

8176

Diag. Cht. No. 1203-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. GI-2154 Office No. H-8176

LOCALITY

State Maine

General locality West Penobscot Bay

Locality Two Bush Channel

19 54

CHIEF OF PARTY

H. O. Fortin

LIBRARY & ARCHIVES

DATE February 14, 1956

B-1870-1 (1)

8176

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.

REGISTER NO. H-8176

Field No. GI-2154

State MAINE

General locality WEST PENOBSCOT BAY

Locality TWO BUSH CHANNEL

Scale 1:20,000 Date of survey 14 June 24 Sept.  
~~24 May to 17 Oct.~~ 1954

Instructions dated 16 Feb. 1954

Vessel GILBERT

Chief of party HENRY O. FORTIN

Surveyed by HENRY O. FORTIN, R.T. KOOPMAN & D.E. WESTBROOK

FATHOGRAMS SCALED & CHECKED IN THE NORFOLK DISTRICT OFFICE

Soundings taken by ~~FATHOGRAM~~ graphic recorder, hand lead, wire

Protracted by G.O. WIMBRO

Soundings penciled by W.W. PEAZEL

Soundings in ~~FATHOMS~~ feet at MLW ~~MEANS~~ AND ARE TRUE DEPTHS.

REMARKS: This survey was processed and smooth plotted in the Hydrographic Section of the Norfolk District Office.

D E S C R I P T I V E   R E P O R T

PROJECT CS-265

BOAT SHEET NOS. GI-2154, GI-2254 & GI-2354

VICINITY OF PENOBSCOT BAY, COAST OF MAINE

24 MAY 1954 TO 17 OCTOBER 1954

COMMANDER HENRY O. FORTIN - COMMANDING

A. PROJECT

Revised instructions, Project CS-265(Ref. 22/MEK S-2-GI, S-2-ST) dated 16 February 1954, to Commanding Officers Ships GILBERT & STIRNI. Supplemental instructions, dated 25 February 1954, consisted of general Instructions for Combined Operations Surveys, addressed to Commanding Officers of all ships, and officers in charge of hydrographic field parties. ✓

B. SURVEY LIMITS AND DATES

This report will encompass all work done on three ship sheets, GI-2154(H-8176), GI-2254(H-8177), and GI-2354(H-8178) since they were adjoining sheets and all were accomplished in the same relative manner with the same equipment. Field work began 24 May 1954, and ended 17 October 1954. ✓

Sheet GI-2154(H-8176); located in vicinity of W. Penobscot Bay, Maine:

## Approximate limits:

Lat.  $43^{\circ}-52'$  on the south to Lat.  $43^{\circ}-58'$  on the north.  
Long.  $69^{\circ}-00'$  on the east to Long.  $69^{\circ}-14'$  on the west.

Junctions with <sup>contemporary</sup> prior surveys:

H-6982, 1944, 1:20,000 and H-7054, 1945, 1:10,000 on south.  
H-6984, 1944, 1:10,000 on the west.

## Junctions with 1954 surveys:

GI-1154(H-8175), 1:10,000 on the north.  
GI-2254(H-8177), 1:20,000 on the east.  
*H-8168 (1954) "*

Sheet GI-2254(H-8177); located in vicinity of W. Penobscot Bay, Maine:

## Approximate limits:

Lat.  $43^{\circ}-57'$  on the south to Lat.  $43^{\circ}-05'-30''$  on the north.  
Long.  $68^{\circ}-44'$  on the east to Long.  $69^{\circ}-03'$  on the west.

## Junctions with prior surveys:

H-7056, 1945, 1:20,000 on the south.  
H-7150, 1946, 1:10,000 on the east.  
H-7832, 1950, 1:20,000 on the west.  
H-7831, 1950, 1:10,000 on the north.

## Junctions with 1954 surveys:

ST-2154(H-8168), 1:20,000 on the south.  
GI-2154(H-8176), 1:20,000 on the west.  
GI-2354(H-8178), 1:20,000 on the north.

Sheet GI-2354(H-8178); located in vicinity of W. Penobscot Bay, Maine:

## Approximate limits:

Lat.  $44^{\circ}-05'-30''$  on the south to Lat.  $44^{\circ}-18'-30''$  on the north.  
Long.  $68^{\circ}-50'$  on the east to Long.  $69^{\circ}-01'-30''$

## Junctions with prior surveys:

H-7832, 1950, 1:20,000 and H-7830, 1950, 1:10,000 on the west.

## Junctions with 1954 surveys:

GI-2254(H-8177), 1:20,000 on the south.

Not Applicable

Two small areas were developed by the ship in the vicinity of Rockland, Maine on this sheet. One is approximately bounded by Lat.  $44^{\circ}-06.3'$  to Lat.  $44^{\circ}-06.6'$  and Long.  $69^{\circ}-05.0'$  to Long.  $69^{\circ}-05.7'$ . The other is approximately bounded by Lat.  $44^{\circ}-05.9'$  to Lat.  $44^{\circ}-06.3'$  and Long.  $69^{\circ}-02.5'$  to Long.  $69^{\circ}-03.2'$ .

} Not  
Applicable

Although there was dense fog on a good many days which hampered the progress of actual hydrography, on those days signals were built and temperature and salinity data were obtained. The actual progress on the sheets was considered good. A very small amount of lost time was attributed to fathometer or equipment breakdowns.

#### C. VESSEL AND EQUIPMENT

The Ship GILBERT was used exclusively for the work on all three sheets. Much of the work was comparatively close to the town of Rockland, Maine so the ship was operated out of the Coast Guard Base in Rockland Harbor.

One 808 type fathometer, No. 161-SPX, was used for all work on these three sheets. The transducer and receiver units were placed in the bilges next to the hull of the ship.

Bottom samples were taken with an armed lead attached to a wire which ran through a registering sheave, and from there to a hand operated sounding machine. The wire soundings at these points cannot be considered accurate, since the wire was very seldom in a truly vertical position when the soundings were taken. In each case, a check fathometer sounding was taken and should be used as the true soundings on bottom sample positions.

#### D. TIDE AND CURRENT STATIONS

##### GI-2154(H-8176):

A portable automatic tide gage was in operation throughout this survey at PORT CLYDE, MAINE (Lat.  $43^{\circ}-55.49'$ , Long.  $69^{\circ}-15.55'$ ). The records from this gage were applied to all sounding records on this sheet.

