

# 8030

Diag. Cht. No. 1202-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ST-1353 Office No. H-8030

### LOCALITY

State Maine

General locality Mount Desert Island

Locality Little Cranberry & Baker Islands

19/53

CHIEF OF PARTY

J. S. Morton

LIBRARY & ARCHIVES

DATE September 13, 1954

B-1870-1 (1)

# 8030

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-8030

Field No. St-1353

State MAINE

General locality MOUNT DESERT ISLAND

Locality LITTLE CRANBERRY AND BAKER ISLANDS

Scale 1:10,000 Date of survey 22 Aug. to 12 Oct. 1953

Instructions dated 4 February 1953

Vessel STIRNI

Chief of party J.S. MORTON

D.F. ROMERO, R.C. DARLING, D.E. WESTBROOK

Surveyed by SHIP'S OFFICERS

Soundings taken by ~~SOUNDING~~, graphic recorder, hand lead, ~~etc~~

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by SHIP PERSONNEL & NORFOLK PROCESSING OFFICE

Protracted by RICHARD D. LYNN

Soundings penciled by RICHARD D. LYNN

Soundings in ~~FATHOMS~~ feet at MLW ~~MLW~~ *and are true depths*

REMARKS: This survey was smooth plotted in the Hydrographic Section of the Norfolk Processing Office.

786

#### A. PROJECT:

Project CS-265 (1953) Supplemental Instructions 222/MEK s-2-ST from the Director dated 4 February 1953 for this project supersede all previous instructions. Letter 224/MEK S-1-ST from Chief, Division Hydrographic Section dated 6 February 1953 with corrections to original instructions.

#### B. SURVEY LIMITS AND DATES:

The Survey includes the eastern halves of Sutton and Great Cranberry Islands, all of Little Cranberry and Baker Islands east of Bunker Iedge and Bracy Cove, Seal Harbor, Hunters Beach Cove and Otter Cove at the southern end of Mt. Desert Island, and the areas bounded thereby as shown below:

Bounded on the east at Long.  $68^{\circ}11.5'W$  from Lat.  $44^{\circ}18.4'N$  (Otter Point) to Lat.  $44^{\circ}13.7'N$ , on the south at Lat.  $44^{\circ}13.8'N$  from Long.  $68^{\circ}11.0'W$  to Long.  $68^{\circ}15.0'W$ , on the west at Long.  $68^{\circ}15.0'W$  (South of Great Cranberry Island), and Long.  $68^{\circ}15.7'W$  (North of Great Cranberry Island), from Lat.  $44^{\circ}13.2'N$  to Lat.  $44^{\circ}17.3'N$ , and on the north at the southern shore of Mount Desert Island from Long.  $68^{\circ}15.7'W$  to Long.  $68^{\circ}11.5'W$ . Field work began on 22 August 1953 and was completed on 12 October 1953.

Minor delays occurred when the launch personnel were used on the STIRNI for continuous hydrography on Sheet ST-4153. Several days were lost due to inclement weather. This survey was run in conjunction with H-8029 to take advantage of the good weather to work in the open areas of this survey and when weather was unfavorable for these exposed areas, work was continued on H-8029.

The survey makes a junction with H-8029, 1953, scale 1:10,000 on the west, and H-7153, 1946, scale 1:20,000 on the south. There is no junction to the east. Some work was accomplished by the STIRNI on sheet ST-1453, 1953, scale 1:10,000, to the east, but no junction was made and the survey was not completed.

#### C. VESSEL AND EQUIPMENT:

Motor launch 101 was used for the entire survey with the exception of 8, 9, and 12 October when the Ship STIRNI was used. The launch operated from the USC&GSS STIRNI tied up alongside the U. S. Coast Guard pier at Southwest Harbor, Maine.

Two 808 Fathometers, nos. 65 and 145 SP were used. Fathometer 65 gives a stray on the "B" scale at about 62 feet. Hand lead soundings were taken in most cases when locating reefs, rocks, and shoals dangerous to navigation.

#### D. TIDE AND CURRENT STATIONS:

All soundings on the boat sheet were reduced to MIW by use of the tidal data taken from the tide tables for Portland, Maine and applying a ratio correction of 1.1, and a time correction of -15 minutes.

A portable automatic tide gage was in operation at Lat. 44°-16.49' and Long. 68°-18.80' at Southwest Harbor, Maine throughout the survey. The marigrams from this tide station will be used for reducing soundings with no time or range corrections.

No current stations were occupied.

#### E. SMOOTH SHEET:

The smooth sheet will be plotted by the Norfolk Processing Office.

#### F. CONTROL STATIONS:

Triangulation control for the photogrammetric control can be found in description No. 536. The Maine Geodetic Survey established control in the years 1856, 1859-1863, 1870, 1875, and 1908. Party Chiefs were ADB, SCMcC, FPW, GAF, JWD, and NHH respectfully. Additional control was furnished by the U. S. Coast and Geodetic Survey in 1934 by KGC.

Photogrammetric/control was used exclusively as shown on the manuscripts RS-463 (T-8585) 1953, (Otter Cove, Bunker Iedge, etc.), and RS-462 (T-8586) 1953, (Cranberry Islands and Baker Island). All manuscripts are on the scale of 1:10,000.

The methods used in securing the control will be given in a separate report by the photogrammetric party chief.

An officer was assigned by the Photogrammetric Division to work in conjunction with the ship to supply and oversee the adequacy of the control. He prepared the boat sheets, built the signals, and supplemented the control where necessary. His knowledge of hydrography and photogrammetry made this practice extremely profitable and with very accurate results. Control points selected in the office that were found unsuitable in the field were moved to favorable locations. Areas with insufficient control were supplied with control by means of radial plots in the field. The entire survey was thereby furnished with control of third order accuracy or better.

## G. SHORELINE AND TOPOGRAPHY:

The shoreline and topography were located by means of photogrammetric plots shown on T-11350 and T-11351, 1953 scale 1:10,000. Some low water soundings could not be taken by normal operation of the launch because the reefs and ledges were too steep and could not be negotiated even at high water. In areas coming under this classification, the low water line was located by spot sextant fixes and intermediate points were sketched in by the hydrographer at the time the fixes were taken. Some estimations were made at the beginning or ending of the sounding lines. The record books will show where these were made.

Topo surveys  
used here

The photographs for the area were taken at approximately the low water stage of the tide. The manuscripts were compiled showing the low water line. The transfer of this line was made on the boat sheet in blue ink. The locations made by the hydrographer is shown in black ink.

No discrepancies are noted between the photogrammetric and hydrographic location of mean low water line with the following exceptions:

The pool at the east side of Great Cranberry Island is a "flat" area. A difference of one foot of tide will move the low water line about 50 meters which will account for the discrepancy of that area.

The southern shore, Baker Island. A ledge fringes the shore at this point and was located by spot fixes from the bow of the launch. The photographs are not clear at this area and it is recommended that the hydrographic location be used.

T-11351  
defines L.W.L.  
adequately

## H. SOUNDINGS:

Depths were measured by use of the 808 fathometer. In most cases, shoals dangerous to navigation were sounded with the hand lead by drifting and circling a marker buoy placed at the shoalest sounding. The fathometer was in continuous use during this operation and notes were made on the fathogram and in the record books.

## I. CONTROL OF HYDROGRAPHY:

Standard hydrographic sextants were used to obtain three point fixes throughout the survey. A courts three arm protractor with extended celluloid arms was used for all plotting.

## J. ADEQUACY OF SURVEY:

The survey is complete and adequate to supersede prior surveys for charting. The junction with the adjoining surveys are satisfactory and depth curves can be adequately drawn at these junctions.

#### K. CROSSLINES:

4% crosslines were run with no discrepancies except for n, p, and r day soundings. It is evident that the fathometer was not operating at its proper speed for parts of these days. This percentage includes the development mileage in the main scheme of soundings. To correct for this error of fathometer speed, a correction table is compiled in paragraph ~~U~~<sup>V</sup> to be applied to the soundings for the position and days shown. The corrections were compiled in a direct proportion as to depth.

see also  
Addendum

#### L. COMPARISON WITH PRIOR SURVEYS:

The survey agrees with the prior surveys H-1121, 1902, scale 1:10,000, H-2765, 1905, scale 1:10,000, H-1215, 1873, scale 1:10,000. It does not agree very well with H-1424, 1879, scale 1:20,000, mainly because of the sparseness of soundings on the prior survey. The area south of Little Cranberry Island is very foul and numerous shoals, boulders, and rocks were newly located. This area should be listed as foul on the charts. The area is almost entirely different on this survey. In other shoal areas, shoaler depths were also found. These soundings are listed in paragraph N. The prior surveys were made by hand lead alone which probably accounts for these discrepancies. Also, very little development was undertaken in the prior survey. It is noted that the old survey showed ledge and reefs by "rock awash" symbols. The limits of these ledges and reefs were carefully located and should supersede the rock awash symbols when applicable.

