

6858

6858

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 2143 Office No. H-6858

LOCALITY

State MAINE

General locality ~~COAST OF MAINE~~

Locality APPROACHES TO BOOTH BAY AND

~~MOUTH OF SHEEPSHOT RIVER~~

194 3

CHIEF OF PARTY

L. P. Raynor & I. E. Rittenburg

LIBRARY & ARCHIVES

DATE

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. H-6858

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. 2143

REGISTER NO. H-6858

State MAINE

General locality ~~Coast of Maine~~

Locality APPROACHES TO BOOTH BAY AND MOUTH OF SHEEPSCOT RIVER

Scale 1:20,000 Date of survey July - October, 1943

Vessel GILBERT & LYDONIA

Chief of Party L. P. Raynor & I. E. Rittenburg

Surveyed by ~~Ship's Officer C. Wagner~~, I. E. Rittenburg

Protracted by L. E. Klinefelter

Soundings penciled by L. E. Klinefelter

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by G. F. Jordan

Verified by G. F. Jordan

Instructions dated March 11, 1942 and March 16, 1943

Remarks: This sheet was processed at the Norfolk Processing Office.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET H-6358

PROJECT CS-265

COAST OF MAINE

This report covers that portion of Sheet H-6358, surveyed by the M.V. GILBERT in July, August and September of 1943. ~~The work of previous seasons (1941 & 1942) done by the parties of the Ships OCEANOGRAPHER and LYDONIA is not covered in this report as it is assumed that the necessary descriptive reports have been submitted previously. (Does not apply to this survey)~~

LIMITS AND JUNCTIONS:

The 1943 work on this sheet extends from a junction with the work of the LYDONIA 1942 at approximately Longitude $69^{\circ}42'W$, eastward to Longitude $69^{\circ}30'W$ where a junction is made with the work on Sheet Field No. *2143, GILBERT. The southern limits * H-6861 (1943) of this sheet were those laid out on the section of Chart 1204 which shows the limits and amended limits for the entire Project CS-265. No new surveys adjoin this sheet on the south. On the north, in the entrances to Sheepscott River and Booth Bay junctions were made with the work of the LYDONIA, L. P. Raynor, 1943, in approximate Latitude $43^{\circ}46.8'$. At the north-eastern edge of this survey, junctions were made with the surveys of L. P. Raynor (Ship LYDONIA) and W. R. Porter (FARIS), 1943. The exact junction limits of each or the sheet numbers cannot be given as they are unknown to me. The inshore work around the islands lying off the entrance to Booth Bay, the 8 foot in Latitude $43^{\circ}44.2'N$, Longitude $69^{\circ}33.7'$ and the area around the bare rock in Latitude $43^{\circ}43.8'N$, Longitude $69^{\circ}37.5'$, shown as holidays on this sheet, were also surveyed by the party of L. P. Raynor * (LYDONIA) 1943. The blank area on this sheet which lies between the Sisters Beacon and the ~~Cuckolds L.H.~~ Cuckolds L.H. was surveyed in 1941 by F. L. Peacock (OCEANOGRAPHER), H-6675 (1941) * on present survey

AUTHORITY:

This survey was made in accordance with original instructions from the Director for Project CS-265 dated May 7, 1941 addressed to the Commanding Officer, OCEANOGRAPHER together with the following amended instructions:

March 11, 1942 addressed to C.O. LYDONIA
June 13, 1942 addressed to C.O. LYDONIA
March 16, 1943 addressed to C.O. LYDONIA

And a further amendment which extended the limits of the project eastward to Monhegan Id. (the date of which is not available).