##### GI-2254(H-8177):

A portable automatic tide gage was in operation throughout this survey at VINALHAVEN on VINALHAVEN ISLAND, MAINE (Lat.  $44^{\circ}-02.60'$ , Long.  $68^{\circ}-50.37'$ ). The records from this gage were applied to all sounding records on this sheet.

} Not  
applicable

##### GI-2354(H-8178):

A portable automatic tide gage was in operation throughout this survey at ROCKLAND, MAINE (Lat.  $44^{\circ}-06.28'$ , Long.  $69^{\circ}-06.12'$ ). The records from this gage were applied to all sounding records on this sheet.

The reducers in the sounding volumes were entered with no time or range corrections for all three sheets.

No current stations were occupied.

E. SMOOTH SHEET

Smooth sheets will be constructed and plotted by the Norfolk Processing Office.

F. CONTROL STATIONS

Sheet GI-2154(H-8176): ✓ *See N.P.O. signal list*

Triangulation Control:

- Burnt Is. 2, 1934, r. 1943 *landmark*
- Green Is. W'ly Bldg. 1913, r. 1943
- Whitehead Lt. Ho. 1859, r. 1943
- Tenants Hbr. Lt. Ho. 1859, r. 1943
- Metinic, 1858, r. 1945
- Two Bush Is. Lt. Ho., 1902, r. 1943
- Yellow Ridge Spindle Bn., 1934, r. 1943

Topographic Control:

- N. Gab. Coast Guard Ho., T-5620 *landmark*
- W. Gab. Ho., 1943, T-8007 *(d)*

Other stations were located from Topographic sheets T-11132S, T-11132N, T-11133N/2, and three stations were the same as those used by the ships WAINWRIGHT & HILGARD on sheets HI & WA-2154.

Sheet GI-2254(H-8177):

Triangulation Control:

- Brimstone Is., 1910, r. 1943
- Heron Neck Lt. Ho., 1868, r. 1943
- Saddleback Ledge Lt. Ho., 1861, r. 1943
- Vinalhaven Water Tower, 1910, r. 1943
- Two Bush Is. Lt. Ho., 1902, r. 1943

Other stations were located from Air Photo Compilation Sheets T-8025 and T-8030, PH-104 Sheet B, and photogrammetric manuscripts T-11133N/2 and T-11129S.

Sheet GI-2354(H-8178):

Triangulation Control:

- Drunkard Ledge Bn., 1943, r. 1954
- Rockland Breakwater Lt. Ho., 1902, r. 1943
- Shag Rock Bn., 1934, ex. 1902, r. 1943
- Duck Trap Church Spire, 1861, r. 1946
- Camden White Brick Stack, 1934, r. 1943
- Mt. Battie Memorial Obsy., 1934, r. 1943
- Jameson Pt., Samoset Hotel Water Tank, 1934, r. 1943
- Owls Head Lt. Ho., 1858, r. 1943
- Mark, 1911, r. 1943
- Negro Island Lt. Ho., 1911, r. 1943
- Goose Island, 1911, r. 1943
- Indian Island Lt. Ho., 1904, r. 1943

*Not applicable*

Fiddlers Ledge Stone Bn., 1859, r. 1943  
 Round(Pavilion near Spruce Head) 1911, r.1946  
 Compass Is., 1911, r. 1943  
 Mark Is., 1911, r. 1943  
 Job, 1944

Topographic Control: (Air Photo Compilation)

Chimney(west gable), 1946, T-8032  
 Jack, 1946, T-8021 (Traverse)  
 Pole, 1954, PH-104 Sheet A (Traverse)  
 Chimney, 1946, T-8021  
 Even, 1946, T-8021 (Traverse)  
 White Silo, 1943, T-8011  
 Chimney(on white house), 1943, T-8009  
 Spire Church, 1943, T-8009  
 Gable(south,yellow cottage), 1946, T-8023  
 Gable(west,white boat ho.), 1946, T-8023  
 Gable(west,white house), 1946, T-8023  
 Gable, 1946 (north gab. hip-roofed house), T-8021  
 N. Gable Ferry Ho., 1946, T-8012  
 Chimney, 1946, T-8021  
 N. Cupola Gray Barn, 1946, T-8012  
 Gable, 1946, T-8021  
 The Graves Light, 1943, T-8010  
 Grindel Point Lt., 1946, T-8021  
 Monroe Is. Lt., 1943, T-8009  
 Largest Chimney(gray house), 1946, T-8023

*Not applicable*

The remaining signals on this sheet were located by sextant fixes (see Sketchbook Vol. 3), and by theodolite cuts (see PH-104 sheet A and PH-104 sheet B).

G. SHORELINE AND TOPOGRAPHY

Shoreline on the boat sheets was sketched in by the photogrammetrist assigned to aid the GILBERT's work, but this was only done to facilitate hydrographic operations. The verification of shoreline does not apply on any of these three ship sheets.

H. SOUNDINGS

All depths were measured by 808 type fathometer No. 161-SPX. All development was done in a criss-cross pattern and no hand-lead soundings were taken on shoals. The usual fathometer corrections (velocity, phase and initial), were calculated and inserted in the sounding volumes where each applied. There were no unusual methods or equipment used.

I. CONTROL OF HYDROGRAPHY

Visual 3-point fixes were obtained exclusively on all three sheets with the use of USC&GS hydrographic sextants and one continuous tangent screw Navy type sextant. Fixes were plotted with a celluloid three-arm protractor with extensions. For the most part, strong fixes were obtained except under adverse conditions such as fog and haze. The control itself was adequate and strong.

Due to a small inaccuracy in the location of signal PAW (GI-2154, and GI-2254), there were several jumps in the plotting of some fixes on the boat sheet when using that signal. These jumps were almost negligible and when the signal was repositioned on the sheet, it was thought that the plotting of the fixes was accurate enough for a boat sheet. The smooth sheet plotter should have no trouble with those fixes.

#### J. ADEQUACY OF SURVEY

The surveys were complete and are adequate to supersede prior surveys for charting.

Since there were few very dangerous shoals and relatively deep water in these surveys, fathoms instead of feet were used exclusively in the original records on all three sheets. Reducers were entered to the nearest 0.1 fathom for depths under 10 fathoms for more accuracy in the shoaler depths. It was felt that sounding in fathoms in an area such as this increased the all around accuracy of the surveys due to the convenience of less phase shifting in the greater depths.

All junctions with adjoining surveys seemed satisfactory and no holidays exist. Depth curves can be adequately drawn on the sheets as a whole and also at the junctions.