Several new rocks were located. These are shown in paragraph N.

Final depths on Long Pond Shoal and Lewis Rock are deeper than the previous survey. All junctions with prior surveys are adequate and no holidays exist.

#### M. COMPARISON WITH CHART:

The survey was compared with chart 306, scale 1:40,000. Any topography changes such as piers, roads etc. are clearly shown on the photogrammetric manuscripts.

The overall soundings compare favorably with the chart with the exception of the area south of Little Cranberry Island and those soundings listed in paragraph N.

N. DANGERS AND SHOALS:

Listed below are the important newly found shoals:

<u>Latitude</u>	<u>Longitude</u>	<u>Least Depth</u>	<u>Position No.</u>
44°-14.10N'	68°-13.99W'	* 8 1/2 feet	137a
44°-14.60N'	68°-13.28W'	* 8 "	115a
44°-15.07N'	68°-13.48W'	* 1 foot	68s
44°-14.45N'	68°-13.65W'	* Reef bares 2 1/2 ft.	161a
44°-15.73N'	68°-12.40W'	* 35 <del>32</del> feet	77n
44°-15.75N'	68°-14.72W'	* 5 "	143s
44°-17.20N'	68°-15.17W'	* 7 "	31p

\* Reported to U. S. Coast Guard by Washington Office. — 2.988(1953)

44°-17.90N'	68°-13.15W'	Rock bares 1 ft.	51p
44°-15.50N'	68°-12.60W'	Rock bares 4 ft.	38,39,40m
44°-15.92N'	68°-12.06W'	6 feet	221r

Development of Long Pond Shoal and Lewis Rock failed to uncover the 5 foot and 6 foot soundings respectively. The shoalest soundings found were 9 ft. and 8 ft. These are sharp pinacles and are no doubt there and should remain on the charts as shown. With the above exceptions, all charted dangers, shoals, and large rocks were found as charted.

# 7C  
Review

Spurling rock was found after investigating the area four different times. Eight passes were made slipping a range a few feet each time on Bell "2" buoy until the highest part of the rock was passed. The launch was traveling at the slowest speed against a current. The resulting echo return shown on the fathogram indicates the sharpness and small area on the top of this rock. Attempt was made to place a hand lead on this rock without success. The fathometer operator destroyed the majority of these 8 fathogram soundings inadvertently. It was noted with the predicted tides that the shoalest sounding would reduce to 7 feet.

see P 5  
Review

O. COAST PILOT INFORMATION:

The Gulf area should be listed as foul, as there are numerous boulders all over the area.

There is a good anchorage in Seal Harbor, but is open to south and southeasterly weather.

P. AIDS TO NAVIGATION:

Floating aids:

<u>Light List Name</u>	<u>Lat.</u>	<u>Long.</u>	<u>Depth of Water</u>	<u>Pos.No.</u>	<u>Date</u>
Crownshield Pt. B.1	44°-17.27'	68°-14.39'	32'	156j	9/23/53
Bowden Iedge B.4	44°-17.07'	68°-14.62'	50'	1c	10/12/53
Cranberry Hbr. B.1	44°-15.82'	68°-14.74'	21'	142s	10/10/53
Seal Hbr. Lightd					
Buoy 2	44°-17.15'	68°-13.90'	43'	2c	10/12/53
Lewis Rock B 3A	44°-17.03'	68°-13.52'	53'	3c	10/12/53
East Bunker Gong					
Buoy 2	44°-16.64'	68°-12.73'	108'	4B	10/9/53
Spurling Rock					
Bell Buoy 2	44°-15.88'	68°-15.40'	35'	31f	9/11/53
Baker I. Ledge					
Buoy 1A	44°-14.92'	68°-11.99'	24'	220r	10/9/53
Gilley Iedge B.1	44°-15.34'	68°-12.02'	34'	230r	10/9/53
Harding Iedge. B.3	44°-15.66'	68°-12.42'	52'	34m	9/30/53
Long Pond Shoal					
Buoy 6	44°-16.98'	68°-15.29'	31'	184s	10/10/53

It is recommended that the Black Can C-3 be moved offshore to the east of the 33 foot sounding at Lat. 44-15.73N, and Long. 68-12.40W. 35

There is a cable area from the Southeast point of Sutton Island to the Northeast point of Little Cranberry Island. A report by the photogrammetric division is submitted on the cable area in more detail. *also other cable areas.*

A fishing boat serves as a ferry for carrying supplies and personnel from Southwest Harbor (2nd pier west of C.G. pier), to the pier at Isleford on Little Cranberry Island.

#### Q. LANDMARKS FOR CHARTS:

See separate report submitted on Form 567.

#### U. STATISTICS:

Totals for Sheet:

Launch 101. No. <sup>Pos.</sup> Sdgs. 2,861, Stat. Mi. Sdgs. 364.1,  
No. H.I. Sdgs. 10, Area, Sq. Stat. Mi. 445.7

STIRNI No. <sup>Pos.</sup> Sdgs. 255, Stat. Mi. Sdgs. 64.3, Area,  
Sq. Stat. Mi. 78.3

#### V. TIDE NOTE:

The portable automatic tide gage located in Southwest Harbor Lat. 44°-16.49', Long. 68°-18.80', furnished tidal data used in reducing soundings for the entire sheet. Mean low water falls at 3.5 feet on the Southwest Harbor tide staff. No correction for time or height was applied to the Southwest Harbor readings. Hourly heights were scaled by ship personnel, and the plane of reference was furnished by the Washington Office.



R. GEOGRAPHIC NAMES:

<u>Name</u>	<u>Latitude</u>	<u>Longitude</u>
Gravel Nobble	44°-14.8'	68°-12.3'
Bar Ledges	44°-14.6'	68°-12.8'
Black Rock	why not: South Black Rock { 44°-14.25'	68°-14.40'
	North Black Rock { 44°-14.38'	68°-14.25'
Mackerel Ledges	44°-14.10'	68°-14.00'
Thompson Ledges	44°-14.40'	68°-13.60'
Whitehorse Ledge	44°-14.60'	68°-13.28'
The Thumper	44°-14.14'	68°-12.45'
Southwest Rocks	{ 44°-14.10'	68°-12.03'
	{ 44°-14.08'	68°-11.93'
Green Bar	44°-15.0'	68°-12.5'
Weaver Rock	44°-15.05'	68°-13.48'
Woodand Ledge	44°-15.3'	68°-13.7'

These names submitted by Winfred Fernald, Isleford, Maine.  
 He and his father have been lobster fishermen in this area for  
 80 years.

*These names have  
 been recorded in the P.M. files for  
 subsequent chart use. A.P.W.  
 4-4-55*

*Above names used on new chart 206  
 with approval of Mr. Waight.  
 S.M.A.  
 1-24-56*

W. ABSTRACT OF VELOCITY CORRECTIONS:

Velocity corrections were applied using one set of corrections through 4 September 1953, and a different set after 4 September, 1953 for the remainder of the season.

Bar checks were taken to 75 ft. depths with fathometer No. 65 and to 100 ft. depths with fathometer 145-SP. Below this depth, velocity corrections were based on temperature and salinity observations.

Velocity corrections through 4 September 1953.

Fath No. 65		launch -101
From	to	Corr.
0ft.	37ft.	0.0ft.
37	57	-0.2
57	67	-0.4
67	78	-0.6
78	95	-0.8
95	114.5	-1.0
114.5	133.5	-1.2
133.5	153	-1.4
153	173	-1.6

Velocity corrections after 4 September 1953.

