

6677

Diag. Cht. No. 1204-2

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. 1006 Office No. H-6677

LOCALITY

State MAINE

General locality CASCO BAY

Locality PORTLAND HARBOR TO SEAL COVE

194 1

CHIEF OF PARTY

F. L. Peacock

LIBRARY & ARCHIVES

DATE February 27, 1942

27000

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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. 1006

REGISTER NO. H-6677

State Maine

General locality Casco Bay Approaches to Portland Harbor

Locality Portland Harbor to Seal Cove  
Portland Head, Cape Elizabeth, Ram Id., Whitehead Passage and  
Seal Cove / Cushing Island

Scale 1:10,000 Date of survey Sept 23-Oct. 17, 19 41

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

Chief of Party Fred. L. Peacock

Surveyed by Ship's Officers

Protracted by G.B. LITTLEPAGE, G.R. BRYAN

Soundings penciled by R.H. CARSTENS, L.L. KING

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

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

Inked by G.B. LITTLEPAGE

Verified by G.B. LITTLEPAGE

Instructions dated May 7, 1941

Remarks: \_\_\_\_\_

\_\_\_\_\_

DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET NO. H-6677  
FIELD NO. 1006

Project CS-265                      Portland, Maine  
U.S.C. & G.S.S. OCEANOGRAPHER      Fred. L. Peacock, Chief of Party, C&GS  
Scale 1:10,000

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 inshore area from Portland Head Lighthouse southward past Cape Elizabeth, Seal Cove, the northeast side of Richmond Island to a point at Lat.  $43^{\circ} 31.5'$ , Long.  $70^{\circ} 14.0'$ , hence northeastward to Lat.  $43^{\circ} 33.7'$ , Long.  $70^{\circ} 11.0'$ , hence directly northward to Lat.  $43^{\circ} 38.0'$  then northeastward to a junction with survey No. H-~~6677~~<sup>6678</sup> (1941). Whitehead Passage and the southeast passage to Portland Harbor is also included in this survey.

CONTROL AND SIGNALS:

Triangulation control previously established and additional triangulation control established by a geodetic party this past season furnished the primary control. Natural objects, banners, flags, whitewashes 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 Company 808-A type fathometer was used. Fixes were obtained between one and two minute intervals. The 15 U type, fifteen second interval chart fathogram was used, and soundings were scaled to the nearest half foot, every seven and one-half seconds. The depth was of such a nature that only the feet scales on the fathogram 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.

The main system of lines were run in a northerly and southerly direction, on the northerly end of this survey. Maximum spacing being 100 meters, except in Whitehead Passage and in developing where they were run only a few meters apart. A northeastern and southwesterly system of lines were run on the southern part of this survey.

CHANNELS:

No channels were developed on this survey. ✓

ANCHORAGES:

The Anchorages remain the same as listed on U.S.C. & G.S. Chart No. 325. Seal Cove would be a good anchorage for small craft, except from a easterly or southeasterly storm, in twenty to twenty-five feet of water. ✓

GEOGRAPHIC NAMES:

No investigation of geographic names was made on this survey, nor on the topographic survey covering this area the past season, so all geographic names will remain as listed on U.S.C. & G.S. Charts Nos. 325, 201, and 315. See review on "Pulpit Rock", under comparison with chart 325 ✓

JUNCTION WITH CONTEMPORARY SURVEYS:

The junctions with hydrographic surveys Nos. H-6672 (1941) and H-6674 (1941) on the north side and with Lieutenant Rittenburg's 1941 survey on the east and northeast is satisfactory. The largest discrepancies were with Lt. Rittenburg's survey where the bottom was so irregular that this was to be expected. ✓  
*No Junction with H-6674 (1941)*

DISCREPANCIES:

In general the soundings agreed within a foot or two on all cross lines. Where the bottom was irregular they agreed as well as could be expected. ✓

COMPARISON WITH PREVIOUS SURVEYS:

The only comparison made in this report was with U.S.C. & G.S. Charts Nos. 325 and 315, and are listed as follows: *Boat sheet returned to field not available* ✓

Shoal of 25 feet as shown on U.S.C. & G.S. Chart No. 325, at Lat. 43° 38.56' and Long. 70° 10.99' is apparently 140 meters farther south on boat sheet, and shows as a 26 foot spot. Further development recommended here. *position agrees with 26 ft. this survey. Soundings added from H-3033 (1909) Survey adequate.* ✓

Shoal of 1/2 foot at Lat. 43° 38.46' Long. 70° 10.84' apparently is 160 meters farther southwest and shows as only 3 feet on boat sheet. *add'l work recommended under Instructions Lyden's July 15, 1942* ✓

Shoal of 15 feet at Lat. 43° 38.03' Long. 70° 11.44' shows as only 17 feet on boat sheet, and a 14 foot shoal 120 meters southeast of here shows in about the same vicinity as the 18 foot spot on the chart. *add'l work recommended* ✓

Shoal of 30 feet at Lat. 43° 37.24' Long. 70° 11.92' shows as only 42 feet on the boat sheet. However, further development is recommended here. *31 ft wire Drag. Add'l work recommended* ✓

COMPARISON WITH PREVIOUS SURVEYS: (CONT'D)

The boat sheet shows a depth of 23 feet on Jordan's Reef against 22 feet on the chart. ✓ ✓ ✓

The depth of 34 feet was the least found near the 27 foot location of Willard Rock on the chart. Further development is recommended here. ✓  
28ft - 4666 (1941)  
28ft - 43677 (1944)

Shoal of 28 feet at Lat. 43° 35.93' Long. 70° 12.50' shows as 24 feet on boat sheet. ✓ ✓

Shoal of 9 feet at Lat. 43° 35.85' Long. 70° 12.75' shows as 6 feet on boat sheet. ✓ ✓

Shoal of 12 feet at Lat. 43° 35.78' Long. 70° 12.70' shows as 11 feet on boat sheet. ✓  
9 ft - L.D. this survey

Shoal of 8 feet at Lat. 43° 35.67' Long. 70° 12.72' shows as a rock bearing 1 foot at M. L. W. on boat sheet. ✓  
agreement

Shoal of 8 feet at Lat. 43° 35.55' Long. 70° 12.53' shows as 8 feet on boat sheet. ✓ ✓

Pulpit Rock shown as a shape (on previous surveys) was not noticed bearing at the stage of tide when hydrography was being done in this vicinity. Actual Pulpit Rock bares 12ft H.W. This Survey. ✓  
misnamed - See Review  
43° 35.5'  
70° 12.8'

Shoal of 11 feet at Lat. 43° 35.53' Long. 70° 12.14' shown as 18 feet on boat sheet. ✓  
12ft accepted

Rock at tip of Whale Back checks boat sheet position. ✓ ✓

Shoal of 23 feet at Lat. 43° 35.98' Long. 70° 11.70' shown as 24 feet on boat sheet. ✓  
23ft - Wire Drag

Shoal of 27 feet at Lat. 43° 35.90' Long. 70° 11.55' shows as 25 feet, just southwest of above position on boat sheet. ✓  
satisfactory

Shoal of 16 feet at Lat. 43° 35.79' Long. 70° 11.41' shows as 18 feet on boat sheet. ✓  
14ft. - Wire Drag

Shoal of 15 feet on the boat sheet is the 9 foot spot at Lat. 43° 35.68' Long. 70° 11.54'. ✓  
9 ft recommended for investigation

Shoal of 30 feet at Lat. 43° 35.23' Long. 70° 11.10' shows as 26 feet on boat sheet. ✓ ✓

A shoal of 18 feet on the boat sheet is about 100 meters south-southeast of the charted 14 foot position of Broad Cove Rock. ✓  
smooth is at  
19ft coincides with charted 14ft

Further development is recommended here. ✓ recommended in review

COMPARISON WITH PREVIOUS SURVEYS: (CONT'D)

A rock covered 3 feet at M.L.W. on the boat sheet is 110 meters N.W. of the 6 foot shoal at Lat. 43° 34.8' Long. 70° 11.60'. *6 ft from old survey - recommended disregarded*

Shoal of 17 feet at Lat. 43° 34.69' Long. 70° 11.81' shows as 19 feet on the boat sheet. *17ft-Wire Drag*

Shoal of 17 feet at Lat. 43° 34.70' Long. 70° 12.22' shows as 16 feet on boat sheet. Further development is recommended here. *17 ft on smooth sheet. Falls south of 43°35', in incompleted area.*

DANGERS AND SHOALS:

No new obstructions which would be dangerous to navigation were found on this survey.

Special attention is called to the <sup>35</sup> 34 foot <sup>(now charted)</sup> shoal which shows ~~two feet less than the chart~~ at Lat. 43° 38.26' Long. 70° 12.90', and to the uncharted rock which is covered 3 feet at MLW at Lat. 43° 34.86' Long. 70° 11.63'. *now charted*

Due to the fact that field work was discontinued before the hydrography could be completed on this survey the following shoals are recommended for further development. ~~A couple of lines behind the reef at Lat. 43° 38.20 Long. 70° 12.00'; 52 foot shoal at Lat. 43° 37.90' Long. 70° 12.58'; shoal of 42 feet at Lat. 43° 37.58' Long. 70° 11.05'; 3<sup>1</sup>/<sub>2</sub> foot shoal at Lat. 43° 37.12' Long. 70° 12.48'; 1<sup>5</sup>/<sub>4</sub> foot shoal at Lat. 43° 35.96', Long. 70° 12.83'.~~ *recommended in review*  
*32 ft W.D., cleared by 32 ft.*  
Other develop- *recommended in review*  
ments were taken up in the paragraph of "Comparisons with Previous Surveys". However that section of the survey which forms a junction with Launch No. 81 at Lat. 43° 35' northward is considered complete except for the above recommendations. *See Review*

That section southward of Lat. 43° 35' is not complete, especially for development.

All other shoal areas are noted on the boat sheet. Their depths being that of MLW computed from field data. *boat sheet not available*

MISCELLANEOUS:

This survey was made by the Ship's officers.

That section of the shoreline between triangulation stations PREBLE and PORTLAND HEAD LIGHTHOUSE was surveyed in 1941 on topographic survey No. T-6853a. Shore line and low water line checked adequately with this survey. The remainder of the shore line southward was taken from past survey bromides and is recommended for a resurvey, especially that section of rocks and reefs around Trunby Reef. Shoreline and low water line checked adequately with topographic survey No. T-6846. *(1941)*

The discussion of time, salinity and temperature, and phase corrections were taken up in the report on survey No. H-6672 *(1941)*

MISCELLANEOUS: (CONT'D)

Since the depths as described in this report were taken from the boat sheet, it probably will be found that the final depths in some instances on the smooth sheet will not be in agreement by a foot or more. ✓✓

If the fathograms are examined it will be noted that several days of hydrography were accomplished while a two to four foot swell was running. This combined with such an irregular bottom as found around Trunby Reef, might tend to throw the soundings off by two or three feet, especially soundings on the crest of a pinnacle rock, for it would be difficult to distinguish in most instances whether the sounding was taken on the crest or trough of the swell. A mean of the swell was taken when scaling the fathograms, except on pinnacles when the top of the fathogram curve was favored. ✓✓

Bottom characteristics were taken by means of a hand lead, armed with soap, averaging about four to a square mile. ✓✓

Depths are recommended to be plotted to the nearest foot, except on shoal areas, where  $\frac{1}{2}$ -foot depths would be to advantage. ✓

Respectfully submitted,

*Henry O. Fortin*  
Henry O. Fortin, Lieutenant (jg),  
U.S.C. & G.S.S. OCEANOGRAPHER

Forwarded:- 2/23/42

*H. C. Warwick*  
H. C. Warwick,  
Officer in Charge,  
Norfolk Processing Office

SEE APPENDUM PAGE 6

Between positions 15b-16b (purple) the boat sheet showed soundings ranging in depths around 78 feet. The fathogram was examined and showed that these soundings should have been 83 feet. Being that the records were not available at the time, and were mailed to the Washington Office before they could be examined, it is advised that these positions be examined in the record book. ✓  
Corrected  
in records

Near position 17lh (blue) a 54 foot sounding was noted on the boat sheet. Upon examining the fathogram it was found that this sounding should have been 44 feet. Due to the reasons mentioned above the record should be examined for this error. Correct  
in records ✓

Henry O. Fortin  
Henry O. Fortin.