CONTROL AND DATUM:

Control consisted mainly of triangulation stations supplemented by signal locations furnished by the air photo compilations, shown as red circles on the sheet, and two objects cut in by sextant

fixes, shown as blue circles and the cuts indexed in the sounding volumes. The source of the shoreline, and other topographic features, is (not known) but in this connection none of the topographic detail shown on the boat sheet was located by this party and none should be used for charting. This survey is on the North American, 1927 Datum. * given in Review, part

METHODS:

Standard methods were used throughout. Soundings were obtained by 808 Fathometer No. 53 operated entirely on the fathom scale. Fixes were obtained by sextant angles taken between previously located shore objects. Soundings were corrected for tide, bar and salinity and temperature. All corrections were entered in the sounding volumes as follows: to the nearest half foot to twelve fathoms and to the nearest foot in deeper depths. At least two bar checks were taken daily to furnish data for the instrumental error plus the correction due to the salinity, temperature, etc.. Serial temperatures and salinities were taken frequently to provide data from which the corrections due to velocity changes could be deduced. Correction to the soundings, due to velocity, etc. were taken from the results of the bar checks up to the deepest limit of the bar, usually twenty fathoms. In greater depths, corrections were obtained from a curve, based upon the observations for salinity and temperature, modified by using the value obtained by the deepest bar check for each day involved as an index, i.e., considering the bar check as the actual observed correction at the depth and the correction due to temperature and salinity as the theoretical value. Fathometer corrections is the subject of another report which is attached with records.

The general spacing of sounding lines is 150 meters, due to the very broken bottom encountered, and this spacing was reduced by splits wherever necessary to delineate clearly the nature of the bottom. In an area such as this there is really no limit to the number of splits that can be run.

DISCREPANCIES:

None. Crossings in general are good and it is believed that in many of those cases which fail to cross by several feet, the applications of the final tide reducers and fathometer corrections will remove the difference.

DANGERS:

Many pinnacles were found but few previously unknown are dangerous to navigation. The only ones worthy of especial note are as follows.

- 49 feet in Latitude 43°43.1', Longitude 69°34.62' ✓ ✓
- 38⁹ feet in Latitude 43°42.57', Longitude 69°37.71' - See further discussion under next heading.
- 28³ feet in Latitude 43°44.29', Longitude 69°35.65' ✓ ✓
- 43 feet in Latitude 43°45.8', Longitude 69°41.0' ✓ ✓

17 feet in Latitude $43^{\circ}45.6'$, Longitude $69^{\circ}37.45'$ ✓

24 feet in Latitude $43^{\circ}47.6'$, Longitude $69^{\circ}33.5'$ *24ft is questionable. See Review, Par. 9(b)* ✓

The dangers found in previous surveys and reports are discussed under the heading of "Comparison with previous surveys and charts". ✓

COMPARISON WITH PREVIOUS SURVEYS AND CHARTS 313, 314 and 1204:

A preliminary review for Project CS-265 was furnished this vessel. In this review various shoal soundings etc. were enumerated giving the source and credibility of each. Each of these shoal soundings etc. discussed below appears in this preliminary review and the numbers given each refer to the number shown on this review. In addition several other shoal soundings were investigated.

Chart 313

Just south of 3d, in Latitude $43^{\circ}48.55'$, Longitude $69^{\circ}31.4'$, 60 feet was found near the charted 73. (*Shoal point with 60 ft curve*) ✓

The ledge about two miles east of White Island and encircled with the notation "Shoal not adequately developed", was developed and numerous depths shoaler than those charted were found. In addition the shape of the ledge as now shown differs materially from that as charted. A least depth of 60 ft. now has been found. (*good development*) ✓

Likewise the shoal north of Latitude $43^{\circ}48'$ between Longitude $69^{\circ}33'$ and $69^{\circ}34'$ has been found to be quite different in shape and now has a least depth of $5\frac{1}{2}$ feet. This shoal is shown as having originated with Sheet H-791, 1860. ✓

The shoal soundings south of Latitude $43^{\circ}48'$ between Longitude $69^{\circ}33'$ and $69^{\circ}34'$ shown as originating with H-746, 1860 were investigated. A least depth of 24 feet was found in this area in Latitude $43^{\circ}47.6$, Longitude $69^{\circ}33.5'$. The 58 and 66 feet soundings charted were not found here but shoaler water was found in the vicinity. (*59 ft at charted 58; 60 ft curve near charted 66 ft.*) ✓

87 feet was found in Latitude $43^{\circ}46.1'$, Longitude $69^{\circ}30.8'$. This appears in a blank area of the chart. ✓