There are no special submarine features, except for the ruggedness of the bottom.

#### K. CROSSLINES

Adequate crosslines amounting to at least 10 percent were run. there were no large discrepancies in comparing them to the main scheme of lines. The rugged bottom made it difficult to pin down actual discrepancies, however.

#### L. COMPARISON WITH PRIOR SURVEYS

As far as can be determined, the new surveys compare favorably with prior surveys of those areas. However, since the available prints of the old surveys are not too legible, it was decided to compare certain definite shoal soundings with the charts of the areas concerned.

#### M. COMPARISON WITH CHARTS

##### Sheet GI-2154(H-8176):

This sheet was compared with charts #322, 1:40,000, 1950 (corrected to 1954) and #313, 1:40,000, 1949 (corrected to 1954).

##### Sheet GI-2254(H-8177):

This sheet was compared with charts #310, 1:40,000, 1937 (corrected to 1954) and #322, 1:40,000, 1950 (corrected to 1954).

##### Sheet GI-2354(H-8178):

This sheet was compared with chart #310, 1:40,000, 1937 (corrected to 1954).

Not applicable



N. DANGERS AND SHOALS

GI-2154(H-8176)

No.	Latitude	Longitude	Survey Depth	Chart Depth	Pos. No.
1✓	43°-52. <sup>78</sup> 39'	69°-12.88'	58, 100m north. 57 ft.	85 ft.	98-99N ✓ 4 24A ✓
2✓	43°-54. <sup>41</sup> 40'	69°-13.32'	45 44 ft.	*38 ft.	48-49D ✓
3✓	43°-55. <sup>32</sup> 30'	69°-09.95'	54 (note: 53' 80m SE) 57 ft.	69 ft.	32A & 145-146 in 57-58N ✓
4✓	43°-57. <sup>48</sup> 22'	69°-10. <sup>48</sup> 46'	35 36 ft.	38 ft.	117M - added to 313
5✓	43°-55. <sup>37</sup> 39'	69°-08. <sup>76</sup> 71'	38 ft.	34 ft.	102-103R ✓ 4 158-159 M
6✓	43°-56. <sup>07</sup> 41'	69°-08.69'	50 51 ft.	63 ft.	57-58E ✓ 48-49 N
7✓	43°-54. <sup>76</sup> 47'	69°-07. <sup>90</sup> 89'	40 ft.	49 ft.	174-175M ✓ added 6 313
8✓	43°-55. <sup>44</sup> 21'	69°-05.98'	31 ft.	*36 ft.	110-111K ✓
9✓	43°-55. <sup>44</sup> 27'	69°-05. <sup>17</sup> 43'	22 ft.	25 ft.	69-70H ✓
10✓	43°-55.51'	69°-05. <sup>08</sup> 09'	20 18 ft.	*14 ft.	108-109P ✓
11✓	43°-56. <sup>37</sup> 87'	69°-06. <sup>35</sup> 39'	53 54 ft.	127 ft.	13-14P ✓ 4 113-114 F
12✓	43°-58.20'	69°-06. <sup>55</sup> 38'	48 ft.	84 ft.	1-2R ✓
13✓	43°-58. <sup>09</sup> 08'	69°-06.80'	49-58 50 ft.	*34 ft.	2-3A ✓
14✓	43°-57. <sup>39</sup> 40'	69°-06. <sup>83</sup> 84'	12 ft.	*8 ft.	13-14S ✓
† 15✓	43°-56.69'	69°-03.76'	50 54 ft.	*34 ft.	116R ✓ 153-154 P
16✓	43°-57.50'	69°-03.69'	48 ft.	51 ft.	4-5H ✓
17✓	43°-56.52'	69°-02.63'	37 42 ft.	39 ft.	60Q ✓ 4 34-35 K
18✓	43°-56.98'	69°-02.02'	18 ft.	*15 ft.	(219-220P) ✓ 4 170K ✓ ON TURN SURVEY POS. 170K

See N.P.O. list of additional shoals

Sufficient development was not done on Nos. 2, 10, 13, 14, 17 and 18 to disprove or prove the charted soundings, but all of them were close enough to the charted values so that the charted soundings can be considered correct.

Due to better development or better methods than previously used, shoaler depths were found on Nos. 1, 3, 4, 6, 7, 8, 9, 11, 12 and 16. The new survey depths should be used to supersede the charted depths.

† On No. 15, although some development was done at this spot, the surveyed depth did not approximate the depth as charted. The 34' charted depth, however, should not be removed from the chart unless verified or disproved by a wire-drag survey or some other method.

\*Sounding to be retained on charts.

The P.D. sunken wreck (<sup>Item 6. Dye survey Review</sup> Lat.  $43^{\circ}-56.42'$ , Long.  $69^{\circ}-08.09'$ ) has been wire-dragged. Reference is hereby made to a chart letter, from the C.O. Ships HILGARD & WAINWRIGHT to the Director dated 27 December 1954. <sup>(1955) see par. 6 A(5) of Review.</sup>

Sheet GI-2254(H-8177)