Fath No. 65			Fath. No. 145-SP ship STIRN I		
From	to	Corr.	From	to	Corr.
0ft.	10ft.	-0.2ft.	0ft.	27ft.	0.0ft.
10	34.5	-0.4	27	46	-0.2
34.5	43.5	-0.6	46	60.5	-0.4
43.5	50	-0.8	60.5	72.5	-0.6
50	55	-1.0	72.5	81	-0.8
55	59.5	-1.2	81	91	-1.0
59.5	66	-1.4	91	115.5	-1.2
66	80	-1.6	115.5	160	-1.4
80	121	-1.8			
121	166.5	-2.0			

Phase corrections are as follows:

Fathometer	A to B	A to C	A to $\mathcal{D}$
SP-145	+1.2 ft.	+2.2 ft.	+2.8 ft.
65	-1.4 ft.	-1.6 ft.	-1.8 ft.

X. SPEED CORRECTIONS:

Day	Depth in ft.	Corr. in ft.	Pos. to be applied
n&r	0-10	0	<del>32n thru 207n</del> 1-14n and 38-170n
	11-30	+1	<del>118 r thru 258 r</del> 245r - 258r
	31-50.5	+2	
	51-70.5	+3	
	71-90.5	+4	see also Addendum.
	91-110.5	+5	
	111-130.5	+6	
	131-150.5	+7	

<u>Day</u>	<u>Depth in ft.</u>	<u>Corr. in ft.</u>	<u>Positions to be applied</u>
p	0-17.5	0	<del>all day</del> 41-168 P
	18-52.5	+1	
	53-87.5	+2	
	88-122.5	+3	
	123-157.5	+4	

Respectfully submitted,

*David F. Romero*

for

R. C. Darling  
LCDR, USC&GS

Approved and forwarded,

*J. S. Morton*

J. S. Morton  
Commander, USC&GS  
Commanding Ship STIRNI

LIST OF SIGNALS

H-8030

TRIANGULATION STATIONS

BAKER BAKER ISLAND LIGHTHOUSE, 1861-1934  
BEAR BEAR ISLAND LIGHTHOUSE, 1902-1934  
HEAD GREAT HEAD OBSERVATORY, 1934-44  
MON BUNKER LEDGE MONUMENT, 1863-1944

TOPOGRAPHIC STATIONS

COMPILATION T-11350

Ace	Arm	Bud	But	Con	Cur	Dim	Dun	Era	Far	Gad
Gus	Hem	Hid	Ivy	Jap	Jut	Ked	Ken	Kim(d)	Lam	Lax
Lip	Mag	Mum	Nat	Nec	Nes	Nix	Obi	Off	Out	Pad
Paw	Pit	Qua	Roc	Row	Rub	Sip	Sox	Tom	Try(d)	Val
Vex	Wall(d)	Wan	War	Wig	Yak	Yel(d)	Zig			

COMPILATION T-11351

Aco(d)	Amy	Art	Ask	Ave	Axe	Bat	Bus	Coo	Cue	Dip
Elf	Est	Fly	For	Fox	Fro	Fun	Geo	Gob	Gum	Guy
Hop	Hug	Hum	Low	Lug	Lux	Maw	Nod	Non	Now	Nub
Nut	Owl	Pix	Ply(d)	Pod	Poi	Pot	Pro	Pup	Put	Rue
Rum	Sis	She	Ski	Sky	Sol(d)	Tel	Tow(d)	Toy	Use	Wen
Why	Win	wit(d)	Woo	Yes						

HYDROGRAPHIC STATIONS

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FLOATING AIDS TO NAVIGATION  
H-8030

<u>BUOY</u>	<u>LAT.</u>	<u>LONG.</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
Crowninshield Pt. Buoy 1	44-17.27	68-14.39	31'	156j	9-23-53
Bowden Ledge Buoy	44-17.07	68-14.62	50'	1C	10-12-53
Cranberry Hbr. Buoy 1	44-15.83	68-14.76	21'	142s	10-10-53
Seal Hbr. Lighted Buoy 2	44-17.15	68-13.90	43'	2C	10-12-53
Lewis Rock Buoy 3A	44-17.03	68-13.52	53'	3C	10-12-53
East Bunker Gong Buoy 2	44-16.64	68-12.73	108'	4B	10- 9-53
Spurling Rock Bell Buoy 2	44-15.89	68-15.40	35'	31f	9-11-53
Baker Island Ledge Buoy 1A	44-14.92	68-11.99	<sup>12</sup> 24'	220r	10- 9-53
Gilley Ledge Buoy 1	44-15.34	68-12.02	34'	230r	10- 9-53
Harding Ledge Buoy 3	44-15.66	68-12.42	52'	34m	9-11-53
Long Pond Shoal Buoy 6	44-16.98	68-15.29	31'	184s	10-10-53

STATISTICS  
H-8030

LAUNCH NO. 101

<u>VOL. NO.</u>	<u>DAY LTR.</u>	<u>DATE</u>	<u>NO. H.L. SDGS.</u>	<u>NO. POS.</u>	<u>STA. MI. SDGS.</u>
1	a	8-28-53	4	154	19.2
1&2	b	8-24-53	-	200	29.8
2	c	9- 1-53	-	229	36.2
3	d	9- 2-53	8	187	24.7
3&4	e	9-10-53	2	156	16.8
4	f	9-11-53	3	187	17.9
4&5	g	9-15-53	-	170	27.5
6	h	9-22-53	-	160	25.4
6&7	j	9-23-53	-	188	21.6
7	k	9-24-53	-	227	30.6
8	l	9-29-53	-	195	27.5
8&9	m	9-30-53	2	127	15.1
9	n	10-01-53	-	207	27.9
10	p	10-02-53	-	168	20.6
10	q	10- 5-53	3	181	17.0
11	r	10- 9-53	-	258	28.7
11&12	s	10-10-53	-	211	24.9
12	t	10-12-53	-	14	1.7
<del>13</del>					

SHIP STIRNI

13	A	10- 8-53	-	182	49.4
13	B	10- 9-53	-	6	-
13	C	10-12-53	-	67	14.9
<b>TOTALS</b>				<b>3474</b>	<b>477.4</b>

ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8030 (Field No. St-1353)

GENERAL

This is a well controlled survey and no difficulty was experienced plotting positions.

SOUNDINGS

The extremely irregular nature of the bottom on parts of this survey, made it difficult to judge the accuracy of soundings at crossings and to pick up irregularities along parallel lines of soundings.

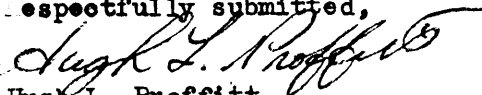
Particular attention should be given to A day (Stirni), as the fathometer was operated with a faulty stylus.

On parts of n,p and r days (Lch. 101), the soundings were not in agreement with surrounding hydrography. The field party noting this, compiled and listed in the descriptive report, time corrections to be applied to these days. The fathograms show no indication of time discrepancies so it is assumed the fathometer was used as a clock. This condition could exist on other days and not be noticeable because of the irregular bottom.

These corrections, how-ever derived, were applied to the reduced soundings in green pencil, on the positions listed below bringing them into agreement with surrounding hydrography

n day	ros. 1 thru 14 and 38 thru 170
p day	ros. 41 thru 168
r Day	ros. 245 thru 258
	also- 27-31 r 111-114 r
	74-77 r 123-127 r
	79-81 r 144-148 r
	83-86 r 149-154 r
	88-89 r 155-156 r
	206-210 r

Respectfully submitted,

  
Hugh L. Proffitt  
Cartographer

Norfolk, Va.  
7 Sept. 1954

GEOGRAPHIC NAMES

Survey No. H-8030

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Baker Island</u>									BGN		1
<u>Bear Island</u>											2
<u>Bowden Ledge</u>											3
<u>Bracy Cove</u>									BGN		4
<u>Cranberry Harbor</u>											5
<u>Deadman Point</u>											6
<u>East Bunker Ledge</u>											7
<u>Eastern Way</u>											8
<u>Gilley Thorofare</u>											9
<u>Gilley Ledge</u>											10
<u>Great Cranberry Island</u>											11
<u>Hadlock Cove</u>									BGN		12
<u>Harding Ledge</u>											13
<u>Hunters Beach Cove</u>											14
<u>Lewis Rock</u>											15
<u>Little Cranberry Island</u>											16
<u>Long Pond Shoal</u>											17
<u>Old Tom</u>											18
<u>Otter Cove</u>											19
<u>Seal Harbor</u>											20
<u>Spurling Rock</u>											21
<u>Sutton Island</u>									BGN		22
<u>The Pool</u>											23
<u>Otter Point</u>											24
<u>Old Soaker</u>											25
<u>Newport Cove</u>											26
											27
											28

Names approved

4-4-55  
a.d.w.