In the vicinity of the 60, 96, and 69 ft. soundings charted about a mile northward of Outer Heron Ledge 57, 76⁶⁵, and 60⁵⁵ feet respectively were found. 70⁶⁶ feet was found near the 75 foot sounding charted in Latitude $43^{\circ}46.2'$, Longitude $69^{\circ}33.0'$. ✓

Chart 314

#20 - The 40 ft. sounding charted on Poor Shoal ^(Lat. $43^{\circ}43.2'$ Long. $69^{\circ}37.1'$) was thoroughly investigated and a least depth of $3\frac{1}{2}$ ft. found, 350 meters N.E. ✓

#21 - The 21 and 36 ft. soundings charted in Latitude $43^{\circ}42.3'$, Longitude $69^{\circ}38.3'$ were searched for and not found. This is an area of very broken bottom but nothing could be found dangerous ✓

to navigation. The wire drag party of L. C. Johnson was requested to drag this area to disprove the existence of this shoal. This was done. Broken bottom with a least depth of ³⁹~~36~~ ft. was found about half a mile northeastward of these soundings in Latitude 43°42.55', Longitude 69°37.7'. To prove or disprove the possibility that the 36 and 21 ft. soundings were displaced and might be in this latter position the wire drag party of L. C. Johnson covered this area with a drag set to 38 ft. effective depth. It is now certain that these two soundings do not exist in the vicinity of their charting and it is recommended that they be expunged from the charts after the wire drag sheets have been verified. ✓ agree

The 57, 54, 72 and 63 ft. soundings north of Latitude 43°44' and shown as having originated with Sheet H-696, 1859 were all investigated and shoaler water found, 38, ~~46~~, ~~71~~ and 51 ft. respectively. _{44 41} ✓

The 87 ft. sounding in Latitude 43°46', Longitude 69°38.3' was found and a lesser depth of ~~72~~ feet found. ₇₀ ✓

West of Damariscove Island between Longitudes 69°37' and 69°38' and Latitudes 43°45' and 43°46.7' numerous shoal soundings are charted. A comparison with this survey shows the following results.

Charted	This Survey
11 ft.	Not surveyed - done by LYDONIA
31 ft.	32 ft. ✓
2 - 55 ft.	41 ² ft.
57 ft.	39 ft. 33 to 49 ft
43 ft.	47 ft. Believe further developed by LYDONIA
49 ft.	155 ft. Believe this sounding is ^{spaced} charted too far west. ✓
63 ft.	4 ⁷ ft. Also think that developed by LYDONIA.
87 ft.	66 ft.) ✓
81 ft.	17 ft.) Many other shoal soundings in vicinity. ✓

In Latitude 43°45.95', Longitude 69°40.3' chart shows 54 ft. ⁵⁰ ft. was found. ✓ ✓

44 and 43 feet were found near the charted 54 feet in Latitude 43°45.7', Longitude 69°41'. ✓ ✓

56 ft. was found near charted 73 ft. in Latitude 43°45.95', Longitude 69°41.2'. ✓ ✓

⁴⁹~~51~~ ft. was found near charted 63 ft. in Latitude 43°44.3', Longitude 69°40.45'. This was found to be part of an extensive ledge. ✓


In addition many soundings much shoaler than those charted were found and are too numerous to mention.

The 34 ft. sounding charted in Latitude ^{on 1204} 43°43.95', Longitude 69°34.85' could not be found even though very close development was run. The shoalest sounding obtained here was 42 ft. about 150 meters southeastward. However it is recommended that this 34 ft. sounding be retained at least until it has been wire dragged. It is felt that further sounding here is uneconomical and this pinnacle, if existant, can only be found by chance even though further hydrography is done.

34 ft retained ✓

TIDES:

Reducers were obtained from the records of a standard automatic tide gage installed at Boothbay Harbor, Maine for A to G day inclusive. Reducers for H to CC days inclusive were obtained from the records of a portable automatic tide gage at Damariscove Island. Reducers for DD and EE days were obtained from the records of a portable automatic tide gage at Monhegan Island, Maine. No tidal data sheet is attached as the information is not available. However, the actual reducers used are attached.