H6677

## STATISTICS

SHEET FIELD NO. 1006

DATE	VOL. NO.	DAY LETTER	STAT. MI.	NO. SDGS.	POSITIONS	BOAT
SEPT.						
27	1	a(PURPLE)	7.5	568	51	75
OCT.						
9	1 & 2	b	30.6	2207	235	"
11	2	c	0.3	70	10	"
13.	2 & 3	d	29.9	2315	226	"
14	3	e	3.7	353	44	"
15	3 & 4	f	34.6	2404	241	"
16	4 & 5	g	15.0	1474	183	"
17	5	h	19.2	1982	227	"
SEPT.						
24	6	a(RED)	3.0	186	14	81
27	6	b	16.8	1014	73	"
29	6	c	12.8	855	59	"
30	7	d	24.9	1672	138	"
OCT.						
8	7	e	4.5	374	29	"
9	7 & 8	f	19.6	1518	137	"
17	8 & 9	g	23.5	1985	168	"
18	9	h	4.5	501	60	"
SEPT.						
23	10 & 11	a(BLUE)	48.3	2712	211	82
24	11 & 12	b	33.8	2503	216	"
25	12	c	15.4	943	97	"
26	12	d	5.0	280	31	"
27	12 & 13	e	13.0	932	88	"
29	13	f	19.8	1102	87	"
OCT.						
7	13 & 14	g	28.6	2039	207	"
8	14 & 15	h	19.6	1863	217	"
<u>TOTALS</u>	<u>15</u>		<u>433.9</u>	<u>31,852</u>	<u>3,049</u>	

. AREA IN SQUARE STATUTE MILES-11.9

*2ae*  
*702*

### TIDE NOTE FOR HYDROGRAPHIC SHEET

February 27, 1942.

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in  
15 volumes of sounding records for

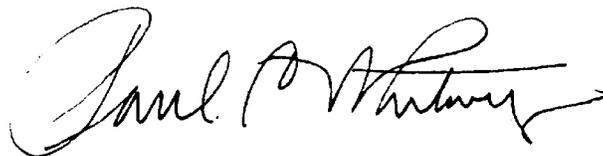
HYDROGRAPHIC SHEET 6677

Locality Southern Approaches to Portland Harbor, Maine

Chief of Party: F. 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.

Remarks.

Decisions

	Remarks.	Decisions
1		436700 U.S.G.B.
2		436702
3		435702
4		"
5		"
6		"
7		435701
8		436701
9		435702
10		436701
11		436702
12		436701
13		"
14		436702 U.S.G.B.
15		436701
16		"
17		436702
18		"
19		
20		
21	Location of tide staff.	436702
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES  
 Survey No. **H6677**

Name on Survey	Source of Name										No.
	A	B	C	D	E	F	G	H	K		
<u>Casco Bay</u>											1
<u>Portland Harbor</u>											2
<u>Seal Cove</u>											3
<u>Richmond I.</u>											4
<u>High Head</u>											5
<u>Cape Elizabeth</u>											6
<u>Taylor Reef</u>											7
<u>Willard Rock</u>											8
<u>Pulpit Rock</u>											9
<u>Jordan Reef</u>											10
<u>Portland Head <del>lighthouse</del></u>											11
<u>Ram I.</u>											12
<u>Ram I. Ledge</u>											13
<u>Cushing I.</u>											14
<u>Whitehead Passage</u>											15
<u>Trotts Rock</u>											16
<u>House I.</u>											17
<u>Spring Pt.</u>											18
											19
											20
<u>Portland</u>											21
											22
											23
											24
											25
											26
											27
											M 234

Names underlined in red approved

by L. H. Allen 8/18/47

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6677**.....

Records accompanying survey:

Boat sheets ~~three~~; sounding vols.(15)...; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls .....;  
 special reports, etc. ~~one special report filed with 6672~~.....  
 .....

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

Number of positions on sheet	3.049	
Number of positions checked	..8.7	
Number of positions revised	...2.	
Number of soundings recorded	318.52	
Number of soundings revised (refers to depth only)	..28	
Number of soundings erroneously spaced	...10.	
Number of signals erroneously plotted or transferred	...0.	
Topographic details	Time ..1.0.	
Junctions	Time ..2.1.	
Verification of soundings from graphic record	Time !3.1.	
Verification by <i>S. Stutzman</i> .....	Total time 162	Date 4/23/42
Review by <i>J. F. Jordan</i> .....	Time 140	Date 8/17/42

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
~~PHOTOSTATIC~~

} No. H H6677  
 } ~~xxxx~~

{ received  
 { registered  
 { verified  
 { reviewed  
 { approved

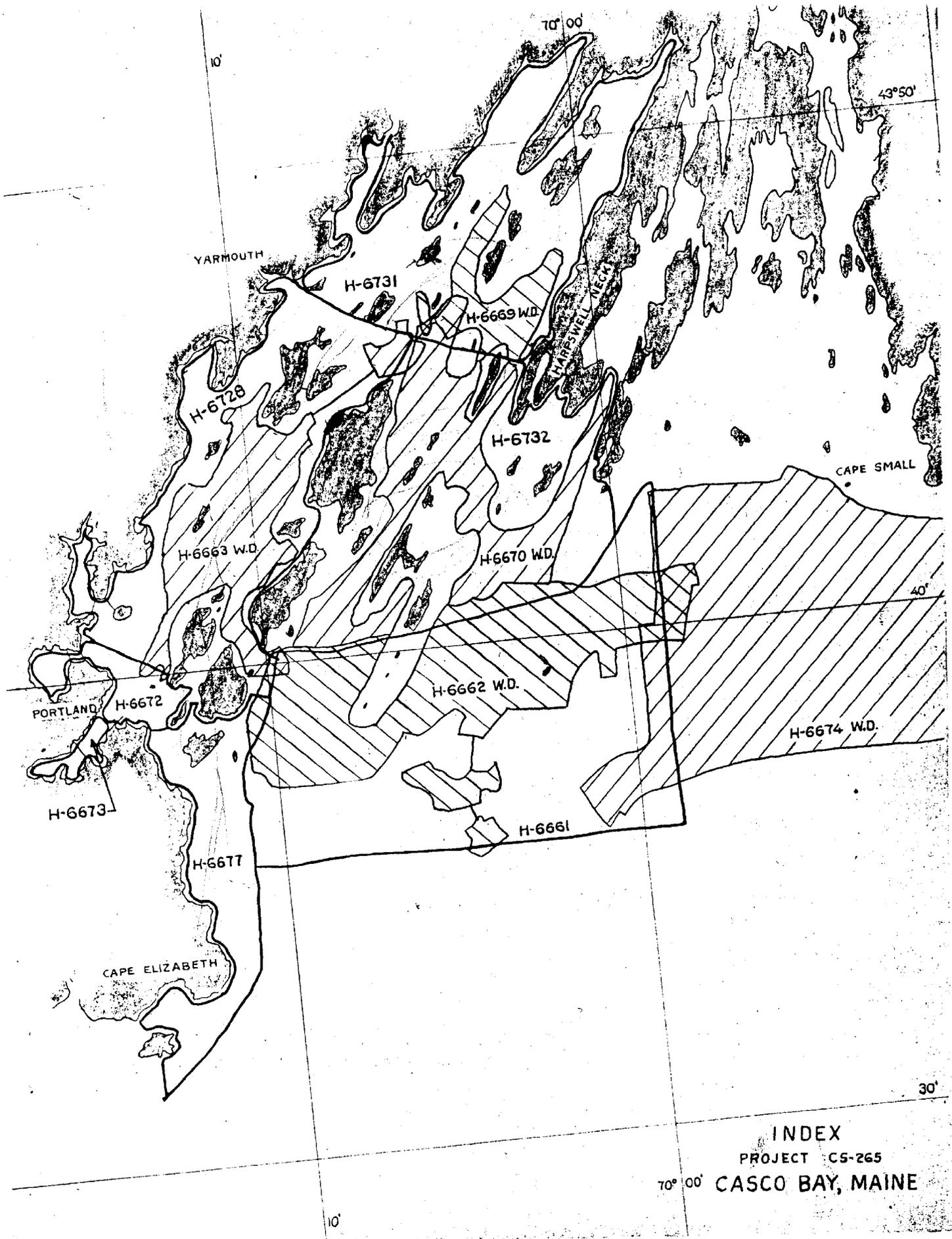
This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please 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 2,3 & 4	MHE	
88			
90			

RETURN TO

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

*vPunk*



90  
23

POST-OFFICE ADDRESS:

600 Flatiron Building  
Norfolk, Virginia

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

82  
82i

MAR 19 PM 19 32

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
Norfolk Processing Office

March 19, 1942.

To: The Director  
U. S. Coast and Geodetic Survey

From: Officer in Charge  
Norfolk Processing Office

Subject: List of Signals for hydrographic sheet No. H-6677

Enclosed herewith is a list of triangulation, topographic and hydrographic signals used on hydrographic sheet No. H-6677, Casco Bay, Maine, Project No. CS-265. This sheet was transmitted to the Washington Office on February 23, 1942.