<u>No.</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Survey Depth</u>	<u>Chart Depth</u>	<u>Pos. No.</u>
1	$43^{\circ}-58.34'$	$69^{\circ}-01.46'$	53 ft.	58 ft.	224-225Q
2	$43^{\circ}-58.62'$	$69^{\circ}-01.31'$	43 ft.	33 ft.	241-242Q
3	$43^{\circ}-59.55'$	$68^{\circ}-59.65'$	23 ft.	18 ft.	84V
4 ✓	$43^{\circ}-59.55'$	$68^{\circ}-57.95'$	57 ft.	69 ft.	179-180V
5	$44^{\circ}-01.71'$	$69^{\circ}-01.38'$	24 ft.	25 ft.	11-12X
6 ✓	$44^{\circ}-02.08'$	$69^{\circ}-01.58'$	14 ft.	15 ft.	134-135Q
7 ✓	$43^{\circ}-58.30'$	$68^{\circ}-59.31'$	56 ft.	87 ft.	91-92J
8 ✓	$44^{\circ}-03.48'$	$68^{\circ}-57.95'$	29 ft.	30 ft.	204-205J
9 ✓	$44^{\circ}-03.08'$	$68^{\circ}-57.00'$	14 ft.	11 ft.	35-36W
10	$44^{\circ}-03.03'$	$68^{\circ}-57.70'$	33 ft.	30 ft.	9-10Y
11 ✓	$44^{\circ}-02.74'$	$68^{\circ}-57.12'$	17 ft.	18 ft.	24-25W
12 ✓	$44^{\circ}-02.53'$	$68^{\circ}-57.52'$	28 ft.	30 ft.	257-258M
13 ✓	$44^{\circ}-01.28'$	$68^{\circ}-57.48'$	37 ft.	34 ft.	26-27Y
14 ✓	$44^{\circ}-01.90'$	$68^{\circ}-55.66'$	22 ft.	18 ft.	187-188U
15 ✓	$44^{\circ}-01.48'$	$68^{\circ}-54.69'$	52 ft.	69 ft.	184T
16 ✓	$43^{\circ}-59.41'$	$68^{\circ}-53.94'$	52 ft.	64 ft.	269-270X
17 ✓	$44^{\circ}-00.76'$	$68^{\circ}-52.25'$	43 ft.	23 ft.	243-244V
18 ✓	$43^{\circ}-58.30'$	$68^{\circ}-48.78'$	53 ft.	100 ft. (approx)	112-113R
19 ✓	$43^{\circ}-57.80'$	$68^{\circ}-48.19'$	55 ft.	123 ft. (approx)	256-257P
20 ✓	$43^{\circ}-56.92'$	$68^{\circ}-47.89'$	69 ft.	180 ft. (approx)	90-91 M
21 ✓	$43^{\circ}-58.25'$	$68^{\circ}-45.09'$	49 ft.	52 ft.	130-131P
22 ✓	$43^{\circ}-58.21'$	$68^{\circ}-46.77'$	47 ft.	63 ft.	87-88P
23	$43^{\circ}-57.89'$	$68^{\circ}-46.62'$	61 ft.	90 ft.	157-158L

Not applicable

PROCESSING OFFICE CONTINUATION OF COMPARISONS

<u>NO.</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>SURVEY DEPTH</u>	<u>CHART DEPTH</u>	<u>POS. NO.</u>
19 ✓	43-55.60 ✓	69-05.61 ✓	30' ✓	28' ✓	104-105P ✓
20 ✓	43-55.51 ✓	69-06.25 ✓	30' ✓	28 26' ✓	112K ✓
21 ✓	43-53.86 ✓	69-11.67 ✓	89' ✓	28' (obstr.) ✓	144-145N ✓ * Item 3 Pre Survey Read 144-145N 144-145W
22 ✓	43-54.33 ✓	69-09.90 ✓	26' ✓	26' ✓	172-173N ✓
23 ✓	43-56.51 ✓	69-08.07 ✓	68' ✓	78' (wreck) ✓	46-47E ✓ * Item 6 Pre Survey Read

\* Investigated see CL #4 (1955)

*[Faint handwritten notes and markings, possibly including "25" and "AT"]*



Due to lack of complete development over Nos. 2,3,9,10,13 and 14, the depth obtained was not quite as shoal as the charted depths, but they were sufficiently close to verify those depths. Use charted depths on these positions.

Shoal depths found by this survey to supercede the charted depths were Nos. 1,4,5,6,7,8,11,12,15,16,18,19,20,21,22, and 23. Use survey depths on these positions.

The charted depth on shoal No. 17 should not be superceded by the surveyed depth since there was not enough development to warrant this action. The charted sounding should be verified or deleted according to wire-drag or information from some other source.

Sheet GI-2354(H-8178):

<u>No.</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Survey Depth</u>	<u>Chart Depth</u>	<u>Pos. No.</u>
1✓	44°-05.99'	69°-02.89'	45 ft.	33 ft.	69R
2	44°-06.62'	69°-05.15'	No indication of 21' as charted.		
3✓	44°-05.97'	68°-58.19'	50 ft.	64 ft.	11-12P
4✓	44°-09.00'	68°-59.07'	42 ft.	47 ft.	12-13D
5	44°-10.35'	68°-57.06'	No indication of 48' as charted.		
6✓	44°-12.20'	68°-54.49'	45 ft.	72 ft.	127-128L
7✓	44°-12.57'	68°-58.50'	49 ft.	61 ft.	155-156M
8✓	44°-13.26'	68°-58.51'	28 ft.	24 ft.	144-145M

Shoaler depths were found at Nos. 3,4,6, and 7. These depths as found should supercede charted depths.

The depth as found on No. 8 was not quite as shoal as the chart depth but was close enough to justify the retention of the depth as shown on the chart.

Shoal depth No. 1 was wire-dragged by the Ships HILGARD & WAINWRIGHT in 1954. The drag hung at 44 ft. and cleared at 42 ft. The shoalest depth that the Ship GILBERT obtained was 45 ft. which must not have been the shoalest depth. Wire-drag data should be used at this position.

There was no indication from this survey of the charted depths on Nos. 2 and 5, although some development was run. The charted depths should be retained unless disproved by wire-drag or some other source.

All shoals on all three sheets were found as charted except those listed in this section (Section N).

In no place on these three surveys were any new depths found

*Not applicable*

of such an important nature to require notification of the Coast Guard.

O. COAST PILOT INFORMATION

The Coast Pilot information for this area is adequate and no corrections to existing material were obtained. The ship tied up at the Coast Guard wharf in Rockland Harbor, Maine during the survey operations and went to the working grounds daily when weather permitted.

The ship rode out two hurricanes, CAROL and EDNA (1954) alongside the Coast Guard wharf and experienced no damage, since the GILBERT is a steel hulled vessel. Most wooden vessels, experiencing great difficulty alongside the docks from the wind and sea, cast off, and huddled inside the breakwater or steamed back and forth across the harbor.

These hurricanes were exceptions, however, and the harbor is a satisfactory one in most bad weather, although it is a little unprotected from easterly winds.