I. E. Rittenburg
Authorized Certifying Officer
and Chief of Party

STATISTICS FOR SHEET H-6958

Volume	Stat. Mi.	No. Positions
1	13.6	111
2	137.6	371
3	138.9	381
4	118.7	426
5	110.6	410
6	79.2	356
7	94.8	422
8	124.7	407
9	91.9	397
10	137.8	381
11	93.2	412
12	33.0	210
	<hr/>	
Total	1174.0	4284

A D D E N D U M

FOR

HYDROGRAPHIC SHEET NO. H-6858

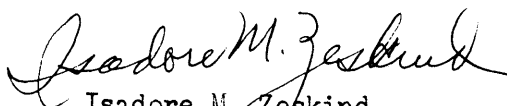
This sheet was surveyed by the Ships GILBERT and LYDONIA. The GILBERT surveyed the entire area except the portion in the vicinity of Bantam Rock, South of Damariscove Island, which was surveyed by the LYDONIA.

Discrepancies:

Latitude $43^{\circ} 43.40'$ and Longitude $69^{\circ} 38.93'$; 166-169 M (red). These soundings appear to be ~~1 fathom~~ ^{3 to 6 ft} too shoal.

comment in Review, Par. 2.

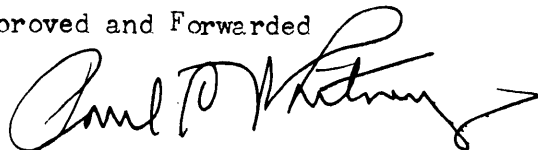
Respectfully submitted,



Isadore M. Zeskind
Associate Cartographic Engineer

February 18, 1944
Norfolk, Virginia

Approved and Forwarded



Paul C. Whitney
Supervisor, S. E. District

2ae
JHE

TIDE NOTE FOR HYDROGRAPHIC SHEET

March 4, 1944

~~Division of Hydrography and Topography~~

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

Plane of reference approved in
12 volumes of sounding records for


HYDROGRAPHIC SHEET 6858

Locality Approaches to Booth Bay and mouth of Sheepscot River, Maine

Chief of Party: I. E. Rittenburg in 1943
Plane of reference is mean low water reading
3.9 ft. on tide staff at Boothbay Harbor
18.5 ft. below B. M. 4
2.9 ft. on tide staff No. 12 at Damaris Cove
16.4 ft. below B. M. 1
2.1 ft. on tide staff at Monhegan Island
16.5 ft. below B. M. 1

Height of mean high water above plane of reference is 8.8 feet.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Remarks

Decisions

1		U.S.G.B
2		
3		438696
4		" U.S.G.B
5		438695
6		" U.S.G.B
7		438697
8		438696
9		437696 U.S.G.B
10		437695
11		"
12		
13		
14		
15		
16		
17	Location of tide staff	
18	"	437693
19		
20		
21		
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES
Survey No. **H6858**

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Maine</u> ✓											1
Coast of Maine											2
<u>Booth Bay</u> ✓											3
<u>Sheepscot River</u> ✓											4
<u>DAMARISCOTTA RIVER</u> ✓											5
<u>Johns BAY</u> ✓											6
<u>GEORGETOWN ISLAND</u> ✓											7
<u>SOUTH PORT ISLAND</u> ✓											8
<u>DAMARISCOVE ISLAND</u> ✓											9
<u>PUMPKIN ISLAND</u> ✓											10
<u>WHITE ISLANDS</u> ✓											11
											12
											13
											14
											15
											16
<u>Damariscove I.</u>											17
<u>Monhegan I.</u>											18
<u>Boothbay Harbor</u>											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined in red approved
by L. Heck on 5/29/41

(there is no Damariscove. should be either Damariscove I. or Monhegan I. see P.S.)

Surveys Section (Chart Division)

H6858

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets .²...; sounding vols. .¹²...; wire drag vols.;
 bomb vols.; graphic recorder rolls .⁹....;
 special reports, etc. . Bar & Fathometer Correction Report.....