*H. C. Warwick*  
H. C. Warwick  
Officer in Charge  
Norfolk Processing Office

-TRIANGULATION STATIONS USED ON SHEET NO. 1006

Cape Elizabeth East Light House, 1904  
 Cape Elizabeth East Radip Tower, 1933 (REW)  
 Cape Elizabeth West Light House, 1904  
 Cemetery, 1933  
 Daniels, USE, 1933  
 Diamond, USE, 1909  
 Fort Preble Flagstaff, 1911  
 Fort Williams, Northeast Radio Tower, 1933  
 Fort Williams, Southwest Radio Tower, 1933  
 Fort Scammel 2, 1911  
 N. Cushing, USE, 1933  
 N. Ram, USE, (END), 1933  
 Maxwell's Barn Cupola, 1923  
 Portland Head Lt., 1850  
 Preble, USE, 1909  
 Ram Id, Ho. Chy., 1933  
 Ram Id, Ledge L. H., 1904  
 Red Barn Cupola, 1923  
 Richmond Id. 2, 1923  
 Smug, 1941  
 S. Ram, USE, 1933  
 South Spindle Whitehead Ledge Beacon, 1911  
 Spring Ledge L. H.  
 Todd Bath Tank, 1944  
 Trotts Rock Beacon, 1911  
 Trundy, 1941  
 Whitehead, 1850

GRAPHIC CONTROL STATIONS USED ON SHEET NO. 1006

ABE	FAD	INA	MAD	QUE	WART	
ANDE	FAT	INK	MAT	QUO	WAG	
AND	FIB	IRA	MAX		WIN	
ARM	FIRE	IRK	MEN	RAIL	WIND	
ART	FIX		MIN	RAT	WOP	
ATE	FOG	JAN	MIT	RED		
AXE	FOP	JAP	MOB		XES	
	FRY	JET	MUT	RIP		
BAD	FUN	JEW			YES	
BANK		JIB	NAN	SAD	YET	
	GAB	JIG	NAT	SAP		
BAT	GAS	JOB	NED	SIS	ZAG	
BED	GAT	JUG	NET		ZED	
BEN	GAY		NOB	SOT	ZEV	
BID	GET	KAY	NUN	SPIR	ZIP	
BUG	GOT	KEG				
BUM	GUS	KEY	OAR	TAG		
	GPY	KID	OAT	TAT		
CAN		KIN	ODA	TERY		
CAT	HAL	KIP	ODE	TOL		
COAT	HAS	KIT	OIL	TROT		
COR	HEN		ORE			
COT	HER	LAD	OWL	UKE		
CUB	HIS	LAG				
	HOG	LAN	PEAK	UTE		
EAT	HOT	LED	PEA			
EBB	HUN	LEG	PEG	VAG		
ELK		LID	PIG	VAL		
ERG	IDA	LOT	POD	VAN		
EVE	IKE	LUB	PUG	VIM		
	IMP	LUG	PUD			

HYDROGRAPHIC CONTROL SIGNAL USED

SUG



5. Previous Surveys

H-4303	(1923)	1:20,000	H-3033	(1909)	1:10,000
H- 403bis	(1905)	1:10,000	H-404a	(1906)	1:10,000
H- 841	(1863)	1:20,000	H- 788	(1862, 1902)	1:20,000
H- 726	(1859)	1:20,000	H- 699	(1859)	1:40,000
H- 601	(1857)	1: 5,000	H- 403	(1853)	1:20,000
H- 404	(1852,53)	1:10,000	H- 243	(1850)	1:10,000
T- 312	(1850)				

The area of the present survey has been charted basically from 80 to 90-year old surveys, with the exception of Seal Cove. Considering the older method of surveying and the uneven bottom the general agreement is good. Seal Cove is charted from H-4303 (1923) 1:20,000 scale which has wide spacing of lines and no development. Surveys H-403bis (1905) and H-3033 (1909) are development surveys in limited areas and are in very good agreement with the present survey.

Discussion and disposition of certain soundings from the above surveys follow:

- (a) The 30-ft. sounding at Lat.  $43^{\circ}38.85'$ , Long.  $70^{\circ}12.85'$  and the 33-ft. sounding 125 meters south are charted (325, 201, 315) from H-404 (1852) and are from a line of soundings all of which are shoaler than the adjacent soundings. The 30- and 33-ft. soundings should be disregarded.
- (b) The 17-ft. sounding at Lat.  $43^{\circ}38.82'$ , Long.  $70^{\circ}13.45'$ , charted (201) from H-404 (1852), was plotted lfm. in error on the smooth sheet, as 23ft. is recorded in the records. The 23-ft. sounding is in agreement with present depths.
- (c) The 33-ft. sounding at Lat.  $43^{\circ}38.65'$ , Long.  $70^{\circ}13.20'$  is charted (325, 201) from H-404 (1852) and is considered to be incorrectly recorded. The present survey is adequate and the 33-ft. sounding should be disregarded.
- (d) The 25-ft. sounding at Lat.  $43^{\circ}38.69'$ , Long.  $70^{\circ}12.71'$  and the 8-ft. sounding ENE are charted (325, 201, 315) from H-404 (1852) and are from a line of soundings all of which are shoaler than the adjacent soundings. The 25-ft. and 8-ft. soundings should be disregarded.
- (e) The 42-ft. sounding at Lat.  $43^{\circ}38.45'$ , Long.  $70^{\circ}12.95'$  is charted (325, 201) from H-404 (1852) and is from a line of soundings all of which are shoaler than the adjacent soundings. The 42-ft. sounding should be disregarded.

**6677**  
Additional work

Diag. Cht. No. 1204-2

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	HYDROGRAPHIC
Field No.	Office No. H-6677 (Add. Work)
LOCALITY	
State	MAINE
General locality	CASCO BAY
Locality	EAST OF CAPE ELIZABETH
194 2	
CHIEF OF PARTY	
C. D. Meaney	
LIBRARY & ARCHIVES	
DATE	December 14, 1942

B-1870-1 (1)

**6677**  
Additional work

(f) The 12-ft. sounding charted on 325 and 315 at Lat.  $43^{\circ}38.53'$ , Long.  $70^{\circ}12.67'$  and the uncharted 2-ft. sounding 80 meters N.E. are from the same line on H-404 (1852). These soundings are on a line evenly spaced and are believed to be too far out from shore as no time interval was recorded. However, the 12-ft. sounding falls in a split near a 15-ft. shoal sounding on the present survey, and the 2-ft. sounding is near a 3-ft. shoal sounding on the present survey. These two soundings are carried forward. *these prior soundings superseded by 13ft and 2ft on 1942 Addl. Wk.*

(g) The 39-ft. sounding at Lat.  $43^{\circ}38.44'$ , Long.  $70^{\circ}13.20'$  is charted (325, 201) from H-404 (1852) and agrees with the other soundings in the area of that survey where there is a general disagreement with the present survey. The present survey is adequate and the 39-ft. sounding should be disregarded.

(h) The 33-ft. sounding at Lat.  $43^{\circ}38.27'$ , Long.  $70^{\circ}12.69'$  is charted (325, 201) from H-404 (1852) and is actually a 31-ft. sounding on a line approaching shore.

A change in sounding interval (no sounding interval recorded) would plot the sounding closer to shore. The present survey is adequate, and the 33-ft. sounding should be disregarded.

(i) The uncharted 25-ft. sounding at Lat.  $43^{\circ}38.56'$ , Long.  $70^{\circ}11.43'$  is a shoal sounding on a line from H-788 (1862). The following sounding of 33 feet agrees with like soundings to the N.W. on the present survey. The existence of a shoal is substantiated by a 28-ft. shoal sounding on the present survey. The 25-ft. sounding is carried forward. *prior 25ft and the 28ft superseded by 27ft on 1942 Addl. Wk.*

(j) The 37-ft. sounding at Lat.  $43^{\circ}38.07'$ , Long.  $70^{\circ}12.17'$  is charted (325, 201) from H-788 (1862) on which survey all soundings in this area are shoaler than on the present survey. The 37-ft. sounding should therefore be disregarded.

(k) The 34-ft. sounding charted at Lat.  $43^{\circ}38.09'$ , Long.  $70^{\circ}11.98'$  (charts 325, 201) is actually 43 feet on H-788 (1862). The 43-ft. sounding is in agreement with the present survey.

(l) The 30-ft. sounding at Lat.  $43^{\circ}37.82'$ , Long.  $70^{\circ}12.80'$  is charted (325, 201, 315) from H-404 (1852) and is controlled by a misplotted position. The sounding plots nearer to shore. The 30-ft. sounding should be disregarded.

- (m) The 36-ft. sounding at Lat.  $43^{\circ}37.87'$ , Long.  $70^{\circ}12.70'$  is charted (325) from H-404 (1852) and is believed to be an error in recording 7fms. for 11fms. As the present survey is adequate, the 36-ft. sounding should be disregarded.
- (n) The 45-ft. sounding at Lat.  $43^{\circ}37.57'$ , Long.  $70^{\circ}11.80'$  is charted (325, 201, 315) from H-404 (1852) and is an error in plotting 52 feet from the records. This area was cleared by a 49-ft. wire drag. The present survey is adequate, and the 45-ft. sounding should be disregarded.
- (o) The 39-ft. sounding at Lat.  $43^{\circ}37.38'$ , Long.  $70^{\circ}12.15'$  is charted (325, 201) from H-404 (1852) but is actually 41ft. As general agreement with the present survey is good, the 41-ft. sounding is carried forward.
- (p) The 44-ft. sounding at Lat.  $43^{\circ}37.24'$ , Long.  $70^{\circ}11.38'$ , charted (325, 201) as 45-ft. from H-404 (1852), is a shoal sounding on a line, with adjacent soundings in agreement with the present survey. A 56-ft. shoal sounding on the present survey and an uncharted 41-ft. wire drag grounding to the S. W. substantiate the existence of a shoal. These soundings were cleared by 40-ft. wire drag. The 44-ft. sounding is carried forward. *Disregard 44ft. 1942 Add'l. Wk. closely develops this area, showing 52 ft least depth.*
- (q) The two 22-ft. soundings on Jordan Reef at Lat.  $43^{\circ}37.05'$ , Long.  $70^{\circ}11.25'$  are charted (325, one sounding on 315) from special development on H-601 (1857). The present survey (23ft.), cleared by 20ft. wire drag, adequately covers this reef. The two 22-ft. soundings, which are actually 30 meters closer than charted, should be disregarded.
- (r) The 42-ft. sounding at Lat.  $43^{\circ}37.02'$ , Long.  $70^{\circ}12.24'$ , charted (325) from H-788 (1862), is actually 47 feet. All soundings on that survey in this area are shoaler than the present survey. The 42-ft. sounding should be disregarded.
- (s) The 50-ft. sounding at Lat.  $43^{\circ}36.40'$ , Long.  $70^{\circ}11.30'$  is charted (325) as 49ft. from H-403 (1853), and falls on the edge of a 54-ft. shoal on the present survey, all of which has been cleared by 32-ft. wire drag. The 50-ft. sounding is carried forward.
- (t) The 40-ft. sounding at Lat.  $43^{\circ}36.23'$ , Long.  $70^{\circ}11.70'$  is charted (325) as 39ft. from H-403

(1853) and is a shoal sounding on line. Existence of a shoal is substantiated by a 48-ft. shoal sounding N. W. on the present survey. This area was cleared by 10-ft. wire drag. The 40-ft. sounding is carried forward.

- (u) The 34-ft. sounding at Lat.  $43^{\circ}36.20'$ , Long.  $70^{\circ}11.30'$  is charted (325) as 33ft. from H-403 (1853) and is a shoal sounding on line, noted as "a rock." It is substantiated by adjacent shoal soundings on the present survey, all of which were cleared by 28-ft. wire drag. The 34-ft. sounding is carried forward.
- (v) The 35-ft. sounding at Lat.  $43^{\circ}36.09'$ , Long.  $70^{\circ}12.67'$  is charted (325) as 34ft. from H-788 (1862) and is a shoal sounding on line (cleared by 19-ft. wire drag) which is substantiated by 37-ft. and 36-ft. soundings to the south on the present survey. The 35-ft. sounding is carried forward. *prior 35ft superseded by 35ft on 1942 Addl. Wk.*
- (w) The 16-ft. (Rk.) sounding at Lat.  $43^{\circ}36.00'$ , Long.  $70^{\circ}12.87'$  is charted (325, not charted on 315) from H-788 (1862) and may be the same rock as shown 100 meters S. E. on the present survey. The 16-ft. sounding is carried forward. *Prior 16ft superseded by 17ft on 1942 Addl. Wk.*
- (x) The 27-ft. sounding at Lat.  $43^{\circ}35.89'$ , Long.  $70^{\circ}11.34'$  is charted (325, 315) from H-788 (1862) and is substantiated by shoal soundings of 40ft. and 43ft. on adjacent lines on the present survey. The 27-ft. sounding, which was cleared by 10-ft. wire drag, is carried forward.
- (y) The 22-ft. sounding at Lat.  $43^{\circ}35.8'$ , Long.  $70^{\circ}11.3'$  is charted (325, 315) as 21ft. from H-403 (1853) and is a shoal sounding at a position on line. As this sounding falls outside soundings of like depth on the present survey, the 22-ft. is carried forward.
- (z) The 27-ft. sounding at Lat.  $43^{\circ}35.95'$ , Long.  $70^{\circ}11.80'$ , charted (325) from H-403 (1853), is actually a 29-ft. sounding which plots 50 meters N. W. of a 30-ft. sounding on the present survey. The present survey is adequate. The 27-ft. sounding should be disregarded.
- (aa) The 11-ft. sounding at Lat.  $43^{\circ}35.5'$ , Long.  $70^{\circ}12.14'$ , charted (325, 315) from H-788 (1862),

is actually a 11-1/2-ft. hard bottom sounding which falls on a 12-ft. sounding on the present survey. The 11-ft. sounding should be disregarded.