OK 11-12-63

a.d.w.



Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8030...

Records accompanying survey:

Boat sheets ..1...; sounding vols. <sup>13</sup>.....; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls <sup>10</sup> Env.  
 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		3474
Number of positions checked		19
Number of positions revised		4
Number of soundings revised (refers to depth only)		1310*
Number of soundings erroneously spaced		70
Number of signals erroneously plotted or transferred		
Topographic details	Time	
Junctions	Time	
Verification of soundings from graphic record	Time	15 hrs
C.R. Helmer -----	318	9/30/54 - 12/1/54
A.R. Stirni -----	84	2/9/55
Verification by.....	Total time	Date

Reviewed by.... *A.R. Stirni*..... Time *96*... Date *3/1/55*...

\* 1310 includes the entering and inking of 875 sds from a tide correction on "g" day; and 185 sds from speed correction on "r" day of

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8030

FIELD NO. ST-1353

Maine, Mount Desert Island, Little Cranberry and Baker Islands

Project CS-265

Surveyed - August, October, 1953

Scale 1:10,000

Soundings:

Control:

808 Fathometer  
Handlead

Sextant fixes on  
shore signals

Chief of Party - J. S. Morton

Surveyed by - D. F. Romero, R. C. Darling, D. E. Westbrook

Protracted by - R. D. Lynn

Soundings plotted by - R. D. Lynn

Verified and inked by - C. R. Helmer, A. R. Stirni

Reviewed by - A. R. Stirni 3-2-55

Inspected by - R. H. Carstens

1. Shoreline and Control

*one passed with  
revised sheet 7/23/63*

The shoreline originates with unreviewed air-photographic surveys T-11350 (1953) and T-11351 (1953). Revisions to the reef limits have been applied from the boat sheet of the present survey.

The source of the signals is given in the Descriptive Report. All signals, with the exception of one hydrographic signal, were located by photogrammetric methods.

2. Sounding Line Crossings

Depths at sounding line crossings are in good agreement, considering the irregularity of the bottom.

3. Depth Curves and Bottom Configuration

The area surveyed clearly reveals effects of glacial scour. The bottom is irregular and interspersed with rocky knolls and ridges submerged at various depths, or bare as reefs and islets. Large islands of the area are almost entirely ringed with rock ledge with the exception of a few sandy bights. Complete development of the low water and 6-ft depth curves was prevented by the foul nature of the inshore areas. Other depth curves have been adequately delineated.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-7153 (1946) on the south. The junction on the west with H-8029 (1953-54) will be considered in the review of that survey. Junctional surveys on the east have not yet been received registered. Present survey depths are in general agreement with charted depths on the east.

5. Comparison with Prior Surveys

H-1120 (1871), 1:10,000  
 H-1121 (1871), 1:10,000  
 H-1215 (1873), 1:10,000

H-1424 (1879), 1:20,000  
 H-2765 (1905), 1:10,000

The most complete coverage of the area is furnished by surveys H-1121, H-1215 and H-1424. Survey H-2765 was a channel investigation made with hand lead and sentinel drag and survey H-1120 crossed the southern limit of the present survey with a single sounding line only. A comparison between the present and prior surveys reveals no important changes in the bottom. However, additional features were revealed by the closer development on the present survey and shoaler depths were found on some of the previously surveyed shoals as exemplified by the following comparison:

<u>Location</u>	<u>Present Survey</u>	<u>Prior Survey</u>	<u>Prior Survey</u>
<u>Latitude</u> <u>Longitude</u>	<u>Depths</u>	<u>Depth</u>	<u>Survey</u>
44°15.05' 68°13.48'	1	6	H-1424
44°14.90' 68°14.42'	2	5	"
44°14.20' 68°14.35'	7	18	"
44°14.17' 68°14.10'	7	20-30	"
44°14.45' 68°12.68'	5	11-15	"
44°14.80' 68°12.87'	8	19	"
44°15.63' 68°12.58' <i>Harding Ledge</i>	1½	6	"
44°15.76' 68°14.73'	5	10½	H-1121
44°17.20' 68°15.17'	7	17	"
44°15.73' 68°15.11'	13	16	"
44°17.32' 68°13.87'	2	4	" Lt. Heald (1884)

The following charted depths from prior surveys are shoaler than present survey depths and have been carried forward on the present survey. The regular system of sounding line spacing on the present survey does not disprove the existence of these prior depths:

Location		Charted	Present survey	Source
Latitude	Longitude	Depth	Depth	
44°15.93'	68°14.71'	16	21	H-1121
44°15.82'	68°14.95'	16	19-21	"
44°15.55'	68°14.92'	18	21-23	"
44°15.76'	68°15.43'	14	18-24	"
44°15.90'	68°14.82'	18	20-21	H-2765
44°17.00'	68°13.48'	6	8	H-1121 (buoy list)

In addition the following shoal depths are noted:

(1) The charted 7-ft. sounding on Spurling Rock at lat. 44°15.88', long. 68°15.38' from H-1121 (Letter of 1877) has been carried forward to the present survey. Three fathogram profiles were obtained on this rock on the present survey. However, no drift or hand lead investigation was made and it is possible, in view of its sharpness, that the least depth was not ascertained. The hydrographer also states in the Descriptive Report that fathograms which were inadvertently destroyed, had registered a least depth of 7 ft. as reduced from predicted tides.

(2) A 23-ft. depth on Old Tom Rock at lat. 44°16.48', long. 68°14.00' was charted from H-2765 (1905). On the present survey close fathometer development reveals a least depth of 24 ft. on Old Tom Rock which is adequate for charting.

(3) A 10-ft. charted depth on Gilley Ledge at lat. 44°15.32', long. 68°12.08' is from L. H. Bulletin No. 36 (1894) and Letter 778 (1894). The present survey hand lead and fathometer investigation established an 11-ft. depth on this ledge, which is considered adequate for charting.

(4) The 5-ft. sounding charted at lat. 44°17.03', long. 68°15.39' from H-1121 falls in depths of about 13 ft. on the present survey. The 5-ft sounding was taken at a fix and was substantiated by other shoal soundings during the investigation on the prior survey. No spot investigation was made on the present survey. The 5-ft. sounding is not disproved and therefore has been retained.

The present survey, with the additional soundings carried forward is adequate to supersede the prior surveys.

6. Comparison with Chart 306 (Latest print date 8-16-54)  
Chart 308 ( " " " 8-23-54)

A. Hydrography

Charted hydrography originates principally with the previously discussed prior surveys supplemented by chart letters, and critical soundings and rocks from the present survey prior to verification and review, as noted in H.O.N.M.'s 29 (1953), 49 (1953) and 42 (1954).

Charted depths and dangers which have been revised during verification and review are as follows:

<u>Charted Depth</u>	<u>Present Survey Depth</u>	<u>Latitude</u>	<u>Location Longitude</u>
6	5	44°14.57'	68°14.03'
5	9	44°14.14'	68°14.70'
4	7	44°14.20'	68°14.35'
4	7	44°14.17'	68°14.10'
2	5	44°14.45'	68°12.68'
6	8	44°14.80'	68°12.87'
6	8	44°14.10'	68°14.00'
7	8	44°14.60'	68°13.28'
33	35	44°15.74'	68°12.40'
6	5	44°15.76'	68°14.73'
rock awash	removed	44°14.49'	68°12.40'
foul area	4	44°14.62'	68°12.80'

At lat. 44°17.83', long. 68°12.67', two charted islets bearing 8 ft. MLW have been revised to rocks awash to conform to the tidal range of 10.2 ft.

A charted islet at lat. 44°18.62', long. 68°11.95' has been revised to a rock awash. This feature was originally shown as a ledge on topographic survey T-1334 (1873). The present survey reveals a depth of 1-ft. at this location and air-photographic survey T-11350, based on photographs taken at approximate MLW, does not reveal any feature..

The present survey is adequate to supersede the charted information.

#### B. Aids to Navigation

The aids to navigation are in substantial agreement with charted aids and adequately mark the features intended.

#### 7. Condition of Survey

(a) The sounding records and Descriptive Report are generally complete and comprehensive.

(b) The smooth plotting was accurately done.