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

Number of positions on sheet	4284.	
Number of positions checked	...32	
Number of positions revised	...3.	
Number of soundings recorded	Profile.	
Number of soundings revised (refers to depth only)	...26	
Number of soundings erroneously spaced	...0.	
Number of signals erroneously plotted or transferred	
Topographic details	Time ..4..	
Junctions	Time ..11..	
Verification of soundings from graphic record	Time ..0..	
Verification by <i>G. F. Jordan</i>	Total time ..192.	Date <i>May 23, 1944</i>
Review by <i>G. F. Jordan</i>	Time ..34.	Date <i>May 23, 1944</i>

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H
No. T

H6858

received February 21, 1944
registered February 22, 1944
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	<i>Comdr Finnegan</i>	<i>p9</i>	<i>2,3,4,5 L.B.B.</i>
88			
90			

RETURN TO

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

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6858

Field No. 2143

Maine, Approaches to Booth Bay and Sheepscot River
Surveyed July to October 1943; Scale 1:20,000
Instructions dated March 11, 1942 and March 16, 1943

Soundings

Control

808 Fathometer

Three-point fix on shore signals

Chief of Party - I. E. Rittenburg, L. P. Raynor
Surveyed by - I. E. Rittenburg, C. Wagner
Protracted by - L. E. Klinefelter
Soundings plotted by - L. E. Klinefelter
Verified and inked by - G. F. Jordan
Reviewed by - G. F. Jordan
Inspected by - H. R. Edmonston, June 1944

1. Shoreline and Signals

The control for this survey is from previously established triangulation, radial plot on planimetric maps, and hydrographic signals located from the latter control.

The planimetric maps furnishing this control and the high water line shown on the sheet are as follows:

T-5971	T-5988	T-5990
T-5972	T-5989	(from flights in 1941)

The datum station "THE CUCKOLDS, 1909", from 1934 field computations does not agree with the publication value corrected to 1927 datum. The 7 meters in latitude and 2 meters in longitude difference is probably due to the unrecorded construction of a new lighthouse since the 1909 determination. Therefore, the date of the station shown on the survey has been changed to 1934.

2. Sounding Line Crossings

Considering the extreme irregularity of the bottom, the sounding line crossings are considered excellent. The only disagreements found occur in smooth bottom of over 200-foot depths 3 miles southwest of Damariscove Island and amount to from 2 to 6 feet. Three crosslines considered to be too shoal because of a rough sea were not inked. Better agreement would have resulted in scaling the graphic recessions instead of the peaks.

3. Submarine Features

Most of the area of the present survey is over extremely irregular bottom with nearly all shoals and deeps extending in an offshore, southerly direction. Most of the shoals are sharp rock pinnacles or ridges with the notable exception of the large deep shoal at Lat. $43^{\circ}47'$, Long. $69^{\circ}32'$.

The areas at the mouth of Sheepscot River and southwest of Bantam Rock show a generally smooth bottom with the underlying rock occasionally projecting up thru the sedimentary bottom.

4. Junctions with Contemporary Surveys

Satisfactory junctions are made on the west with H-6730 (1941-42) and in the area at Lat. $43^{\circ}45'$, Long. $69^{\circ}41'$ with H-6675 (1941). H-6805 (1942) on the west and H-6861 (1943) on the east have not been verified. Contemporary surveys on the north have not been received in the office.

5. Comparison with Prior Surveysa. H-696 (1859), 1:40,000

The agreement with this prior survey is generally satisfactory. Several unimportant discrepancies in the deeper depths should be disregarded as the shoaler prior soundings are sufficiently near to present shoals as to be unimportant. A few more noticeable discrepancies are listed.

- (1) The 132-ft. prior sounding charted on 314 at Lat. $43^{\circ}45.4'$, Long. $69^{\circ}41.6'$ and the 144-ft. sounding 450 meters southwest should be disregarded. These soundings on the same line are considered to be 10 fathoms in error, as the crossline on the prior survey and the soundings on the present survey show a smooth bottom of 180 feet.