(bb) The 33-ft. sounding at Lat. 43°35.10', Long. 70°11.08', charted (325, 315) from H-403bis (1905), is actually a 35-ft. sounding whose position is uncertain due to a confusion between E and W Cape Elizabeth Lights. It is considered that the position should have been plotted from the West Light in which case this sounding agrees with a 35-ft. sounding 100 meters W.S.W. on the present survey. The 33-ft. sounding should be disregarded.

(cc) The 20-ft. sounding (charted as 21ft.), 22-ft. (140 meters N. E.) and 33-ft. (230 meters N. E.) *20ft retained* at Lat. 43°35.05', Long. 70°11.48' are charted (325) from H-403bis (1909). The 20-ft. sounding, cleared by 0-ft. wire drag, is checked in the records and is substantiated on the same survey by a 24-ft. sounding. The 20-, 22- and 33-ft. soundings are carried forward. *Disregard 22ft and 33ft. Present survey adequate. 1942 Add'l. WK.*

The remaining soundings discussed here fall south of Lat. 43°35' and are therefore in the incom-  
pleted area of the present survey.

(dd) The 14-ft. sounding (charts 325, 315) and the 16-, 18- and 18-ft. soundings adjacent at Lat. 43°35.05', Long. 70°11.30' are from H-403bis (1905) tracing. The 14-ft. and 16-ft. soundings are shown as cleared by 17-ft. wire drag from H-4307 (1923) W.D., but the review for that survey (page 5, par. (k) discredits the 17-ft. clearance. The above four soundings are carried forward. *14ft retained. Disregard 16, 18, 18 ft soundings. Area developed on 1942 Add'l. WK.*

(ee) The 19-ft. sounding at Lat. 43°34.69', Long. 70°12.02' is charted (325, 315) from H-403 (1853) and was misplotted on the sheet from the records. As this sounding falls close to a 17-ft. sounding E.S.E. on the present survey, it should be disregarded.

(ff) The 7-ft. sounding at Lat. 43°34.81', Long. 70°11.67' is charted (325) from H-403 (1853) and falls close to a 3-ft. sounding on the present survey, which is adequate. The 7-ft. sounding should be disregarded.

- (gg) The 18-ft. (Rk.) sounding at Lat.  $43^{\circ}34.1'$ , Long.  $70^{\circ}11.5'$  is charted (315) from H-403 (1853) or H-726 (1859) but originates from investigation by Lt. Pillsbury (USN) and is noted to be reported in the files of the Hydro. Insp. Office August 7, 1885. As the rock has yet to be investigated on this survey ("additional work" 1942), it was deemed inadvisable to search the files at the Archives Building for confirmation. The 18-ft. (Rk.) sounding is carried forward. *Prior 18ft considered disproved. 22ft nearby on 1942 Add'l Wk.*
- (hh) The uncharted 11-ft. sounding at  $43^{\circ}33.90'$ , Long.  $70^{\circ}11.67'$  is a wire drag grounding from H-4307 (1923) W.D., which was cleared by 18-ft. by drag in opposite direction. A note on page 34, Vol. 3 of that survey states "Coast Guard reports large anchor in this vicinity", and the review states "this area should be investigated." As no record of an investigation was found, the 11-ft. sounding is carried forward. *Disregard 11ft grounding considered 3 disproved by 18ft clearance and 1942 development*
- (ii) The 38-ft. sounding at Lat.  $43^{\circ}33.9'$ , Long.  $70^{\circ}11.1'$ , charted (315) from H-403 (1853), is actually a 41-ft. sounding, which is an unreduced 7-fm. sounding, preceding 11fm. and after 8fm. It falls in a deep of 68 feet on the present survey, with no indication of shoaling. It is believed that the leadline was misread, and the sounding should have been 11fm., not 7fm. However, the preceding uncharted 1fm. shoaler sounding of 50ft. (cleared by 38ft. wire drag) is carried forward. The 38-ft. sounding should be disregarded. *50ft sounding considered disproved on 1942 Add'l Wk.*
- (jj) The 18-ft. sounding, Taylor Reef, at  $43^{\circ}33.42'$ , Long.  $70^{\circ}11.62'$ , charted (315) from H-403 (1853), is actually a 19-ft. sounding in the records which falls on a line of 19ft. soundings on this survey. The 18-ft. sounding should be disregarded. *Lat.*
- (kk) The 37-ft. sounding charted (315) at Lat.  $43^{\circ}33.25'$ , Long.  $70^{\circ}11.87'$  is actually 39 feet in the records of H-4303 (1923). The 39-ft. sounding is carried forward. *Prior 39ft to be disregarded. considered error in review of 1942 Add'l Wk.*
- (ll) The 28-ft. sounding, charted (231, 315) at Lat.  $43^{\circ}33.26'$ , Long.  $70^{\circ}13.30'$ , is actually 27ft. in the records of H-4303 (1923). The 27-ft. sounding is carried forward. *Prior 27ft to be disregarded. considered error in review of 1942 Add'l Wk.*
- (mm) The 35-ft. sounding charted (231, 315) at Lat.  $43^{\circ}32.70'$ , Long.  $70^{\circ}12.52'$  is actually 34ft. in

the records of H-3677 (1914) W.D., as found in checking the reduced value. The 34-ft. sounding is carried forward. *34 ft considered disproved on 1942 Add'l Wk.*

- (nn) The 36-ft. sounding at Lat. 43°32.79', Long. 70°12.70' is charted (231) from H-243 (1850) original sheet. This survey was replotted on accompanying tracing in 1885, which places this sounding on the 29-ft. shoal of present survey. The 36-ft. sounding should be disregarded.
- (oo) The 1/2-ft. sounding at Lat. 43°38.43', Long. 70°10.85' and the 1-ft. sounding 30 meters N.E., charted on 325, 315 and 201, are from H-726 (1859) but originate from investigation by Lt. Pillsbury (U.S.N.) and are reported in files of the Hydro. Insp. Office dated August 7, 1885. This is believed to be an erroneous location of the 3-ft. shoal 170 meters S. W. on the present survey. These two soundings should be disregarded as additional investigation for least depth has been ordered under instructions to LYDONIA, July 15, 1942. *prior position of rock disproved on 1942 Add'l Wk. Located at 3ft shoal, and observed awash at minus 1ft tide.*

A summary of the 47 soundings discussed above is as follows:

25	soundings	recommended deleted from the charts
11	"	corrected and retained
7	"	retained (exclusive of Seal Cove area)
3	"	not charted, carried forward

With these additions the present survey supersedes all the old surveys within the common area. It will be necessary to retain the charted bottom characteristics south of Lat. 43°35' until this survey has been completed.

#### 6. Wire Drag Surveys

H-3677 (1914) W.D.; H-4307 (1923) W.D.; H-6662 (1941) W.D.

The above surveys were carefully checked against the present survey and numerous critical soundings have been transferred. The following discrepancies are listed:

- (a) The 31-ft. sounding at Lat. 43°37.24', Long. 70°11.95' is charted (325, 201, 315) as 30-ft. from H-3677 (1914) W.D., which change was evidently made to accentuate the shoal by a 30-ft. contour.

This sounding is shown as being cleared by a 33-ft. strip, but this strip made a turn near this sounding and although the 31-ft. sounding was fully covered it is felt that there was excessive lift as a towline of only 61 meters was used. A statement is made in the review of that survey that the drag strips cleared other soundings which were less than the effective depth. The 31-ft. sounding is carried forward.

- (b) The uncharted 41-ft. grounding at Lat.  $43^{\circ}37.20'$ , <sup>41 ft</sup> grounding Long.  $70^{\circ}11.44'$  is from the records of H-3677 (1941) W.D. Although this grounding falls in 58-ft. depths on the present survey, there is an indication of an undeveloped shoal to the N.E. The 41-ft. grounding is carried forward. *considered disproved on 1942 Add'l. Wk.*
- (c) The 38-, 40- and 41-ft. soundings at Lat.  $43^{\circ}36.48'$ , Long.  $70^{\circ}11.52'$  on the present survey are shown as being cleared by a 42-ft. drag strip on H-3677 (1941). The drag grounded at 42 feet, 250 meters N. E., and as the above three soundings fall close to the guide launch of that strip it is felt there was a combination of the drag scraping bottom and excessive lift due to a 61-meter towline on a 50-ft. drag depth. The 34-ft. sounding S. W. was cleared by 28 feet.
- (d) The 9-ft. sounding at Lat.  $43^{\circ}35.68'$ , Long.  $70^{\circ}11.55'$  is charted (325, 315) from H-4307 (1923) W.D. This is the shoalest sounding in this section. No time for tide reduction was given in the sounding record for this sounding so it remains in doubt as to the actual least depth on this shoal. Its position corresponds to a grounded strip where the tide reduction of 3 feet would make it 15 feet, against a 13-ft. sounding of the other tender; but its inserted position in the wire drag records is at a time when a 9-ft. tide reduction is applicable. The 9-ft. sounding is carried forward. *9 ft sounding considered disproved on 1942 work. 14 ft least depth substantiates belief that 9 ft should have been 15 ft, with correct tide reduction.*
- (e) The 6-ft. sounding at Lat.  $43^{\circ}34.8'$ , Long.  $70^{\circ}11.6'$  is charted (325) from H-4307 (1923) W.D. The position and depth of this sounding is questioned in the records. As the present survey is adequate, the 6-ft. sounding should be disregarded.

Attention is respectfully called to the review of both H-3677 (1941) and H-4307 (1923) in evaluating

the adequacy of coverage by wire drag in this area. It is pointed out in those reviews and noted during this review that in some instances time was not recorded for soundings by tenders, drag strips cleared depths shoaler than effective depths, and shallow drag strips prevailed too frequently. It is also to be noted that no groundings are plotted on H-3677 (1914).