(c) Fathometer speed corrections were applied by the field party to sections of lines on several days in order to eliminate differences in depths, although no differences between recorded and fathogram time are apparent. Apparently time was recorded from the fathograms and not from the clock, a practice which

is contrary to hydrographic instructions and which fails to provide the data necessary for the determination of speed corrections.

(d) Errors in tide reducers for q-day were detected in the Division of Tides and Currents. The application of the correct tide reducers eliminated discrepancies as great as 4 ft.

(e) Errors of 5 and 10 ft. were found in the scanning of about 15 soundings, indicating a rather cursory check on the scanning. Several shoal soundings which provided the least depth on features were not scanned by the field party and were added in the Washington Office.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional hydrography is recommended. Proposed wire-drag surveys to be accomplished in 1955 will cover portions of the navigable areas.

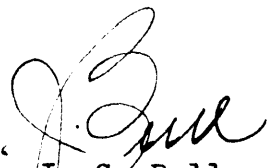
Examined and Approved:



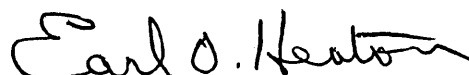
H. R. Edmonston  
Chief, Nautical Chart Branch



E. R. McCarthy  
Acting Chief, Chart Division



J. C. Bull  
Chief, Hydrography Branch



Earl O. Heaton  
Chief, Division of Coastal Surveys

RHC

### TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF HYDROGRAPHY AND TOPOGRAPHY~~

27 September 1954

Division of Charts: R. H. Carstens

Plane of reference approved in  
13 volumes of sounding records for

HYDROGRAPHIC SHEET 8030

Locality Mt. Desert Island, Maine

Chief of Party: J. S. Morton in 1953  
Plane of reference is mean low water, reading  
3.5 ft. on tide staff at Southwest Harbor  
17.9 ft. below B. M. 2 (1879)

Height of mean high water above plane of reference is 10.2 feet.

NOTE: Tide reducers for positions 1q - 181q inclusive in  
Volume 10 have been revised in red, these revisions  
have been verified.

Condition of records satisfactory except as noted below:

*E. C. McKay*  
Tides Branch

Chief, Division of Tides and Currents.

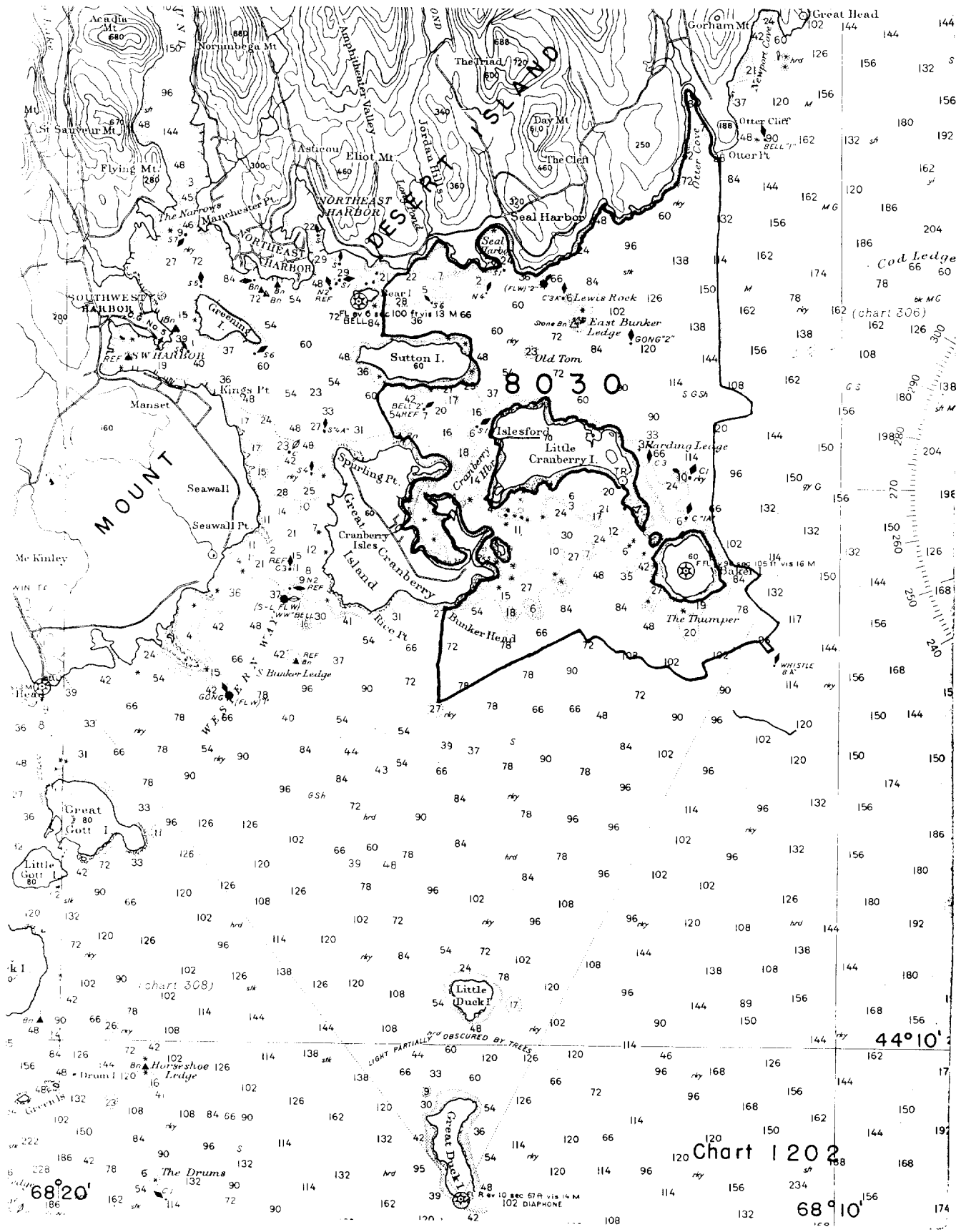


Chart 1202

44° 10'

68° 20'

68° 10'



# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8030

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/27/54	308 Reconst.	M.E.	(Verif. about 90% complete) Before <del>After</del> Verification and Review
7 Jan '55	1202	H.E. MacEwen	Before <del>After</del> <del>Verification</del> and Review Partially
1/12/55	1106	S.R.M.	<del>Before</del> After Verification and Review <sup>before</sup> Completely applied
			Before After Verification and Review
3/30/55	206	S.R.M. Gunn	<del>Before</del> After Verification and Review <span style="float: right;">S.M.A.</span>
8/3/55	308	S.R.M.	<del>Before</del> After Verification and Review Partially applied.
5-11-56	306	J.P. Walker	<del>Before</del> After Verification and Review Partially
4/12/57	Reconst 308	J.P. Walker	<del>Before</del> After Verification and Review Completely
3/29/62	306 Reconst	Helmer	<del>Before</del> After Verification and Review App thru chart 206. Added 120' curve and hydro in Otter Cove
			Before After Verification and Review

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.

# 8030

Additional work

*Original*

Diag. Cht. No. 1202-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey ~~WIRE DRAG~~ Hydrographic

(ST-1353)

Field No. ~~H-8030~~ Office No. ~~H-8030~~ Ad. Wk.

### LOCALITY

State MAINE

General locality GULF OF MAINE

Locality MT. DESERT I.  
~~MUSCONGUS BAY~~

19 55

CHIEF OF PARTY

Commander John C. Ellerbe

LIBRARY & ARCHIVES

DATE **DEC 10 1958**

B-1870-1 (1)

8030

Additional work

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-8030 Ad. Wk.