- (2) The 40-ft. prior sounding on Poor Shoal charted on 314 at Lat. $43^{\circ}43.2'$, Long. $69^{\circ}37.1'$ should be disregarded. It is considered that this sounding from special investigations in 1883 as well as the adjacent shoal soundings should actually have fallen 350 meters northeast on the present 33-ft. shoal. The descriptive report particularly notes investigation of the prior shoal.
- (3) The 21-ft. prior sounding charted on 314 at Lat. $43^{\circ}43.95'$, Long. $69^{\circ}37.2'$ is considered incorrectly spaced on line on the prior survey. The 18-ft. curve on the present survey has been extended northerly from Bantam Rock to cover the shoaler prior depth.

b. H-771 (1860), 1:10,000

The general statement in the above paragraph (a) also applies to this prior survey. The wide spacing of lines and soundings is in sharp contrast to the present development.

- (1) The 49-ft. prior sounding charted on 314 at Lat. $43^{\circ}46.6'$, Long. $69^{\circ}37.2'$ should be disregarded. Falling in a passage of 150-ft. depths, the sounding is considered to be erroneously located 170 meters west of comparable depths on the present survey.
- (2) The 129-ft. prior sounding charted on 314 at Lat. $43^{\circ}46.8'$, Long. $69^{\circ}41.1'$ should be disregarded. The sounding falls on smooth bottom of 155-ft. depths and disagrees with adjacent prior depths.

c. H-746 (1860), 1:20,000

- (1) The 36-ft. prior sounding charted on 313 at Lat. $43^{\circ}47.8'$, Long. $69^{\circ}33.5'$ should be disregarded. The present well developed 38-ft. sounding is considered adequate, considering that there are shoaler depths close by.
- (2) The 34-ft. prior sounding charted on 1204 at Lat. $43^{\circ}43.9'$, Long. $69^{\circ}34.8'$ has been carried forward in place of a 59-ft. sounding on the present survey. This sounding is from a special investigation in 1885. The present survey shows 42 feet on this shoal. Wire drag surveys have not been received.

d. H-791 (1860), 1:10,000

The slight overlap by this prior survey east of the White Islands is superseded by the present survey.

e. H-1836 (1888), 1:40,000

Widely spaced lines and soundings on this small scale prior survey do not allow a satisfactory comparison. There are no important discrepancies.

6. Comparison with Wire Drag Surveys

The area of the present survey is to be covered by wire drag surveys. A comparison with H-6830 (1943) W. D. will be considered in the review of that survey. No important discrepancies were noted in a preliminary comparison.

7. Comparison with Chart 313 (latest print of July 9, 1943)
314 (latest print of Dec. 8, 1943)
1204 (latest print of Dec. 10, 1943)

a. The following soundings charted from advance information on the present survey should be disregarded:

Chart	Lat.	Long.	Charted Depth	Correct Depth
313	43°47.8'	69°33.9'	58	59
314	43°42.6'	69°37.7'	38	39
1204	43°43.1'	69°34.6'	48	49

b. Chart 314

(1) The 21-ft. ledge charted at Lat. 43°42.2', Long. 69°38.2' and the 36-ft. shoal sounding charted 400 meters northwest are from separate reports in the year 1889 as noted in pencil on H-696 (1859) and H-1836 (1888). This review agrees with the descriptive report that both soundings are adequately disproved by present surveys. The present survey shows depths over 150 feet, with 61-ft. clearance by the unverified wire drag survey H-6830 (1943). The reported shoal was apparently the 39-ft. shoal exceedingly well developed one-half mile northeast on the present survey and cleared by 38 feet on the unverified wire drag survey H-6830. Both prior soundings should be disregarded.