7. Comparison with Chart 325 (New print of 7-17-42)  
Chart 201 (New print of 5-12-42)  
Chart 315 (New print of 6-3-42)  
Chart 231 (New print of 12-17-41)

Charts 325 and 315 carry a few critical soundings from the present survey; otherwise, the first paragraph under item 5 applies. All critical soundings, with the exception of three, have been charted from the old surveys. The following discrepancies are noted:

- (a) The 6-ft. sounding at Lat.  $43^{\circ}38.97'$ , Long.  $70^{\circ}11.62'$  on H-788 (1862) is charted too far north of the beacon. As the present survey is adequate, the 6-ft. sounding was not carried forward.
- (b) The 27-ft. sounding at Lat.  $43^{\circ}36.05'$ , Long.  $70^{\circ}11.10'$ , Willard Rock, is charted on 325 from advance information (L. 289-1914) on H-3677 (1914). The final value is 28 feet. The 28-ft. sounding is 30 meters north of 28ft. on the present survey and is carried forward.
- (c) The 37-ft. sounding at Lat.  $43^{\circ}35.58'$ , Long.  $70^{\circ}11.40'$  originates on drawing of chart 325 dated June 5, 1943<sup>2</sup>. The sounding was taken from the present survey, but its location is 100 meters west of the charted position.
- (d) Pulpit Rock, charted at Lat.  $43^{\circ}35.50'$ , Long.  $70^{\circ}12.74'$  on 325 and 315, originates from T-414 (1852) and is an error in the original compilation of the name of the rock. Pulpit Rock is the rock which uncovers 12ft. at H. W., 220m. west on the present survey. The charted name applies erroneously to the end of a ledge (zero sounding) on the present survey.
- (e) The 33-ft. sounding charted at Lat.  $43^{\circ}35.33'$ , Long.  $70^{\circ}11.00'$  on 325 and 315 originates from

places the lighted buoy but does not remove the bell buoy. The Light List has both buoys. The bell buoy marks the ledge S. W. from Peaks Island and it is recommended that it be moved 150m. E.S.E. in 18ft.

- (e) The red spar buoy No. 4 charted at Lat.  $43^{\circ}38.66'$ , Long.  $70^{\circ}12.65'$  on charts 325, 201 and 315 is located 110m. south on present survey. It is recommended that this buoy be moved 320m. south of its charted position to Lat.  $43^{\circ}38.50'$ , Long.  $70^{\circ}12.73'$  in 30ft. to mark S. W. end of shoal. This buoy is listed under "Portland Harbor" in the Light List.
- (f) The black spar buoy No. 1 charted at Lat.  $43^{\circ}38.58'$ , Long.  $70^{\circ}13.40'$  on charts 325, 201 and 315 is located 110m. farther north on the present survey. Either location is adequate for the passage of navigation. The buoy may have moved from its position, but its position should remain fixed as Mill Rock (uncovers 3ft. at MLW) is a danger to small-boat navigation in Simonton Cove.
- (g) The red bell buoy No. 201 charted at Lat.  $43^{\circ}37.95'$ , Long.  $70^{\circ}12.45'$  on charts 325, 201 and 315 is located 140m. S.S.E. on the present survey. The Light List records this buoy in 60ft., which agrees with the present survey depths. Either location is adequate for marking Cushing Island.
- (h) The Broad Cove Rock black can buoy No. 5BC charted at Lat.  $43^{\circ}35.02'$ , Long.  $70^{\circ}11.24'$  on charts 325 and 315 is recorded in the Light List as being in 60 feet; but this position falls in 30ft. on present survey. The present survey locates this buoy 150 meters S.E. of the charted position, in 40ft. The charted position is adequate, but the Light List should record the depth as 30 feet.
- (i) The black can buoy No. 1 in Seal Cove charted at Lat.  $43^{\circ}33.40'$ , Long.  $70^{\circ}13.26'$  on charts 231 and 315 is located 110m. N.N.W. on present survey. The buoy has probably shifted from its adequately charted position.

No new dangers which require marking were found on this survey.

10. Condition of Survey

- (a) Sounding records are satisfactory.
- (b) Descriptive Report is satisfactory.
- (c) Field (Wash. Office) plotting is satisfactory.

11. Compliance with Instructions for the Project

There was insufficient time before the end of the season to complete the survey south of Lat. 43°35'.

Bottom characteristics were obtained, generally, north of Lat. 43°35', but due to the use of the recording fathometer the definition of the so numerous shoals was not obtained.

12. Additional Field Work Recommended \*Accomplished on H-6677 (1942) Add'l. Wk.

- \* (a) Lat. 43°39.03', Long. 70°12.63' - 2-ft. offshore sounding, 80 meters to next line
- \* (b) Lat. 43°38.56', Long. 70°11.43' - 25-ft. shoal <sup>27ft-1942</sup>
- \* (c) Lat. 43°38.45', Long. 70°11.0' - 8 to 26 feet on 130-meter split
- \* (d) Lat. 43°38.49', Long. 70°10.47' - 36ft. in <sup>substantiated by 40ft</sup> 50-ft. depths
- \* (e) Lat. 43°38.36', Long. 70°10.90' - 3-ft. and 1/2-ft. shoal 170 meters N.N.E., already <sup>1085 position disproved</sup> instructed under supplemental instructions to LYDONIA dated July 15, 1942
- \* (f) Lat. 43°38.02', Long. 70°11.42' - undeveloped shoal indications
- \* (g) Lat. 43°38.05', Long. 70°12.59' - development of projecting ledge (14ft.) north of buoy
- \* (h) Lat. 43°38.55', Long. 70°12.65' - 12ft. and 2ft. (80 meters N. E.); development for least depth
- \* (i) Lat. 43°37.90', Long. 70°12.58' - 52ft.; development inshore from this point
- \* (j) Lat. 43°38.15', Long. 70°13.23' - projecting ledge (6ft.); 12- and 18-ft. curves
- \* (k) Lat. 43°37.93', Long. 70°13.05' - projecting ledge (14ft.); 18- and 30-ft. curves
- \* (l) Lat. 43°37.2', Long. 70°11.4' - 41-, 44- and <sup>prior 41ft and 44ft considered disproved</sup> 56-ft. soundings; development
- \* (m) Lat. 43°37.2', Long. 70°12.0' - 31-, 34-, 37- <sup>34ft to be disregarded</sup> 40-ft. (S.W.); development
- \* (n) Lat. 43°35.95', Long. 70°12.83' - 15-ft. shoal, 16-ft. rock 100 meters N. W. and 36-35-ft. <sup>prior 14ft superseded by 17ft on 1942 Add'l Wk.</sup> shoal 300 meters N. E.
- \* (o) Lat. 43°35.68', Long. 70°11.55' - 9-ft. W.D. <sup>9ft considered disproved</sup> sounding; investigation

\* (p) Lat. 43°35.05', Long. 70°11.28' - Broad Cove Rock; verification of 14ft. and development of shoal on south and northwest, as indicated by the old 20-, 22- and 33-ft. soundings <sup>14ft and 22ft prior soundings retained.</sup>

\* The Descriptive Report makes reference to the fact that this survey was not completed south of Lat. 43°35'. Shoals and indications of shoals are too numerous to list in this area. H-4303 (1923) 1:20,000, made no shoal developments in and approaching Seal Cove. The result is that complete development of shoal indications is recommended in the <sup>completed</sup> incomplete area. Comment is made under par. 5 of this review on certain soundings carried forward from previous surveys.

Additional work should include securing bottom characteristics for the incomplete part of this survey. <sup>all "ky" characteristics</sup>

13. Miscellaneous Matter

The boat sheet was available during verification but had been returned to the field before this review was made and is not considered in this review.

Instructions were issued on last June 17 and July 15 (LYDONIA) regarding completion of this survey and certain investigations. <sup>(completed)</sup>

14. Superseded Surveys

H-4303	in part	H-601	in part
H-3033	" "	H-404	" "
H- 841	" "	H-404a	" "
H- 788	" "	H-403	" "
H- 726	" "	H-403bis	
H- 699	" "	H-243	in part

Examined and approved:

  
Chief, Surveys Section

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of Coastal Surveys

Partially applied to ckt. 325 2.M.A. June 3, 1942

Applied to Chart Comp. 201 Mar. 25, 1942. H.E. MacEwen

Applied to Chart 3201 after review of 46677 and just after  
the add. work had been added in pencil. 1/16/43 - JTW

Applied to Chart Cor. 325 H.E.M. 1942

Applied to Chart Cor. 315 Feb. 23, 1943 K.R.

Applied to Chart Correction 50 (Buff) March 11, 1943 H.E.M.  
" " " " 1205 ( " ) " 13, " "

Applied to Reconstruction of Chart 315 - June 7, 1943 - JTW after review

Applied to Chart 201 (after review) 10/29/43 - JTW

CHART 325 (Extension of Limits) App'd 1-31-68 HR9

# H6677 Additional work

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

## HYDROGRAPHIC TITLE SHEET

REG. NO. H-6677  
**H6677**  
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. H-6677

State Maine

General locality Casco Bay

Locality East of Cape Elizabeth

Scale 1:10,000 Date of survey July, August, Sept., 1942

Vessel LYDONIA

Chief of Party C. D. Meaney

Surveyed by Ship's Officers

Protracted by L. L. King Feb 3, 1943

Soundings penciled by " "

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

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

Inked by \_\_\_\_\_

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

Instructions dated \_\_\_\_\_, 19\_\_\_\_

Remarks: Reducers entered and checked, soundings reduced and checked by Norfolk Processing Office.

DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET H-6677

Project CS-265  
U.S.C. & G.S.S. LYDONIA

Portland, Maine  
C.D. Meaney, Lt. Comdr. C&GS  
Commanding

Scale 1:10,000

INSTRUCTIONS:

The authority for this survey is contained in Instructions dated May 7, 1941, Supplemental Instructions dated June 17, 1942, Supplemental Instructions dated July 15, 1942, and a Field Work Letter dated August 14, 1942.

LOCALITY:

This survey includes development in Portland Harbor, in the approaches and entrance to the harbor, the vicinity of Ram Island, Whitehead Passage, the waters within one and one half miles of the shoreline between Cape Elizabeth and Portland Head and a complete survey and development of Seal Cove and the approaches to the cove.

SURVEY METHODS:

Frequent visual three point fixes were observed to control the hydrography and locate the positions where bottom characteristics were observed. Submarine signal 808 depth recorders were used for sounding. All soundings were measured on the foot scale.

Bar checks were observed on the A, B and C scales with depth recorder 55 on Launch 82. This instrument is built accurately. Shifting scale does not change the correction to be applied to soundings.

Bar checks were <sup>observed</sup> on the A and B scales with depth recorder 53 on Launch 79. When the scale on this recorder is shifted from A to B the correction applied to soundings differs by more than two. Either this instrument is not centred properly or the phase angle is not accurate.

Some soundings taken with depth recorder 55 on D scale are recorded very faintly.

ANCHORAGES:

Seal Cove is an excellent anchorage for small launches, except during east or southeast storms. The approaches to the cove provide good anchorage for larger ships during westerly winds.

GEOGRAPHIC NAMES:

The air photo inspection party under Lt. H. O. Fortin was instructed to investigate geographic names. His report will be submitted at the close of his field season.

JUNCTION WITH CONTEMPORARY SURVEYS:

This sheet joins sheets H-6672 (1941) and H-<sup>6728</sup>~~6674~~ (1941) on the north and sheet H-6661 on the northeast and east. *A butt junction is made with H-4303 (1923) on the south.*

DEVELOPMENT: (Plotted on smooth sheet)

(a) In the vicinity of Latitude 43° 39'03 Longitude 70° 12'.63 additional hydrography was executed in accordance with recommendations contained in the review of this sheet. Additional shoals were found in this area. The 1942 hydrography was plotted on the boat sheet.