P. AIDS TO NAVIGATION

Floating Aids:

GI-2154(H-8176)

<u>Light List Name</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Pos. No.</u>	<u>Date</u>
✓ Metinic Is. Ledge Buoy	43°-53.72 <sup>1</sup> '	69°-10.17 <sup>1</sup> '	{101-102F, 162-163N}	6/21/54
✓ Marshall Point Lighted Whistle Buoy 1	43°-53.87 <sup>5</sup> '	69°-12.60 <sup>1</sup> '	73L	7/12/54
✓ Mosquito Island Bell Buoy "2MI"	43°-54.70 <sup>1</sup> '	69°-13.12 <sup>4</sup> '	57D	6/17/54
✓ Crow Island Ledges Buoy "2CI"	43°-57.35 <sup>6</sup> '	69°-06.09 <sup>1</sup> '	{149-150R, 157R, 25}	9/17/54
✓ Two Bush Ledge Lighted Gong Buoy	43°-56.75 <sup>4</sup> '	69°-04.92 <sup>3</sup> '	{106-107K, 116G, 167P}	7/9/54
Two Bush Channel - Rock Buoy 2	43°-57.22 <sup>4</sup> '	69°-04.87 <sup>1</sup> '	{86-87G, 187-188P, 36K}	6/24/54
Two Bush Channel - Shoal Buoy	43°-57.02 <sup>4</sup> '	69°-02.02 <sup>2</sup> '	33-34Q	8/2/54
Northern Triangles Buoy 1	43°-57.57 <sup>1</sup> '	69°-01.85 <sup>1</sup> '	62J	7/6/54
<u>GI-2254(H-8177)</u>				
Shoal Buoy "2A"	43°-58.59 <sup>1</sup> '	69°-01.50 <sup>1</sup> '	233-234Q	8/12/54
Two Bush Is. Lighted Whistle Buoy TBI	43°-58.30 <sup>1</sup> '	69°-00.20 <sup>1</sup> '	99N	8/5/54
Juncken Ledge Buoy	43°-59.46 <sup>1</sup> '	68°-59.53 <sup>1</sup> '	83-84V	8/23/54

3 G  
3-4K  
31-32K  
171K  
30 Q  
36 Q  
Not specified

## GI-2254 (cont.)

<u>Light List Name</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Pos. No.</u>	<u>Date</u>
Twenty-five Foot Rock Buoy "1A"	44°-01.66'	69°-01.30'	14-15X	9/13/54
South Guide Buoy A	44°-01.13'	69°-00.30'	37D	6/25/54
Guide Buoy "2GB"	44°-00.83'	68°-58.30'	54S	8/17/54
South Guide Lighted Buoy "B"	44°-03.12'	69°-00.29'	41-42D	6/25/54
Inner Bay Ledges Buoy "6"	44°-04.79'	68°-57.71'	225-226L	8/3/54
Old Horse Ledge Bell Buoy "2A"	43°-59.92'	68°-49.90'	298P	8/9/54
Saddleback Ledge Gong Buoy	44°-00.19'	68°-44.58'	161-162R	8/13/54

GI-2354(H-8178)

N"2" (new buoy)	44°-06.19'	69°-05.68'	(see Volume 10 Pg. 57) (see <del>Cuts Volume 1</del> )	
Robinson Rock Whistle Buoy 8	44°-09.00'	68°-58.91'	12-13E	8/24/54
McIntosh Ledge Buoy "1"	44°-09.31'	68°-57.68'	222-223M	9/9/54
Mouse Island Reef Buoy "1A"	44°-10.90'	68°-56.51'	69-70K	9/2/54
Ensign Is. Buoy "6"	44°-14.03'	68°-58.20'	23-24R	9/21/54
Lincolnville Bell Buoy "7"	44°-16.69'	68°-59.78'	19-20A	7/29/54
Grindel Point Bell Buoy "2"	44°-16.78'	68°-57.14'	92-93G	8/26/54

*Not applicable*

Q. LANDMARKS FOR CHARTS

Form 567 has been submitted with a recommendation for a white silo and a water tank to be deleted, affecting Charts #310 and #1203.

A new location for Drunkard Ledge Beacon was also submitted on Form 567, affecting Charts #310 and #1203.

*CL. 1142 (53), nothing pertinent on CL. 607 (34)*

*Not on H-8176 JPC*

R. GEOGRAPHIC NAMES

No investigation of geographic names was made by the hydrographic party.

*covered in top. S.L.*

S. STATISTICS

Sheet GI-2154(H-8176):

2,230 positions, 695.5 statute mi. sounding, 232.7 mi. to and from, 877.6 nautical mi. total.

Sheet GI-2254(H-8177):

4,046 positions, 1,125.9 statute mi. sounding, 273.8 mi. to and from, 1,314.9 nautical mi. total.

} Not applicable

Sheet GI-2354(H-8178):

2,670 positions, 799.4 statute mi. sounding, 250.5 mi. to and from, 1,055.1 nautical mi. total.

T. TABULATION OF APPLICABLE DATA

A velocity correction report, *filed with H-8178* submitted separately, embodies all data pertinent to 808 type fathometer #161-SPX used on this project for Sheets GI-2154, 2254, and 2354. That report also covers corrections for fathometer #126S used in Launch #CS-101 on Sheet GI-1154.

} 841  
545  
8178  
1954  
F

Respectfully Submitted,

*Dale E. Westbrook*

Dale E. Westbrook  
ENS., USC&GS Ship GILBERT

Approved and Forwarded:

*Robert A. Marshall*

Robert A. Marshall  
CDR., USC&GS  
Commanding Officer  
Ships STIRNI & GILBERT

LIST OF SIGNALS  
H-8176

TRIANGULATION STATIONS

BUR BURNT ISLAND 2, 1934-43 *landmark*  
GREEN GREEN ISLAND, WESTERNMOST BUILDING, 1913-43  
ITE WHITEHEAD L.H., 1859-1943  
TEN TENANTS HARBOR L.H., 1859-1943 *landmark*  
TIN METINIC, 1858-1943  
TWO TWO BUSH ISLAND L.H., 1902-43  
YEL YELLOW RIDGE SPINDLE, 1934-43 *Yellow Ledge Daybeacon*

MARKED TOPOGRAPHIC STATIONS

MET MET, 1944 T-11132(S)

TOPOGRAPHIC STATIONS SOURCE T-11131(S)

Bel

SOURCE T-11132(N)

Fog Hug Jaw Kid(d) ✓

Source T-11132(S)

Cod Dip Eva Ray(d) ✓ Tip

SOURCE T-11133(N)

Max Paw

SOURCE T-11133(S)

Gab

SOURCE T-11135(N)

Ace(d) ✓

HYDROGRAPHIC STATIONS

Ree Vol. 1, pg.2

PLANIMETRIC FEATURES

Big \ T-11133(S)