- (2) The 166-ft. sounding charted at Lat. $43^{\circ}41.3'$, Long. $69^{\circ}41.9'$ should be disregarded. Originally appearing on the present chart print, the sounding is evidently from the combined boat sheet for the present survey and H-6730 (1941-42) which shows 166 feet 250 meters north of the charted position.
- (3) The stranded wreck symbol charted at Lat. $43^{\circ}43.75'$, Long. $69^{\circ}37.45'$ from advance information on the present survey represents a wreck at the position of the charted rock awash. The charted rock awash was not verified as the soundings taken were on the wreck at 7-1/2-ft. tide. The present survey shows the shoalest natural depth by a rock awash 100 meters north of the charted rock.
- (4) The 38-ft. sounding charted at Lat. $43^{\circ}46.2'$, Long. $69^{\circ}39.9'$ is erroneous. The first digit of the correct value 138 became obliterated when full projection lines were drawn on the chart in 1928.
- (5) The 78-ft. sounding charted at Lat. $43^{\circ}46.3'$, Long. $69^{\circ}40.3'$ is considered erroneous. H-696 (1859) shows 23 fathoms at this position, whereas the original charts show 13 fathoms.
- (6) The 105-ft. sounding charted at Lat. $43^{\circ}44.5'$, Long. $69^{\circ}37.6'$ is considered erroneous. The position of this sounding corresponds to a 28-fm. sounding on H-696 (1859), originally charted in error as 18 fathoms. The 105 originally appears in changing from charted fathoms to feet.

c. Chart 1204

The 300-ft. sounding charted at Lat. $43^{\circ}42.7'$, Long. $69^{\circ}31.3'$ is erroneous. Prior to the new chart in 1924, the correct sounding of 60 fathoms had been charted from H-1836 (1888).

8. Aids to Navigation and Dredged Channels

The present survey is in agreement with the charted aids to navigation.

Inasmuch as the positions of the reported shoals charted at Lat. $43^{\circ}42.2'$, Long. $69^{\circ}38.2'$ were disproved by present surveys, as discussed in par. 7(b), it is recommended that buoy "16 BR" be moved 800 meters northeast.

The marking of the 17-ft. rocky shoal in the white sector of Ram Island light at Lat. $43^{\circ}46.6'$, Long. $69^{\circ}37.4'$ might be considered although the Coast Pilot directions give this position a wide berth.

There are no dredged channels within the limits of the present survey.

9. Condition of Survey

- a. This is an excellent survey. A very thorough and complete coverage was made of all shoal areas.

The sounding records are complete in all detail. The descriptive report and accompanying report on fathometer operation and correction are comprehensive. The field plotting was excellent.

- b. Three questionable soundings are plotted in the shoal area at Lat. $43^{\circ}47.6'$, Long. $69^{\circ}33.4'$. The shoal soundings may have been scaled at the top of kelp. Contemporary wire drag surveys are scheduled to cover this area.

(1) The two 24-ft. soundings on line after position 114 S may be as deep as 32 or 33 feet, as indicated by crosslines at position 153 S and between positions 52 and 53 U. H-746 (1860) shows 34-ft. least depth.

(2) The 32-ft. sounding to the north on line between positions 110 and 111 S may be as deep as 54 feet.

10. Compliance with Instructions for the Project

Satisfactory.

11. Additional Field Work

This is the basic survey for the area covered, and no additional field work is recommended other than the coverage by wire drag, with particular attention called to the shoal noted in par. 9(b) and the 34-ft. prior sounding at Lat. $43^{\circ}43.95'$, Long. $69^{\circ}34.85'$.

12. Superseded Surveys

The following prior surveys are superseded, in part, with the exception of bottom characteristics:


H-696 (1859)
H-746 (1860)

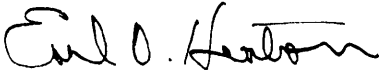
H-771 (1860)
H-791 (1860)


H-1836 (1888)

Examined and approved:


Chief, Surveys Branch


Chief, Division of Charts


Chief, Section of Hydrography


Chief, Division of
Coastal Surveys

Partially Applied (before V. & R.) to Cht. 313 3-22-44 K. R.

" " " review " " 314 5/9/44 HFS

" " " " " " 1204 5/10/44 HFS ,

" " " " (thru 1204) to Cht 1000 9/2/44 HFS

Applied to Reconst. Ch. 314 5/9/46 JHE

* " 1000-1000L - Aug 55 - Nichols

Applied after review to eastern extension of chart 238 5/8/62 J.P.W.