(b) Latitude 43° 38'.56 Longitude 70° 11'.43.. Additional development checked the 1941 hydrography. The 1942 hydrography was plotted on tracing paper. *27ft shoal*

(c) Latitude 43° 38'.45 Longitude 70° 11'.0. Additional development supplemented 1941 hydrography, furnished further hydrographic information regarding the extent of shoals, and provided further data for drawing depth curves. The 1942 hydrography was plotted on tracing paper. *24ft shoal*

(d) Latitude 43° 38'.49 Longitude 70° 10'.77. Additional development verified 1941 hydrography. The 1942 hydrography is plotted on tracing paper. *36ft shoal sounding substantiated by 46ft in 1942.*

(e) Latitude 43° 38'.<sup>3</sup>56 Longitude 70° 10'.90. The 1942 hydrography verified the 1941 hydrography. ~~A minimum depth of 2 feet was found.~~ This area was observed during a minus tide. Soundings reported in a field letter dated August 7, 1885 were not verified. Both 1941 and 1942 surveys are in agreement and do not agree with soundings on H-726. The 1942 hydrography was plotted on tracing paper. *enclosed with this report.* *1885 position in error. No sounding obtained on rock. Observed awash at minus 1/2 ft tide at position*

(f) Latitude 43° 38'.02 Longitude 70° 11'.42. Additional development defined the limits of shoals. The 1942 hydrography was plotted on the boat sheet and verified 1941 hydrography.

(g) Latitude 43° 38'.05 Longitude 70° 12'.59. Development in this area defined the limits of the shoal near navigation buoy 2 off Catfish Rock. The 1942 hydrography is plotted on the boat sheet.

(h) Latitude 43° 38'.55 Longitude 70° 12'.59. ~~A least depth of one foot was found during the development of this shoal.~~ The 1942 hydrography is plotted on tracing paper. *(enclosed with this report)* *prior 12ft and 2ft soundings now superseded by 13ft and 2ft on preint development.*

H68777

Additional work

(i) Latitude 43° 37'.90 Longitude 70° 12'.58.

This area was developed in 1942. Field reduced 1942 soundings are plotted on the boat sheet and are deeper than soundings shown on the 1941 survey. *Some areas are shoaler, general agreement good 3.2.4.*

(j) Latitude 43° 38'.15 Longitude 70° 13'.23.

Additional development in this area provides more information for plotting depth curves. The 1942 hydrography is plotted on the boat sheet. *developed 10ft ledge*

(k) Latitude 43° 37'.93 Longitude 70° 13'.05.

Additional development was executed and provides detailed data for drawing depth curves. The 1942 hydrography is plotted on the boat sheet. *developed 14ft ledge*

(l) Latitude 43° 37'.2 Longitude 70° 11'.4.

The least depth found during the 1942 development of this area is 52 feet. Wire dragging in this area was prohibited during 1942 by naval officials at Portland. It may be desirable to wire drag this area to verify shoal depths found during previous surveys. The 1942 hydrography is plotted on tracing paper. *prior 41ft and 44ft soundings to be disregarded. close development is considered adequate for accepting 52ft as least depth.*

(m) Latitude 43° 37'.2 Longitude 70° 12'.0.

Additional development in this area verified previous wire drag depths. The least (preliminary field) depth found is 30 feet. The 1942 hydrography is plotted on the boat sheet. *31ft retained from wire drag. Very sharp pinnacle shown at change of phase on photograph.*

(n) Latitude 43° 35'.95 Longitude 70° 12'.83.

Hydrography executed in 1942 <sup>adds to</sup> verified the 1941 survey. The 1942 hydrography is plotted on tracing paper. *three shoals developed, showing 12ft, 17ft and 35ft least depths.*

(o) Latitude 43° 35'.68 Longitude 70° 11'.55.

The 1942 hydrography verified 1941 hydrography. The 9 foot questioned sounding from Wire Drag Survey H-4307 was not found. A wire drag survey may be advisable to determine the least depth on this shoal. Wire dragging during 1942 in this area was prohibited by naval officials at Portland. ~~The 1942 hydrography is plotted on tracing paper.~~ *9ft sounding questioned in view of 1941 work is now considered disproved.*

(p) Latitude 43° 35'.05 Longitude 70° 11'.28.

The 1942 development verified the 1941 survey. The 1942 hydrography is plotted on the boat sheet. *14ft prior soundings retained.*

(q) Latitude 43° 35'.75 Longitude 70° 13'.7.

Additional development shown in red on a photostat of the 1941 was executed during 1942. The 1942 hydrography is plotted on a tracing.

(r) Latitude 43° 34'.7 Longitude 70° 11'.2.

The area near four soundings shown in green and one in red in the vicinity of this position was developed. ~~Soundings obtained during 1942 surveys are deeper than shoal soundings transferred to the photostat of the 1941 survey from previous surveys.~~ A wire drag survey is recommended to verify shoal depths. The 1942 hydrography is plotted on a boat sheet. *prior 21ft sounding superseded by 21ft on this survey. 20ft on 1941 work superseded by 18ft on this survey. Wire drag sounding retained. No add'l. work recommended.*

# H6677 Additional work

(s) Latitude 43° 34'.95 Longitude 70° 11'.86.  
Development in this area verified 1941 hydrography. The 21 foot wire drag sounding shown on a photostat of the 1941 survey was not found. A shoal with 16 feet 0.05 of a mile southwest of this position shown on the 1941 survey was <sup>Substantiated by 16 ft. not plotted.</sup> verified. The 1942 hydrography is plotted on a boat sheet. No additional hydrography or wire dragging is recommended in this area.

21ft grounding now considered to have been on 16ft shoal. Disregard.

(t) Latitude 43° 34'.66 Longitude 70° 11'.83.  
A 17 foot sounding from a wire survey plotted on a photostat of 1941 hydrography was <sup>not</sup> investigated in 1942. A least depth of 19 feet was found during the 1942 development. No additional work is recommended as depths of 15 feet have been found one tenth of a mile southwest of this position. The 1942 hydrography was plotted on the boat sheet.

No work was done here in 1942. 17ft W.D. sounding is considered adequate.

(u) Latitude 43° 34' Longitude 70° 11'.55.  
An 18 foot sounding one tenth of a mile northeast of this position and an 11 foot sounding southwest of this position were investigated. A least depth of 19 feet was found one tenth of a mile west of the 18 foot sounding plotted from an earlier survey. Further investigation is not recommended. The least depth found in 1942 in the vicinity of the 11 foot sounding observed on a wire drag survey is 34 feet. One tenth of a mile west of this position soundings less than 10 feet were observed in 1942. All 1942 hydrography in this vicinity is plotted on the boat sheet.

prior 18ft superseded by 22ft on present survey. 11ft W.D. grounding is considered disproved.

(v) Latitude 43° 33'.8 Longitude 70° 11'.15.  
A 50 foot sounding circled in blue one tenth of a mile north of this position and a 38 foot sounding circled in green (both shown on a photostat of the 1941 survey) were investigated. Fifty foot soundings were found within one tenth of a mile of the 50 foot sounding circled in blue. A 38 foot sounding was found close to the 38 foot sounding circled in green. There is a shoal with a least depth of 24 feet one tenth of a mile southwest of the circled 38 foot sounding. No further investigation of this area is recommended. The 1942 hydrography is plotted on the boat sheet.

50ft considered disproved. 38ft W.D. sounding retained.

(w) Latitude 43° 33'.55 Longitude 70° 11'.7.  
Soundings of 19, 20, and 21 feet circled in green and a 33 foot sounding circled in red were investigated. A shoal with a least depth of 20 feet shown on the 1941 survey and 21 feet on the 1942 development verifies the green circled soundings. No further hydrography in this area is recommended. The 1942 hydrography is plotted on the boat sheet.

20, 21 and 33ft soundings to be disregarded. 19ft from wire drag and present development is considered adequate.

(x) Between Latitude 40° 32'.5 and 40° 33' and Longitude 70° 12' and 70° 13' soundings circled in red and green on a photostat of 1941 hydrography were investigated.

(48 sounding circled in red) - <sup>disregard</sup>  
A depth of 48 feet was found close to this position in 1942.

(42 and 40 foot soundings circled in red) - <sup>disregard</sup>  
A depth of 39 feet was found close to this position in 1942.

# H6677 Additional work

(39 foot sounding circled in red) ~~disregard~~  
Soundings much shoal were found in 1941 and verified in 1942 within 0.05 of a mile of this position. Twenty four foot soundings were observed in 1941 and 26 foot soundings were observed in 1942.

(46 foot sounding circled in green).  
A 47 foot sounding was found in 1941 and verified during the 1942 development of this area.

(34 foot sounding circled in green). *34ft considered disproved*  
A very close development of this area did not verify this sounding. Further investigation, if contemplated, should be made with a wire drag.

(30 foot sounding circled in green).  
A least depth of 29 feet was found during the 1941 survey and verified in 1942. All 1942 hydrography in this area was plotted on the boat sheet.

(y) Latitude 43° 32'.3 Longitude 70° 13'.2.  
33,34,36, and 56 foot soundings circled in green in the vicinity of this position and plotted on a photostat of the 1941 survey were investigated during the 1942 season.

(33 foot sounding circled in green)  
Thirty five feet was found close to the position of the 33 foot sounding in 1941. Thirty six feet was found in 1942. One tenth of a mile northwest of the circled 33 foot sounding a 31 foot sounding was observed during 1942. *33 M.D. sounding retained*

(34 foot sounding circled in green)  
The least depth found in 1941 and 1942 in this vicinity was 37 feet. *34 M.D. sounding retained*

(36 foot sounding circled in green)  
A 38 foot sounding is shown on the 1941 survey. A 37 foot sounding was observed very near this position on the 1942 survey. *36 ft M.D. sounding retained*

(56 foot sounding circled in green)  
Shoaler soundings were found less than one tenth of a mile north-west of this position both on the 1941 and 1942 survey. *56 ft to be disregarded 46 ft depth nearby considered adequate.*

The 1942 hydrography was plotted on the boat sheet.

(z) Latitude 43° 31'.92 Longitude 70° 13'.88.  
Soundings with a least depth of 52 feet were observed close to this position during 1942. The 1942 hydrography is plotted on the boat sheet. *49ft on 1941 work. shoal adequately developed.*

(aa) Latitude 43° 32'.6 Longitude 70° 13'.55.  
An eight foot sounding circled in blue on a photostat of sheet 6677 was investigated. The least depth found in 1942 was N feet. The 1942 hydrography is plotted on a boat sheet. *prior 8ft sounding superseded by 9ft on present development.*

(bb) Latitude 43° 33'.3 Longitude 70° 11'.8.  
The area in the vicinity of a 39 foot sounding circled in blue and 34 and 39 foot soundings circled in red on a photostat of sheet 6677 was developed in 1942. A 40 foot sounding was observed in 1942 close to the 39 foot sounding circled in blue. *prior 39ft sounding superseded by 40 ft.*

(39 foot sounding circled in red)  
A shoal was found northeast of the 39 foot sounding circled in red. Less than one tenth of a mile from this position depths less than 39 feet were observed. *prior 39ft sounding considered disproved and to be error in recording.*

H6677  
Additional work

(34 foot sounding circled in red)  
A shoal with less depth was found on the 1941 survey and developed during the 1942 survey less than a tenth of a mile north of the 30 foot sounding circled in red. The 1942 hydrography is plotted on the boat sheet.

*prior 34ft sounding now superseded by adjacent comparable depths.*

SPAL COVE:

During 1942 areas in the vicinity of soundings circled in green, red, and blue were developed.

The depths found verify 1941 hydrography and soundings from earlier surveys. In some cases the positions of shoals taken from earlier surveys and the positions of the same apparent shoals do not agree. *Discrepancies discussed in the review.*

The 1942 hydrography is plotted on a <sup>smooth</sup> boat sheet.

TIDE STATION:

The plane of reference is mean low water at the Portland Tide Gage.

TIDE REDUCERS:

Tide reducers were entered and checked in the sounding record by Norfolk Processing Officer Personnel.