FLOATING AIDS TO NAVIGATION  
H-8176

*See field list of signals under Section P, page 10*

<u>BUOY</u>	<u>LAT.</u>	<u>METERS</u>	<u>LONG.</u>	<u>METERS</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
Metinic I. Ledge Buoy	43-53	1315	69-10	208	38'	101F	6-21-54
Marshall Pt. Ltd. Whistle Buoy 1	43-53	1563	69-12	810	158'	73L	7-12-54
Mosquito I. Bell Buoy 2MI	43-54	1277	69-13	192	80'	57D	6-17-54
Crow I. Ledges Buoy 2CI	43-57	672	69-06	90	57'	149R	9-17-54
Two Bush Ledge Ltd. Gong Buoy	43-56	1388	69-04	1277	102'	106K	7-9-54
Rock Buoy 2	43-57	419	69-04	1155	114'	86G	6-24-54
Shoal Buoy	43-56	1830	69-02	8	32'	33Q	8-2-54
Northern Tri- angles Buoy 1	43-56	989	69-01	1195	49'	62J	<sup>7</sup> <del>4</del> -6-54

STATISTICS  
H-8176

<u>VOLUME</u>	<u>DAY LTR.</u>	<u>DATE</u>	<u>NO. H.L. OR WIRE SDGS.</u>	<u>NO. POS.</u>	<u>STAT. MI. SDGS.</u>
1	A	6-14-54	1	61	27.6
1	B	6-15-54	1	56	25.5
1&2	C	6-16-54	0	132	39.1
2&3	D	6-17-54	0	139	60.4
3&4	E	6-18-54	0	101	42.6
4	F	6-21-54	0	147	56.7
4&5	G	6-24-54	0	139	58.2
5&6	H	6-25-54	0	105	45.2
6	J	7- 6-54	0	114	35.0
6&7	K	7- 9-54	0	174	53.1
7&8	L	7-12-54	0	144	42.6
8&9	M	7-14-54	0	220	54.2
9	N	7-16-54	0	209	46.1
9&10	P	7-23-54	0	221	45.1
10	Q	8- 2-54	0	68	14.6
10&11	R	9-17-54	11	162	34.4
11	S	9-24-54	7	88	15.1
TOTALS			20	2280	695.5

TOTAL SQUARE STATUTE MILES OF SOUNDING

46

ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8176 (Field No. G1-2154)

GENERAL

This appears to be an excellent basic survey and no difficulty was experienced with the smooth plot. Soundings at crossings checked very well in this extremely irregular bottom and no discrepancies are known to exist.

*rescanning resolved a few minor crossing differences of about 2 ft.*

SOUNDINGS

All soundings entered on the smooth sheet were reduced and converted from fathoms to feet with a reducing template and entered in the Office column. Soundings in the Field column in the first seven volumes, were reduced in the conventional manner but these values were not checked or used and should be disregarded. The template method is considered as <sup>close enough</sup> accurate, so the saving in time and the ease of operation made it appear inadvisable to continue the reductions in the usual manner.

Respectfully submitted,

*Hugh L. Proffitt*

Hugh L. Proffitt  
Cartographer.

Norfolk, Va.  
9 Feb. 1956

DIVISION OF CHARTS

REVIEW SECTION -- NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 8176

FIELD NO. CI-2154

Maine, West Penobscot Bay, Two Bush Channel

SURVEYED: June-September 1954

SCALE 1:20,000

PROJECT NO. CS-265

SOUNDINGS: 808 Depth Recorder

CONTROL: Sextant fixes  
on shore signals

Chief of Party -----	H. O. Fortin
Surveyed by -----	H. O. Fortin, R. T. Koopman, and D. E. Westbrook
Protracted by -----	G. C. Wimbro
Soundings plotted by -----	W. W. Feazel
Verified and inked by -----	J. E. Gearhart
Reviewed by -----	L. S. Straw
Inspected by -----	R. H. Carstens

DATE: 19 Feb. 1960

1. Shoreline and Control

The shoreline originates with reviewed air-photographic surveys T-11131S (1952-55), T-11132 N&S (1952-55), T-11133 N&S (1952-55) and T-11135 N (1953-55).

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

The cross lines are adequate and the depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. The bottom is generally rocky and very irregular. Many of the shoals and reefs are relatively small in extent and rise abruptly from greater depths.

4. Junctions with Contemporary Surveys

In accordance with the Project Instructions adequate junctions were effected with H-6984 (1944) on the southwest; H-6982 (1944-45) on the south, and H-7054 (1945) on the southeast.

The junctions with H-8175 (1954) and H-8177 (1954) on the north, and H-8168 (1954) on the northeast will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys

- A. H-823a (1863), 1:40,000  
 H-907 (1866), 1:10,000  
 H-943 (1866-67), 1:20,000  
H-953 (1867), 1:10,000

These surveys taken together cover the entire area of the present survey. H-823a covers about 75% on the west, east of Mosquito Island, and H-943 covers 25% on the east, southeast of Two Bush Island. Surveys H-907 and H-953 overlap a small portion of the present survey on the north, westward of Two Bush Island. The differences in depths between the prior and present survey are generally not more than 1 to 3 feet, but there are many instances where great differences in depths occur. These greater differences are attributed to errors in the values of the soundings, and/or sextant angles, and also in the inaccurate spacing of soundings plotted on the old surveys. The use of an inaccurate protractor (left arm in error about -26') caused errors in positions plotted on H-953 (1867) as much as 130 meters.

All of sounding records could not be found for H-907 (1866), therefore questionable soundings could not be examined except by direct comparison on the smooth sheets of the prior and present survey. The soundings on H-907 (1866) are 6-12 ft. shoaler than present depths in depths of 60-100 ft. for reasons which could not be ascertained. Other errors are apparent in the plotting of sections of lines in the vicinity of lat.  $43^{\circ}55.7'$ , long.  $69^{\circ}12.3'$  on the prior survey where prior depths of 51 to 57 ft. fall in present depths of 88 ft. A 34 ft. sounding in lat.  $43^{\circ}58.05'$ , long.  $69^{\circ}06.71'$ , which is one of three of the same depth on the same line of H-907 (1866), falls in depths of 48-49 ft. within the limits of a 60 ft. shoal on the present survey. In the absence, in this case, of the sounding records and the possible existence of shoaler depths than found on the present survey, the 34 ft. sounding is not considered disproved by the present work and is therefore carried forward.