Field No. ST-1353

State Maine

General locality Mount Desert Island

Locality Little Cranberry and Baker Islands

Scale 1:10,000 Date of survey 22-27 Sept. 1955

Instructions dated 5 August 1955

Vessel USC & GS Ships WAINWRIGHT and HILGARD

Chief of party J. C. Ellerbe

Surveyed by J. C. Ellerbe & G. L. Short

Soundings taken by ~~XXXXXXXX~~, graphic recorder, ~~XXXXXXXXXX~~

Fathograms scaled by Ship's personnel

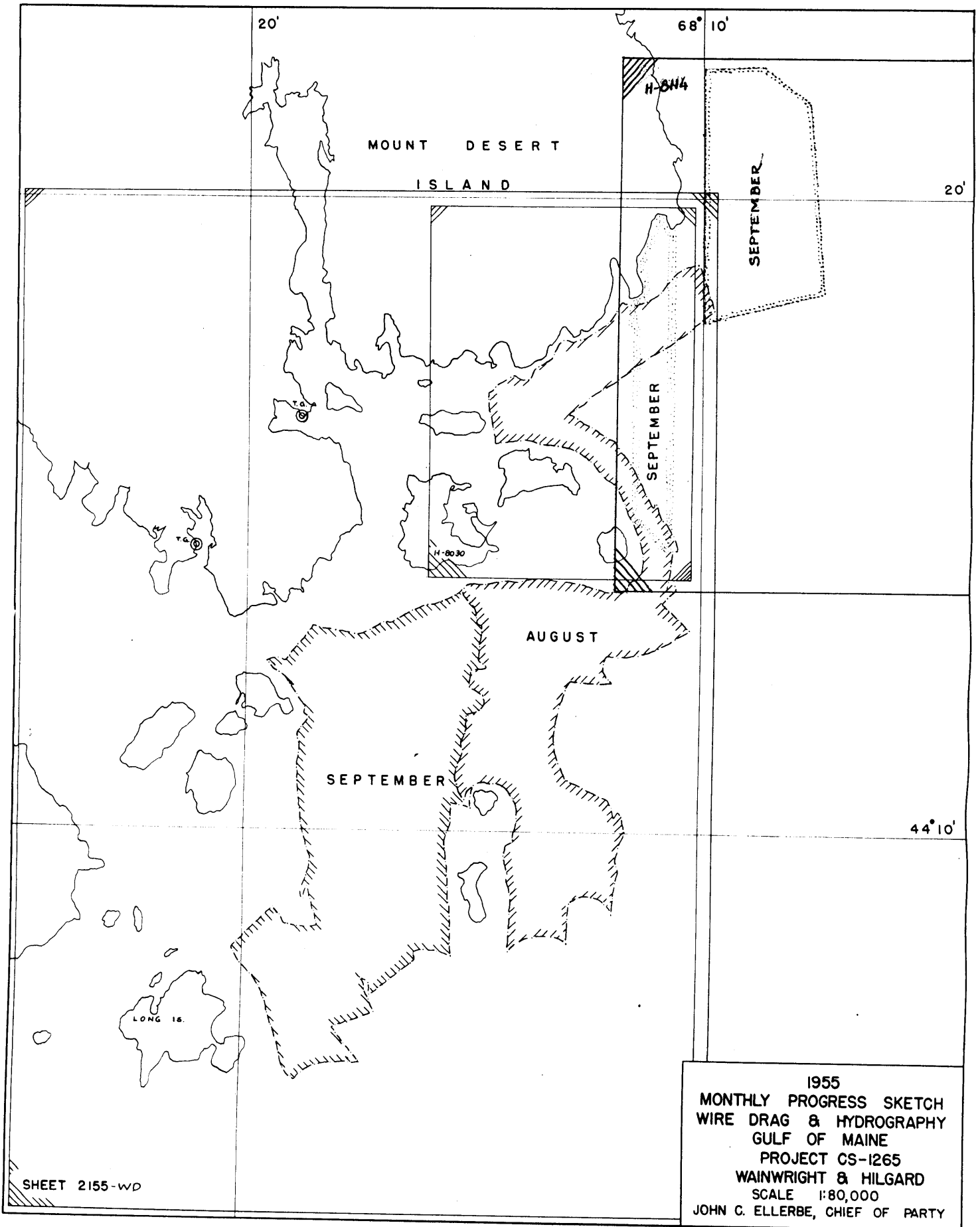
Fathograms checked by Ship's personnel

Protracted by D. E. Westbrook

Soundings penciled by D. E. Westbrook

Soundings in ~~fathoms~~ feet at MLW ~~MEAN~~ and are true depths.

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet No. H-8030 (ST-1353)

Project 1265

Coast of Maine 1955

Scale 1:10,000

John C. Ellerbe

Chief of Party

A. PROJECT

Revised Instructions dated 5 August 1955 22/MEK S-2-WA&HI. ✓

B. SURVEY LIMITS AND DATES

Sheet covers  $44^{\circ} 14.3'N$  to  $44^{\circ} 20.0'N$  and  $68^{\circ} 10'W$  to  $68^{\circ} 16'W$ . The survey of the incompleted area between the Thumper and Otter Point was plotted on a blue-line print of the smooth sheet furnished by the Washington Office. Field work began 22 September 1955 and was completed 27 September 1955. ✓

C. VESSELS AND EQUIPMENT

The Ship WAINWRIGHT was used on "A", "B", and "C" days and Launch CS-171 was used on "D" day, 808 Fathometer No. 58S was used in both vessels. ✓

D. TIDE AND CURRENT STATIONS

A portable automatic tide gage at Bass Harbor, Maine was used for reduction of soundings. ✓

Data is listed in Attachment #2. ✓

No currents were observed. ✓

E. SMOOTH SHEET

To be prepared by the Norfolk Processing Office. ← Smooth plotted in Wash. Off. on H-8030.

F. CONTROL STATIONS

All control was located by conventional methods, all being recoveries of former signals of Sheet (ST-1353) or Sheet *H-811.4* (1953) *1:10,000* or *H-8030* (1953) *1:10,000*

see Par. 3  
Review of  
Add. WK.

G. SHORELINE AND TOPOGRAPHY

Shoreline and topographic details were taken from the above sheets. ✓

H. SOUNDINGS

All soundings were obtained by conventional methods. ✓

I. CONTROL OF HYDROGRAPHY

All control was by 3-point fix method on shore signals. ✓

J. ADEQUACY OF SURVEY

The survey is adequate and no further field work is necessary. ✓

K. CROSSLINES

Crosslines averaged 10 to 15% over the area surveyed with discrepancies of approximately 2% being apparent.

} Discrepancies  
corrected  
by applying  
Speed Corrs.

L. COMPARISONS WITH PRIOR SURVEYS AND CHART

Agreement was good throughout with no important differences being detected. ✓

M. DANGERS AND SHOALS

No dangers or shoals were found. ✓

O. FATHOMETER CORRECTIONS

Fathometer corrections are tabulated in Attachment #4. Bar checks were made to 60 feet, the length of bar uprights, returns being secured on "A" and "B" phase where possible. Since the waters surveyed were considerably deeper, the deeper end of the bar check curve was determined by lead-line comparisons on the smoothest bottom which could be located. Separate bar corrections were determined for Launch CS-171 and the Ship WAINWRIGHT. Uprights were measured and corrections were found to be zero throughout. ✓

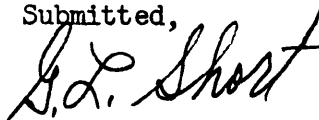
The speed of the fathometer varied considerably over the work and the soundings were adjusted a percentage determined by computing the percentage variation of the speed of paper travel between fixes. It was apparent, in a few cases, that the speed of the fathometer was not constant between fixes, as shown by crossline discrepancies and discrepancies between the work and work done on the same sheet by the STIRNI. Due to the boat sheet becoming cluttered with inked, adjusted soundings this further adjustment has not been done and the processor is authorized to make this correction.

} Speed  
Corrs. applied  
after  
Rescanning  
by smooth  
plotter  
resolved  
discrepancies.

P. LIST OF ATTACHMENTS

1. Statistics ✓
2. Tide Note ✓
3. List of Signals ✓
4. Fathometer Corrections ✓

Submitted,



G. L. Short  
Lt. Comdr., C&GS

Approved and Forwarded

John C. Ellerbe  
Commander, C&GS  
Chief of Party



STATISTICS ✓

<u>VOL. NO.</u>	<u>DAY LETTER</u>	<u>DATE</u>	<u>NUMBER OF POSITIONS</u>	<u>STAT. MI.</u>
		1955		
1	A	9/22	66	14.5
1	B	9/23	80	18.1
1	C	9/26	123	21.5
1 & 2	D	9/28	129	18.6

## TIDE NOTE

Portable automatic tide gages were installed and maintained by this party at Bass Harbor, Maine Latitude  $44^{\circ} 14.5'N$  Longitude  $68^{\circ} 21.2'W$  and Southwest Harbor, Maine Latitude  $44^{\circ} 16.5'N$  Longitude  $68^{\circ} 18.8'W$ . The Southwest Harbor gage was erratic in operation, believed due to choked well intake, and the Bass Harbor gage without corrections was used in the reduction of all soundings.