FATHOGRAMS:

Fathograms were scaled in the field and checked at the Norfolk Processing Office.

SIGNALS:

The same signals used during the 1941 survey were used during 1942. Topographic signals located by officer personnel attached to the OCEANOGRAPHY during 1941 were identified and redressed when found necessary.

HYDROGRAPHY:

Eleven volumes of sounding records contain the results of the 1942 survey.

Eight of these volumes contain hydrography executed with Launch 82, in charge of Lieutenant Wilbur R. Porter.

H6677  
Additional work

-7-

Three of these volumes contain hydrography executed with Launch 79, in charge of Lieutenant Clarence A. George.

Respectfully submitted

*C. D. Meaney*  
C. D. Meaney  
Lt. Comdr. U.S.C.&G.Survey

Statistics

No. of Positions ..... 1858

No. of Statute Miles --- 217

H6677  
Additional work

ADDENDUM

SHEET H-6677

All reducers were entered and checked and the soundings were reduced and checked by the Norfolk Processing Office.

This sheet is being transmitted to the Washington Office for smooth plotting in compliance with the Director's letter of November 17, 1942, reference 82-DRM.

Respectfully submitted

  
Isadore M. Zeskind  
Assoc. Cartographic Engineer

Norfolk, Virginia  
December 10, 1942

Approved and forwarded

Paul C. Whitney  
Supervisor SE District

82 Reuk  
821

~~311~~ Charts

*[Handwritten initials]*  
5/12

22-RCC  
1995 LY 4

August 14, 1942

To: Commanding Officer  
U.S.C. & G.S. Ship LYDONIA  
c/o Postmaster  
Portland, Maine

From: The Director  
U. S. Coast and Geodetic Survey

Subject: Field Work - Project CS-265

Enclosed you will find a copy of Paragraph 10 - Additional Field Work Recommended - that will appear in the review of Hydrographic Survey H-6677. The review has not yet been completed, but the above paragraph is being sent you in order that you may make the hydrographic investigations necessary to complete this sheet. Four photostats covering the area on H-6677, which has been completed and to which the above notes apply, are being sent you under separate cover.

In completing sheet H-6677, the investigations recommended shall be made. Below latitude 43°35', all shoal indications developed in the work of the OCEANOGRAPHER in 1941 or in your present work shall be thoroughly investigated, as well as all shoal soundings that have been transferred from previous surveys. As you will note on the photostats, soundings shown ringed in blue are from H-403(1853), H-403 bis(1905), H-404(1852-53), H-788(1862), and H-243(1850); those ringed in red from H-4303(1923), while those that have been ringed in green are from wire-drag surveys.

For your information you are also advised that the 5-foot sounding shown just south of Wood Island about 2 miles northwest of Cape Small originates in a rough survey made by the Commanding Officer of the Lighthouse Tender ILEX in 1932, as reported in chart letter 540(1932). Your survey shall definitely prove or disprove its charted location, and the least depth on the shoal should be determined.

The soundings shown on the latest edition of chart No. 315 in the east side of "The Basin" about 6 miles north of Cape Small are in part a result of the interpretation of chart letter 592(1941). This letter also reports that there is a rock awash at mean low water at or near the 3-foot sounding shown near the "n" in the word "Basin". Since this area is reported to be considerably used by yachtsmen, a thorough survey shall be made to locate all dangers.

Enclosure

(Signed) L. O. COLBERT  
Director

CC: Chart Division  
Hydrography Section

GEOGRAPHIC NAMES

Survey No. **H 0077**

**Additional work**

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	K.
<b>Casco Bay</b>									1
<b>Cape Elizabeth</b>									2
									3
									4
									5
									6
									7
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									27

**H0677**  
**Additional work**

	Remarks	Decisions
1		
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Surveys Section (Chart Division)

H3677

HYDROGRAPHIC SURVEY NO. ....

Additional work

Records accompanying survey:

Boat sheets 3...; sounding vols. 11....; wire drag vols. 0....; bomb vols. 0....; graphic recorder rolls Bathograms 17 (in envelopes) special reports, etc. 3-tracings... 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. ....

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

Number of positions on sheet 1858
Number of positions checked 6
Number of positions revised 2
Number of soundings recorded
Number of soundings revised (refers to depth only) 3
Number of soundings erroneously spaced 0
Number of signals erroneously plotted or transferred
Topographic details Time 10
Junctions Time
Verification of soundings from graphic record Time

Verification by G.F. Jordan Total time 123 Date 3/27/43

Review by G.F. Jordan Time 27 Date 3/27/43

H5677  
Additional work

MEMORANDUM  
IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTATIC~~

No. H5677 (Add. W'k)  
~~XXXX~~

received Dec. 14, 1942  
registered Dec 17, 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 to 6	<i>AF</i>	Lieut. Comdr Finnegan. & M. McEwen notes.
88			
90			

RETURN TO

82 **R.W.Knox**

Fac  
HLL

### TIDE NOTE FOR HYDROGRAPHIC SHEET

December 21, 1942.

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in  
11 volumes of sounding records for

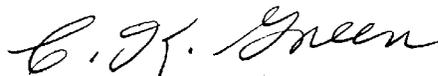
HYDROGRAPHIC SHEET 6677 Additional work

Locality East of Cape Elizabeth, Casco Bay, Maine.

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

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

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

1142

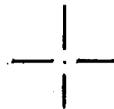
2142



Ned



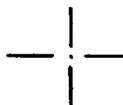
Oil



Additional Work - 1942

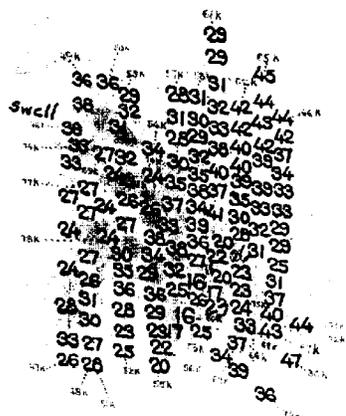
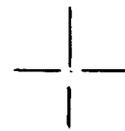
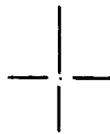
Positions not plotted on smooth sheet, because of close development. Necessary soundings are transferred

70° 13'



43° 38'

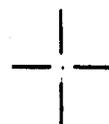




Additional Work -1942  
 Postions not plotted on smooth sheet, because of close  
 development. Necessary soundings are transfered.

70° 11'

43° 35'



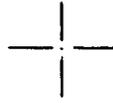
Eat

Fat

Gas

Hal

Ina



Rock

Spin

Fire



~~swash across latitude~~  
Cav 11 ft MLW

Chy

70° 11"

43° 38'

Additional Work - 1942  
Positions not plotted on smooth sheet because of close  
development. Necessary soundings are transferred

Ram



DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6677 AD. WORK  
Field No. 1006

Maine, Casco Bay, East of Cape Elizabeth  
Surveyed July - September 1942; Scale 1:10,000  
Instructions dated June 11 and July 15, 1942;  
Field Letter dated August 14, 1942

Soundings:  
808 Fathometer

Control:  
Three-point fix on shore  
signals

Chief of Party - C. D. Meaney  
Surveyed by - W. R. Porter; C. A. George  
Protracted by - L. L. King  
Soundings plotted by - L. L. King  
Verified and inked by - G. F. Jordan  
Reviewed by - G. F. Jordan  
Inspected by - H. R. Edmonston, March 30, 1943

1. Purpose and Extent of Survey

This additional work completes the survey south from Lat.  $43^{\circ}35'$ , which was unfinished at the close of the previous season's work, and also includes the development of certain shoals and prior shoal soundings listed in the review of H-6677 (1941).

2. Incomplete Development

It is recommended that the ledge point with 32-ft. depth projecting into the main waterway at Lat.  $43^{\circ}38.08'$ ; Long.  $70^{\circ}13.04'$  be developed for least depth. This area is not covered by H-3677 (1914) wire drag. *32 ft. spot developed by Add. Wk. 1943 sig was verified.*

3. Soundings of Prior Surveys to be Disregarded

The following prior soundings, in disagreement with the present surveys, are considered to have been adequately disproved by the present development. The reference paragraphs, noted below, contain a discussion of these soundings in the original review, H-6677 (1941). The reference charts are dated 231-12/17/41; 325-1/2/43; 315-12/10/42; 201-10/28/42

	Lat.	Long.	Sdg.	Chart	Ref.	Remarks
	43°	70°				
(a)	38.56'	11.43'	25'	325	Par. 5(i)	27ft. on development ✓
(b)	38.43'	10.85'	$\frac{1}{2}$ ', 1'	None	Par. 5(oo)	erroneous position ✓
(c)	37.24'	11.38'	44'	325	Par. 5(p)	46ft. nearby ✓
(d)	37.22'	12.03'	34'	201	H-3677	31ft. nearby ✓
(e)	37.20'	11.44'	41'	None	Par. 6(b)	considered erroneous ✓
(f)	37.58'	11.08'	37'	None	H-3677	32 feet nearby ✓
(g)	35.68'	11.55'	9'	325	Par. 6(d)	considered erroneous
(h)	35.1'	11.4'	22'	325	Par. 5(cc)	23 feet nearby
(i)	35.14'	11.37'	33'	325	Par. 5(cc)	35 feet nearby
(j)	34.1'	11.5'	18'	315	Par. 5(gg)	22-ft. development
(k)	33.90'	11.67'	11'	None	Par. 5(hh)	considered erroneous
(l)	33.9'	11.1'	50'	None	Par. 5(ii)	" "
(m)	The 39-ft. sounding referred to in Par. 5(kk) and charted on 315 as 37 feet at Lat. 43°33.25'; Long. 70°11.87' is now considered to be erroneous. Present development shows 64-ft. depths. It is believed the unreduced 7-fm. 3-ft. sounding should have been recorded 11fm. 3ft. It is recommended that the 39-ft. sounding be disregarded.					
(n)	The 20-ft. sounding charted on 315 at Lat. 43°33.54'; Long. 70°11.8' from H-4307 (1923) W.D., is now considered to be erroneous. This grounding in 40-ft. depths was noted at buoys 5 to 6, whereas both tenders took shoal soundings at F-buoy. The 2,000-ft. drag had been set at 1200 feet on the previous strip. It is believed the remark was erroneously based on the shorter drag, which would have placed the grounding near the tender positions. The tender soundings of 19 feet and 21 feet agree with the closely developed shoal depths on the present survey. It is recommended that the 20-ft. grounding be disregarded.					
(o)	The 10-ft. sounding charted on 231 at Lat. 43°33.34'; Long. 70°12.65' from H-4307 (1923) W.D. is considered to be slightly south of its correct position. The present development shows 19 feet at this position with 10-ft. depths 60 meters inshore. The 10-ft. sounding should be disregarded.					