- (1) The following prior survey soundings are erroneous and should be disregarded.:

<u>Prior Depth (ft.)</u>	<u>Present Depth (ft.)</u>	<u>Lat.</u>	<u>Long.</u>	<u>Chart</u>
82	174	43°53.14'	69°14.39'	313
115	177	43°53.27'	69°14.14'	313
118	155-171	43°54.03'	69°12.57'	313
82	118	43°54.83'	69°11.15'	313
139	165-180	43°55.10'	69°12.16'	313
82	91	43°55.80'	69°12.24'	313
66	63-86	43°55.90'	69°12.41'	313
66	84-87	43°56.01'	69°12.27'	313
34	64-70	43°55.40'	69°08.66'	313 & 322

(2) Eight soundings which were not considered disproved by the present survey, and supplementary bottom characteristics have been retained from the prior surveys. With these additions the present survey is adequate to supersede these prior surveys within the common area.

- B. H-2969 W.D. (1908-09) 1:20,000  
 H-3025 W.D. (1909-10-13), 1:20,000  
H-3185 W.D. (1910), 1:20,000

The present depths do not conflict with the effective depths of these wire-drag surveys. However, the 30 ft. depth charted in lat. 43°56.85', long. 69°01.79' from H-3025 W.D. should be disregarded. Development on the present survey failed to reveal a shoal in this position. The sounding on H-3025 is on a detached fix, the position of which would move the 29 ft. shoal to the northwestward by a 2° change in one angle. Several drag strips of 35 ft. and greater on H-3025 cleared the shoal without grounding and therefore, the 30 ft. sounding is considered adequately disproved.

6. Comparison with Chart 313 (Latest print date 9/29/58)  
Chart 322 (Latest print date 10/5/59)

A. Hydrography

The charted hydrography originates principally with the previously discussed surveys and the present survey (critical soundings only) before verification and review.

- (1) The 18 ft. sounding charted in lat. 43°57.69', long. 69°06.01' was applied from H-8175 (1954) before verification. This sounding falls in 45 ft. depths on the present survey and between lines of 43 and 64 foot depths on H-8175 (1954). The 18 ft. sounding is apparently the result of reading a

false stylus discharge on the fathogram and therefore should be expunged from the chart.

- (2) The authority for the 34 ft. sounding charted in lat. 43°57.76', long. 69°06.75', could not be found. General depths on the present survey in this immediate vicinity are from 100 to 105 feet with no shoal indications. The wire drag survey H-3025 (1909-10-13) adequately covered the area in which this sounding is charted, with an effective drag depth of 37 feet. The 34 ft. sounding is considered erroneous and should be disregarded.
- (3) The 36 ft. sounding charted in lat. 43°56.93', long. 69°10.60 from H-3185 W.D. (1910) is superseded by a 35 ft. depth on the present survey.
- (4) The obstruction charted in lat. 46°56.14', long. 69°08.58' which originates with CL 4 (1955) was found while searching for a PD wreck. (Item 6 of preliminary Review of Jan. 1954) The obstruction as presently charted should be retained.
- (5) The following soundings were applied to the chart from a bromide copy of the Boat Sheet. In some cases the soundings were illegible, in others, changes were made during verification. They are superseded by the depths now shown on the present survey.

<u>Sounding</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Chart</u>
48 ft.	43°56.80'	69°06.39'	322
48 ft.	43°56.68'	69°04.68'	322
42 ft.	43°56.42'	69°03.16'	322
36 ft.	43°56.77'	69°01.20'	322
54 ft.	43°54.96'	69°08.71'	313 & 322
33 ft.	43°57.20'	69°10.60'	313

The present survey with the indicated additional information from prior surveys supersedes the charted information within the area covered.

B. Aids to Navigation

The charted aids to navigation are verified in position by the present survey and satisfactorily mark the features intended. No new dangers which would require aids were found.

7. Condition of Survey

- a. The sounding records and the Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.
- c. Supplemental bottom characteristics from prior surveys were carried forward to augment those on the present survey.

8. Compliance with Project Instructions

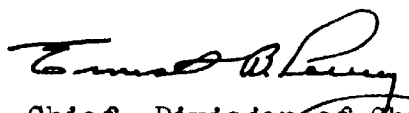
The present survey adequately complies with the Project Instructions.

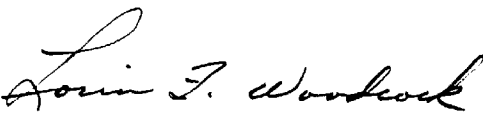
9. Additional Field Work Recommended.

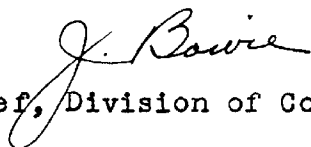
The survey is considered basic and no additional work is recommended.

Examined and Approved:

  
Chief, Nautical Chart Branch

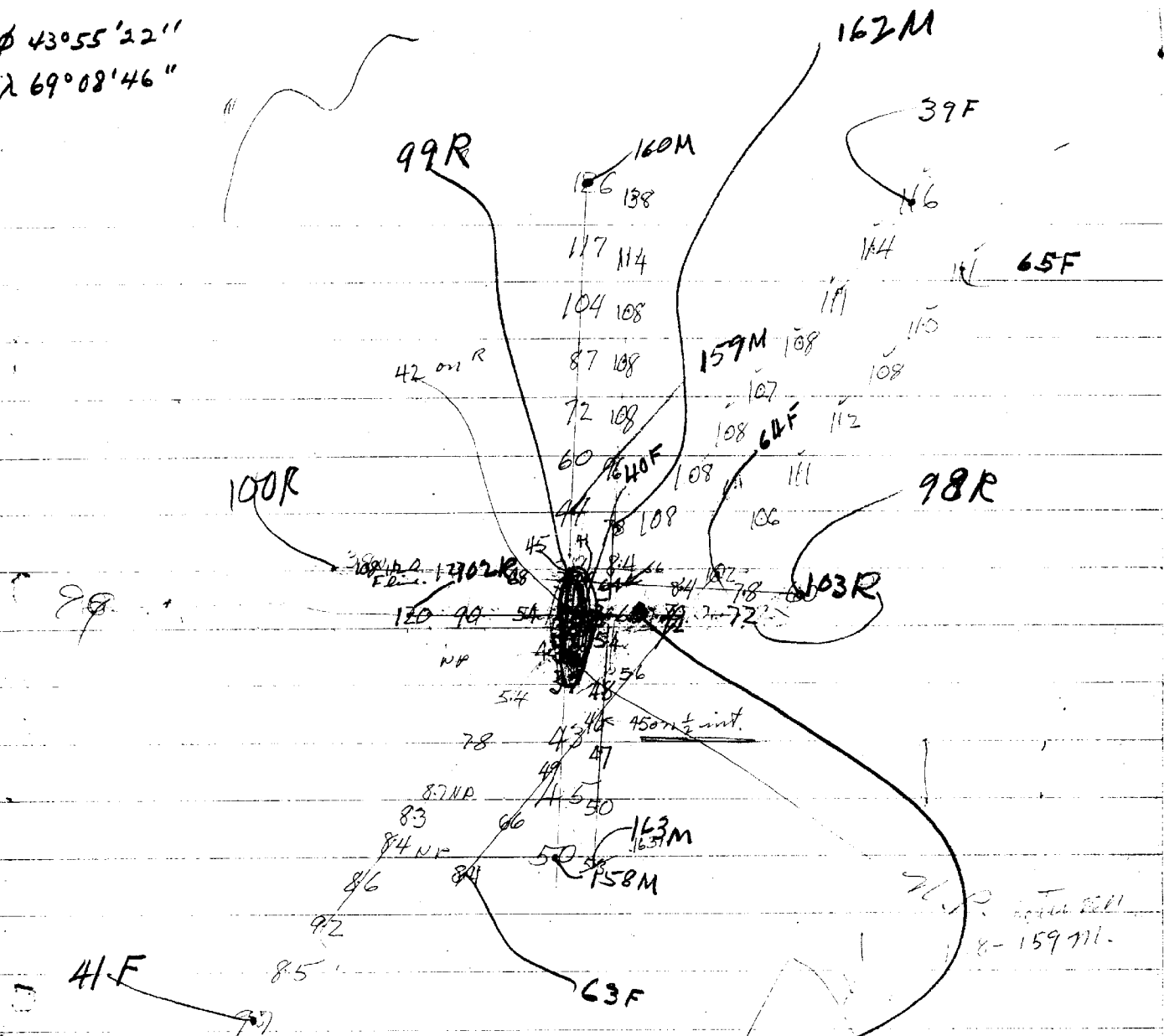
  
Chief, Division of Charts

  
Chief, Hydrography Branch

  
Chief, Division of Coastal Surveys



$\phi$  43°55'22"  
 $\lambda$  69°08'46"



About  $\frac{4}{10}$  scale

The shoal is well  
 bracketed by sounding  
 lines - fathograms  
 are clear cut all line  
 crossings agree

$5\frac{3}{4}$  fms  
 falls on  
 60 ft

I still believe no shoal  
 exists in the position of  
 the  $5\frac{3}{4}$  fms from H-823

6-23-60  
 L.S.S.

GEOGRAPHIC NAMES

Survey No. H-8176

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
<u>Maine</u>				(for title)						RGV	1
<u>West Penobscot Bay</u>											2
											3
<u>Two Bush Channel</u>											4
<u>Andrews Island</u>											5
<u>Two Bush Island</u>											6
<u>Mosquito Island</u>											7
<u>Port Clyde</u>				(village, tide station)							8
<u>Burnt Island</u>											9
											10
											11
											12
											13
											14
<u>Tide stations off limits:</u>											15
<u>Rockland</u>											16
<u>Vinal Haven</u>											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names approved  
3-7-56. L. Heck  
(all names on 322 and 313  
are approved, if additional  
names are desired).

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 5176.....

Records accompanying survey:

Boat sheets 1...; sounding vols. 11...; wire drag vols. ....; bomb vols. ....; graphic recorder rolls 2-Envelopes special reports, etc. 1-Descriptive report, & 1-Smooth sheet.  
.....

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

Number of positions on sheet	.....	2280
Number of positions checked	.....	25
Number of positions revised	.....	0
Number of soundings revised (refers to depth only)	.....	50
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	1
Topographic details	Time	..... 12
Junctions	Time	..... 24
Verification of soundings from graphic record	Time	..... 20

Verification by J. E. ... Total time 24.7... Date 12-14-59

Reviewed by ... Time 1.98.. Date 2-19-60

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8176

Reviewed Feb. 19, 1960  
Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
May 1956	70	H.F.S.	Examined. No correction now. Before <del>After</del> Verification and Review <span style="float: right;">gma</span>
May 1956	1203	L.S.S.	Examined. No correction at this time. Before <del>After</del> Verification and Review add couple dozen significant soundings. <span style="float: right;">gma</span>
9 Apr '57	1106	McElmac Ewen	Before <del>After</del> Verification and Review <i>partially applied</i> application verified via 1203 dng. no. 13 <span style="float: right;">gma</span> Correction canceled. Not to be used for this scale till survey is verified. Rev. by H.S. Apr. 23, 1957
2/15/56	322 (2 dng #6)	J.H.E.	Before <del>After</del> Verification and Review <i>Part. applied (6 ft to 11 ft)</i>
6/20/57	313	J.M.	Before <del>After</del> Verification and Review <i>Part. applied</i>
3-17-60	313 dng 12	R.K. de Landau	<del>Before</del> After Verification and Review - before inspection by bastions and typing of review
3-18-60	322 dng 9	R.K. de Landau	<del>Before</del> After Verification and Review - before inspection by bastions and typing of review
6-23-60	71	J.M. Albert	Before <del>After</del> Verification and Review <i>Completely</i>
3-21-61	1203 dng 18	R.E. Elkins	Before <del>After</del> Verification and Review <i>Fully applied</i> thru chit 322 dng 9 and 313 dng 12
3-21-61	70	R.E. Elkins	<i>Fully applied after Ver &amp; Rev thru chart 322 dng 9 and 1203 dng 18. (chart 313 dng 12)</i>
10-12-61	1106	R.E. Elkins	<i>Fully applied after Ver &amp; Rev thru chart 1203 dng 18, chit 313 dng 12, chit 322 dng 9.</i>
5-8-63	1203 Ream	M. Rogus	<i>Fully appl'd thru charts 313 &amp; 322 after ver &amp; review.</i>
3/4/68	1000	Svendsen	No corr. Use Ch 1203. Hydro prev. deleted in this area

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

RHC

### TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

14 March 1956

Division of Charts: R. H. Carstens

Plane of reference approved in  
11 volumes of sounding records for

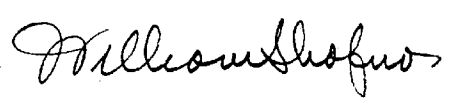
HYDROGRAPHIC SHEET 8176

Locality Penobscot Bay, Maine

Chief of Party: H. O. Fortin in 1954  
Plane of reference is mean low water, reading  
3.5 ft. on tide staff at Port Clyde  
23.0 ft. below B. M. 3 (1944)

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.