The height of Mean Low Water was 2.6 feet above staff zero.

Hourly heights were scaled by party personnel.

## LIST OF SIGNALS

<u>NAME</u>	<u>SOURCE</u>	<u>NAME</u>	<u>SOURCE</u>
ACE	ST-1353	IMP	*
BAKER	ST-1353	KED	ST-1353
BUD	ST-1353	KEN	ST-1353
COX	*	MON	ST-1353
DUB	*	NAT	ST-1353
ERG	*	NUB	ST-1353
FAR	ST-1353	OBI	ST-1353
GAL	*	POD	ST-1353
GON	*	POI	ST-1353
HEAD	ST-1353	SKI	ST-1353
ICE	*	TOW	ST-1353
		WIN	ST-1353

\* These signals from Hydrographic Sheet No. H-8114.

*Note:*

*Smooth sheet positions  
taken directly from T-11350,  
except for O COX. It was  
transferred from H-8114 as  
no other info. was available.*

ABSTRACT OF BAR CHECKS

Ship WAINWRIGHT fathometer No. 585-Initial 2.0'

Ttr. Day	Date	"A" Range												"B" Range		Remarks
		10	15	20	25	30	35	40	45	50	55	60	50	55		
A	9/22	40.2	0.0	-0.2	-0.2	-0.3	-0.4	-0.5	-0.6	-0.6	-2.0	-2.3	-2.4	-2.0	One check only	
B	9/23	40.4	40.2	40.1	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.9	-1.2	-1.2	-0.8	do	
C	9/26	40.2	40.1	0.0	0.0	0.0	-0.2	-0.2	-0.1	-0.1	-0.8	-0.5	-0.8	-0.8	do	
Average		40.3	40.1	0.0	-0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-1.2	-1.3	-1.5	-1.2		
		Fathom Scale												Corrections		
		55 Ft.												0 - 10.0 Fm. use		
		60 Ft.												10.1 on Fm. use		
"A" Day	9/22													-3.0 Ft.		
"B" Day	9/23													-1.4 Ft.		
														-1.2 Ft.		
														21.8 Fm.		
														16.4 Fm.		
														19.8 Fm.		
														-3.0 ft.		
														11.0 Ft.		
														11.0 Ft.		

Launch No. CS-171 Fathometer No. 585-Initial 0.0'

Ttr. Day	Date	Fathom Scale												Leadline Comparisons		Corrections	
		10	15	20	25	30	35	40	45	50	50	55	60	"A" Range	"B" Range		
d	9/27	-0.2	-0.2	-0.4	-0.4	-0.4	-0.6	-0.6	-0.4	-0.1R	-2.2	-1.9	-1.8	-2.4	-3.0		
		50 Ft.												Use 0.0 Ft.		"A" Range 0 to 15.0 Ft.	
		55 Ft.														15.1 to 47.4 Ft.	
		60 Ft.														Use -0.5 Ft.	
																Use -1.0 Ft.	
																Use -2.0 Ft.	
																Use -2.5 Ft.	

Use same fathom corrections as for WAINWRIGHT installation

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8030 Ad. Wk. (1955)

Records accompanying survey:

Boat sheets .1...; sounding vols. .2...; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls 1-Envelope  
 special reports, etc. 1-Descriptive report.....  
 .....

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

Number of positions on sheet		..397.
Number of positions checked		<del>.....</del>
Number of positions revised		..1..
Number of soundings revised (refers to depth only)		..0..
Number of soundings erroneously spaced		..0..
Number of signals erroneously plotted or transferred		..0..
Topographic details	Time	.....
Junctions	Time	.....
Verification of soundings from graphic record	Time	.....
Smooth Plotting by D.E. Westbrook	Total time	104
Verification by D.E. Westbrook	Total time	24
	Date	Oct. 17 - Nov 4, 1963
	Date	Nov 4 - 7, 1963
Reviewed by D.E. Westbrook	Time	24
	Date	Nov. 7 - 13, 1963

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8030 AD.WK.

FIELD NO. ST-1353

Maine, Mount Desert Island, Newport Cove to Baker Island

SURVEYED; September 22-27, 1956

SCALE: 1:10,000

PROJECT NO. CS 1265

SOUNDINGS: 308 Fathometer

CONTROL: Sextant  
fixes on shore  
signals

Chief of Party-----J. C. Ellerbe  
Surveyed by-----J. C. Ellerbe, G. L. Short  
Protracted by-----D. E. Westbrook  
Soundings plotted by-----D. E. Westbrook  
Verified and inked by-----D. E. Westbrook  
Reviewed by-----D. E. Westbrook  
Inspected by-----R. H. Carstens

Date: 11/13/63

1. The additional work was accomplished in accordance with REVISED INSTRUCTIONS - PROJECT 1265 - COAST OF MAINE, dated 5 August 1955.

The purpose of the survey was to complete hydrography in the area south of Mount Desert Island between The Thumper (Baker Island) and Otter Point. This area comprised a holiday between H-8030 (1953) 1:10,000 and H-8114 (1953) 1:10,000, about one-half mile wide by five miles long.

2. The source of the additional control and shoreline required for this survey is reviewed photogrammetric shoreline manuscript T-11350. Signal "cox" was located on the smooth sheet by direct transfer from the smooth sheet of H-8114 (1953) 1:10,000. No other information on its location was available.

3. Depths at crossings are in good agreement. The rugged nature of the bottom prevented agreement in some cases of no better than 1 or 2 feet.

Depth curves are in general adequately delineated except in the following locations:

- a. The steep foreshore of Mt. Desert Island and the foul nature of the bottom prevented development of the low water line and 6-foot depth curve.
- b. Depth curves around two reef areas in Lat.  $44^{\circ}18.52'$ , Long.  $68^{\circ}11.10'$  and Lat.  $44^{\circ}19.32'$ , Long.  $68^{\circ}10.8'$  and around the shoal area in Lat.  $44^{\circ}19.15'$ , Long.  $68^{\circ}11.25'$  were not adequately delineated. Four questionable outlying rocks awash in the vicinity of Lat.  $44^{\circ}19.32'$ , Long.  $68^{\circ}10.8'$  were not verified in the field. not in chart 206

#### 4. Condition of Survey

This survey falls short of being classified as a basic survey. A number of deficiencies in complying with the project instructions are enumerated in Par. 8 of this review.

In addition to these deficiencies a considerable amount of time was required by the smooth plotter in rescanning all fathograms of the survey for speed corrections. Only by doing this would the hydrography come into agreement with itself and adjoining surveys. The same fathometer (808 type, No. 58 S) was used throughout the survey, and although, early in the survey, its speed was recognized by the field party to be erratic, no attempt was apparently made to repair or replace this fathometer.

Despite the fact that this survey covered a small area and it was classified as "additional work", its specifications for accuracy and completeness should have been neither less important nor less binding than those of the original basic survey of which this additional work is now a part.

#### 5. Junctions

Adequate junctions were made with H-8030 (1953) 1:10,000

on the west and H-7153 (1946) 1:20,000 on the south. The junction with H-8114 (1953) 1:10,000 on the east will be considered in the review of that survey.

## 6. Comparison with Prior Surveys

H-1215 (1873) 1:10,000  
H-1424 (1879) 1:20,000

These prior surveys taken together cover the area of the additional work. A comparison of the present and prior surveys indicate that no appreciable changes in the bottom have taken place. The old sounding lines are widely spaced, however, and fail to show many shoaler soundings revealed by the more modern survey.

To supplement the present survey information the following items have been carried forward from the prior surveys:

- (1) The present survey shows no development of the reef in Lat.  $44^{\circ}18.52'$ , Long.  $68^{\circ}11.10'$ . A number of soundings and depth curves have been brought forward from H-1215 to the present survey to more adequately delineate the reef area and the area near the shoreline to the westward.
- (2) Since the present survey lacks bottom characteristics, a number of characteristics were brought forward from the prior surveys to cover the area.
- (3) The 16-ft sounding in Lat.  $44^{\circ}19.16'$ , Long.  $68^{\circ}11.25'$ , and the 21-ft. sounding in Lat.  $44^{\circ}19.13'$ , Long.  $68^{\circ}11.18'$ , on H-1215 are located on a shoal which is undeveloped on the present survey. These two soundings are shoaler than those obtained on the present survey, aid in delineating the depth curves, and have been carried forward to the present survey.