- (p) The 19-ft. sounding charted on 231 at Lat.  $43^{\circ}33.13'$ ; Long.  $70^{\circ}13.0'$  from H-4307 (1923) W.D. is considered to be mis-plotted. The grounding is noted as buoy-1 but the tender position at the grounding plots at N-buoy, with no sounding obtained. The tender position is 90 meters N.N.W. of the plotted grounding and 100 meters south of the 18-ft. shoal on the present survey. It is believed the grounding occurred after the last drag position and actually was on the 18-ft. shoal. As the present survey is considered adequate, it is recommended that the 19-ft. sounding be disregarded.
- (q) The 25-ft. sounding charted on 231 at Lat.  $43^{\circ}33.15'$ ; Long.  $70^{\circ}13.25'$  from H-4307 (1923) W.D. is a grounding plotted in 40-ft. depths which is considered to have occurred 50 meters S.E. on the 27-ft. shoal, as the F-buoy at that point was set at 28 feet. The 25-ft. grounding should be disregarded.
- (r) The 27-ft. sounding charted on 231 as 28 feet at Lat.  $43^{\circ}33.26'$ ; Long.  $70^{\circ}13.30'$  from H-4303 (1923) is considered erroneous. The plotted 28-ft. sounding, falling in 42-ft. depths, is an unreduced 5-fm. 4-ft. sounding following 7fm. 4ft. and preceding 7fm. 2ft. It is believed 7fm. 5ft. should have been recorded. In view of the close development on the present survey it is recommended the 27-ft. sounding should be disregarded.
- (s) The reef, charted on 231 at Lat.  $43^{\circ}33.1'$ ; Long.  $70^{\circ}13.8'$  from T-312 (1850), named Stevens Rock was covered with five fathometer lines on the present surveys without verifying low water depths. Both the 1941 sounding line and present development lines show the least depth to be 6 feet. The reef symbol by the prior topographic party may have been based on observed breakers. However, it is considered swells rolling in over the 40-ft. depths would break over the 6-ft. depth. It would have been advisable to investigate this rock at low tide, but the present development at high water is considered to be sufficient to discredit the prior low water feature. This rock is charted on 315 as a rock awash and had been carried forward on the present survey as a rock awash, previous to this review. It is recommended that 6 feet be accepted as the least depth.
- (t) The 8-ft. uncharted sounding on H-243 (1850) at Lat.  $43^{\circ}32.6'$ ; Long.  $70^{\circ}13.55'$ , previously carried forward on the smooth sheet, is considered to be superseded by the 9-ft. sounding, 70 meters east on the present development.
- (u) The 34-ft. sounding charted as 35ft. on 231 at Lat.  $43^{\circ}32.7'$ ; Long.  $70^{\circ}12.5'$  from H-3677 (1914) W.D. is considered to be erroneous. The closely developed area shows

50-ft. depths at this position. No solution was found for the detached sounding, as neither angle of the position swings into comparable depths on the present survey. Both sounding tenders were obtaining soundings over a large area. The present development is considered adequate to disprove the plotted 35-ft. sounding, which should be disregarded.

- (v) The 28-ft. sounding charted on 231 at Lat.  $43^{\circ}32.45'$ ; Long.  $70^{\circ}12.7'$  from H-243 (1850) falls south of a shoal in 40-ft. depths on the present survey. The present survey so adequately develops this area that the 28-ft. sounding is considered to be superseded. It is recommended that the 28-ft. sounding be disregarded.
- (w) The 29-ft. sounding charted on 231 at Lat.  $43^{\circ}32.5'$ ; Long.  $70^{\circ}12.55'$  from H-4303 (1923) falls in 50-ft. depths 100 meters S.E. of the 28-ft. shoal on the present survey. Other soundings on this short line on the prior survey fall S.E. of comparable depths on the present survey. As the present survey very closely develops this area, it is recommended that the 29-ft. sounding be disregarded.

#### 4. Soundings of Prior Surveys Carried Forward

Eight relatively unimportant prior soundings have been carried forward from hydrographic surveys. Six of these, on which no additional work was recommended, are noted in paragraphs 5(o), (s), (t), (u), (x) and (y) of the 1941 review. The other two soundings, noted in paragraphs (cc) and (dd) are as follows:

- (a) The 20-ft. prior sounding at Lat.  $43^{\circ}35.05'$ ; Long.  $70^{\circ}11.48'$  is not considered disproved and is carried forward.
- (b) The 14-ft. prior sounding on Broad Cove Rock at Lat.  $43^{\circ}35.05'$ ; Long.  $70^{\circ}11.30'$  is also carried forward. This leadline sounding is from a special investigation of this rock on H-403bis (1905).

#### 5. Condition of Survey

- (a) The rock awash at extreme low tide at Lat.  $43^{\circ}33.3'$ ; Long.  $70^{\circ}12.7'$  is a questionable reading of  $1-1/2$  feet on the fathogram at position 37c, Launch No. 82, July 29, 1942. There is a possibility that this feature might be a stray, but it has been accepted as a pinnacle rock.
- (b) The 250-meter gap in the sounding lines at the southern limit of the survey is due to rejecting

two lines of "g" day. The relatively deeper soundings recorded in the sounding volumes were scaled from a very faint graph on the D-scale. This condition is mentioned in the descriptive report. It is considered that definite depths cannot be scaled for these lines, and the recorded soundings have been rejected. No sharp irregularities of the bottom are noted on the fathogram.

- (c) The soundings by launch No. 79, fathometer No. 53, appear to be 1 to 3 feet deeper than the 1941 depths. This is especially noticeable at Lat.  $43^{\circ}37.2'$ ; Long.  $70^{\circ}12.0'$ , in 50-ft. depths. The difference is also noted at Lat.  $43^{\circ}36'$ ; Long.  $70^{\circ}12'$  in 50-ft. depths and at Lat.  $43^{\circ}33.1'$ ; Long.  $70^{\circ}14.3'$  in 19-ft. depths. Other deeper soundings on the northern part of the sheet were not inked where the depth curves were concerned.

6. Reef Detail

The shoreline and reef detail have been transferred from planimetric drawing T-5956 (1942) before its review. The reef detail has been adjusted to conform to the minus soundings.

Several minor discrepancies are noted in this detail in comparison with prior topographic surveys. It is recommended that the present survey supersede the prior surveys in this respect.

7. Additional Work

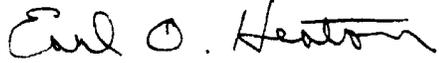
See recommendation in paragraph (2).

*Add. Wk. accomplished  
in 1943*

Examined and approved:

  
Chief, Surveys Branch

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of  
Coastal Surveys

Inspected in connection with correction to chart 1204 (Buff) H.E.M. <sup>12/22</sup> 1942

Applied to Chart 3201 before verification, inking, or review  
JTW 1/16/43

Applied (before verification & review) to Cht. Cor. 315 Feb. 23, 1943

Applied to Chart Correction 50 (Buff) March 11/43 H.E.M. <sup>K.P.</sup>

Applied to chart 3201 after review. L.A.M. 4/27/43.

Applied to cor. proof cor. 325 ( May 3, 1943) H.E.M. 5/5/43

Applied to drawing of Chart 231 (after review) JTW. May 22, 1943

Applied to Reconstruction Ch. 315 (after review - JTW June 7, 1943

Applied to drawing of Chart 1205 (after review) J.K.S. Aug. 3, 1943  
" " " " 201 " " JTW Oct. 29, 1943

# 6677

Additional work

Diag. Cht. No. 1204-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. 6677 Office No. H-6677

### LOCALITY

State MAINE

General locality PORTLAND

Locality PORTLAND HARBOR

194 3

CHIEF OF PARTY

L. P. Raynor

LIBRARY & ARCHIVES

DATE June 9, 1943

B-1870-1 (11)

6677  
6677  
6677  
6677

Additional work

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.  
H6677

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. 6677

REGISTER NO. H6677

H6677

State Maine

General locality Portland

Locality Portland Harbor

Scale 1:10000 Date of survey April, ~~1942~~ 1943

Vessel Launch

Chief of Party L.P. Raynor

Surveyed by L.P. Raynor

Protracted by L.S. King June 11, 1943

Soundings penciled by " " "

Soundings in ~~centimeters~~ feet at M.L.W.

Plane of reference

Subdivision of wire dragged areas by

Inked by L.S. King June 11, 1943

Verified by " " "

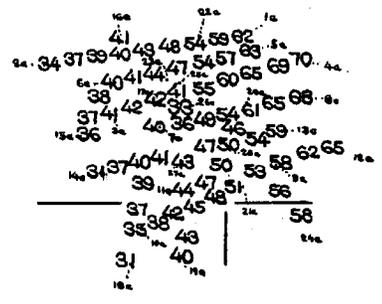
Instructions dated April 5, 1943 1943

Remarks:

39'

H-6677 Add. WK. (1943)  
L.P. Raynor Chief of Party

Positions were not plotted on smooth sheet  
because of close development.  
Necessary soundings are transferred.



43°-38'

Kin

70° 13'

14'

H6677

DESCRIPTIVE REPORT

ADD. WORK

To Accompany

Hydrographic Sheet No. 6677 (Reg.)

Ship LYDONIA

1943

L.P. Raynor, Chief of Party

AUTHORITY: This survey was executed in compliance with the Director's Letter dated April 5, 1943, Reference: 22/MEK, 1995 LY 4.

SURVEY METHODS: Standard hydrographic survey methods were used throughout, soundings were taken with an 808 depth recorder and a lead line.

DISCREPANCIES: The sounding of 32 feet was approved by a drift sounding investigation in which a sounding of 33 feet (using predicted tides) was obtained on the same spot.  $\phi 43^{\circ} 38.06'$   $\lambda 70^{\circ} 13.06'$

GENERAL: A system of lines were run normal to the previous lines of the boat sheet. These lines failed to disclose the shoal area so drift soundings were taken. Approximately 50 minutes were taken up in drifting over the area. Cross ranges were used to fix the launch position. The sounding apparently was obtained on a rocky projection which had a rather steep slope. The officer in charge assisted the leadsman in "feeling" for the least depth so he is certain that such was obtained. The bottom was not visible, however, the shoal area is obviously small since a drift of 50 meters would take the launch into a uniform deeper area. It is not believed necessary to sweep the area. It is recommended that the sounding of 32 feet be retained.

Respectfully submitted

*William F. Deane*

William F. Deane  
H. & G.E. C&GS

Approved and Forwarded:

*Noting, however, that above was an examination not a survey*

*L.P. Raynor*

L. P. Raynor  
H. & G. E., Chief of Party

*32 ft. sounding was verified by Add. Wk.*

*R.H. Carstens*

*6/14/43*

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. .... **H6677**  
*additional work*

Records accompanying survey:

Plotted on original  
 Boat sheets ~~sheet~~ sounding vols. **.1**...; wire drag vols. **0**....;  
 bomb vols. ....**0**...; graphic recorder rolls **.0**....;  
 special reports, etc. ....  
 .....

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

Number of positions on sheet	<b>.28</b> ..
Number of positions checked	<b>..1</b> ..
Number of positions revised	<b>..0</b> ..
Number of soundings recorded	<b>..114</b> ..
Number of soundings revised (refers to depth only)	<b>..0</b> ..
Number of soundings erroneously spaced	<b>..0</b> ..
Number of signals erroneously plotted or transferred	<b>..0</b> ..
Topographic details	Time .....
Junctions	Time .....
Verification of soundings from graphic record	Time .....

*Plotting*  
 Verification<sup>^</sup> by *Larry King*..... Total time **5 1/2 hrs** Date **June 11, 1943**  
*Inspected*  
 Review by *R.H. Carstens*..... Time **1 1/2** Date **6/14/43**...

H6577

Remarks.

Decisions

	Remarks.	Decisions
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GEOGRAPHIC NAMES

Survey No.

**H5677**

*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
Portland										2
Portland Harbor										3
										4
										5
										6
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# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT PHOTOSTAT OF	}	No. H No. T	Additional work <b>H6677</b>	{ received June 10, 1943 registered June 10, 1943 verified <i>June 11, 1943</i> reviewed approved
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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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88			
90			

RETURN TO

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

*✓ R.W.K.*

No Correction to Chart 201 - 10/29/43 - JFW