With the addition of the items carried forward, the present survey is adequate to supersede the prior surveys in the common area.

## 7. Comparison with Chart 306 (5th Ed., Feb. 12, 1962)

### A. Hydrography



The charted hydrography originates with the previously discussed prior surveys and with the boat sheet of the present survey. The following discrepancies are noted:

- (1) The 12-ft. sounding charted in Lat.  $44^{\circ}19.29'$ , Long.  $68^{\circ}11.20'$  originates with the boat sheet of the present survey. The verified smooth sheet sounding of 11 ft. should be charted.
- (2) The rock awash charted in Lat.  $44^{\circ}18.82'$ , Long.  $68^{\circ}11.41'$ , originates with T-1334a (1873) 1:10,000. In comparing this old survey with photogrammetric survey T-11350 it was found that by holding to comparable shoreline features the position of the rock falls on the present ledge symbol extending from shore. The rock awash and ledge appear to be the same feature and therefore, the rock awash on the chart should be replaced by the ledge symbol of the present survey.
- (3) The reef symbol charted in Lat.  $44^{\circ}18.57'$ , Long.  $68^{\circ}11.18'$  originates with the preliminary photogrammetric compilation of T-11350 (BP-50305). This reef is shown to be less extensive on the reviewed copy of T-11350 and the existing hydrographic surveys. The charted reef should be revised to agree with the present survey delineation.

The present survey is adequate to supersede the charted information in the common area. In order to verify certain doubtful information on the present survey additional work has been recommended in Par. 9.

#### (B) Aids to Navigation

One buoy (Bell "1" east of Otter Point) falls within the project area. It was not located by the field party. The charted position adequately marks the feature intended.

### 8. Compliance with Instructions

The present survey complies with the project instructions except for the following deficiencies.

- (a) Inshore line spacing exceeded the 100 meter limit


in several areas where closer spacing was clearly desirable.


- (b) The bottom configuration was not properly delineated in the three areas as noted in Par. 3 of this review.
- (c) The two rocks awash and two reef symbols photogrammetrically located on T-11350 and charted in the vicinity of Lat.  $44^{\circ}19.3'$ , Long.  $68^{\circ}10.8'$  were not verified or disproved by the present survey. There is some question as to the existence of these features.
- (d) No bottom characteristics were obtained on the present survey.
- (e) The only floating aid to navigation in the additional work area was not located by the field party.

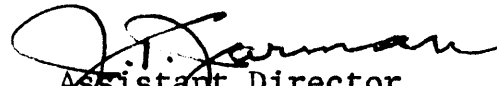
9. Additional Field Work


To complete the hydrography in this area, it would be desirable to verify or disprove the existence of the two rocks awash and two reef symbols (charted as rocks awash) in the vicinity of Lat.  $44^{\circ}19.3'$ , Long.  $68^{\circ}10.8'$ , (See Par. 8, part c above) and develop the 16-ft. shoal in lat.  $44^{\circ}19.15'$ , long.  $68^{\circ}11.25'$  and the area within the 60-ft. curve in this vicinity.

Examined and Approved:

Chief,   
Nautical Chart Division

  
Projects Officer,  
Operations Division

  
Assistant Director,  
Office of Cartography

  
Assistant Director,  
Office of Oceanography

## TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

27 February 1959

Plane of reference approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 8030 (Add. Wk.)

Locality Muscongus Bay, Maine

Chief of Party: J. C. Ellerbe in 1955

Plane of reference is mean low water, reading

2.6 ft. on tide staff at Bass Harbor

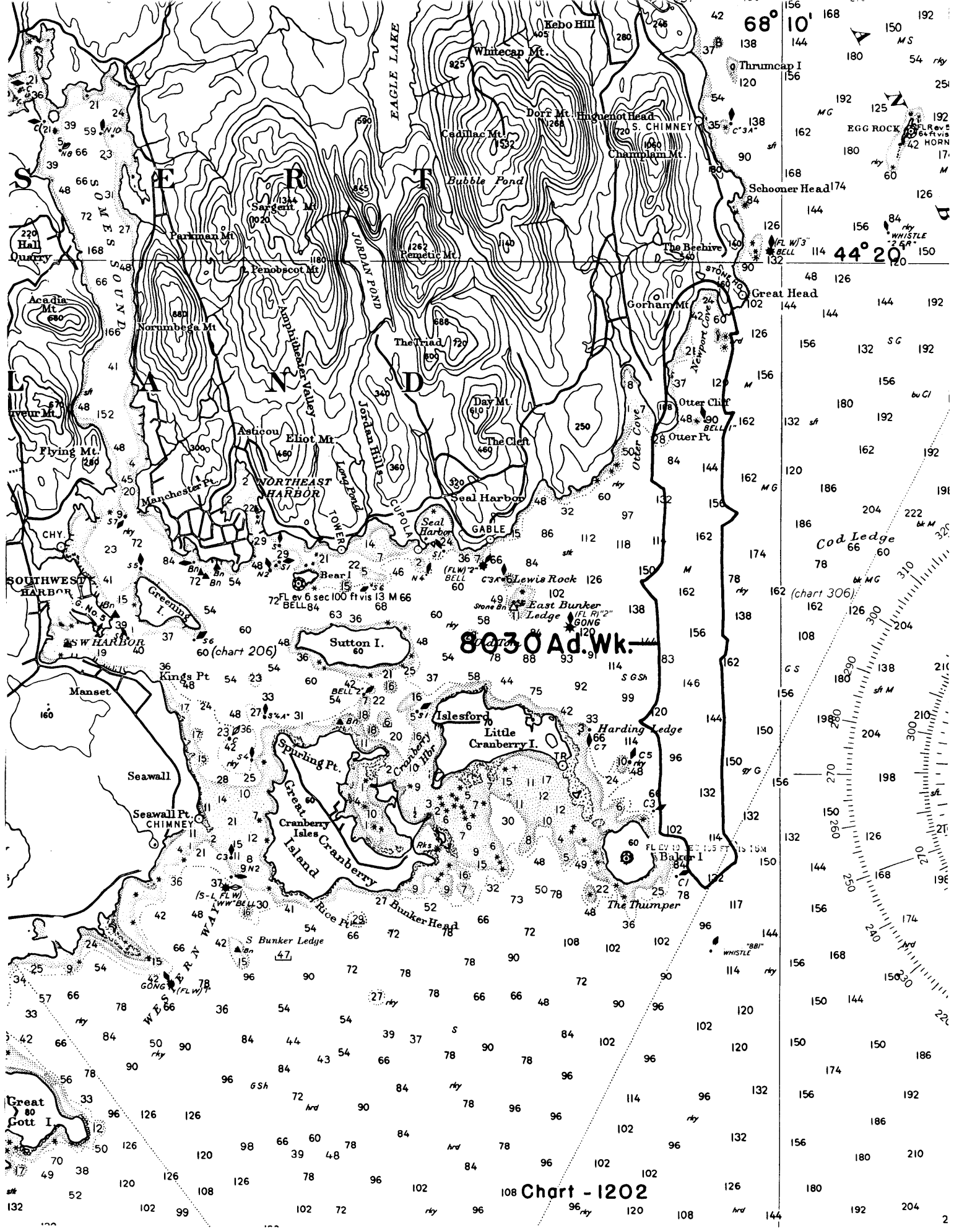
10.9 ft. below B.M. 3 (1911)

; Height of mean high water above plane of reference is 9.9 feet.

Condition of records satisfactory except as noted below:

  
Signature

Chief, Tides Branch



68° 10' 168 192

44° 20' 150

8030 Ad. Wk.

Chart - 1202

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8030 Ad. Wk.

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3-24-59	206	R.E. Elkins	<del>Boat sheet</del> examined - no revisions Before <del>after</del> Verification and Review <i>not applied</i>
8-14-59	1202	T.A. Dinamore	Before <del>after</del> Verification and Review <i>Boat sheet examined, - no crit. corrections</i>
8-27-59	306	T.A. Dinamore	Before <del>after</del> Verification and Review <i>Boat sheet examined, - no crit. corrections</i>
3/30/62	306 Recast	Helmer	Before <del>after</del> Verification and Review <i>Fully appl before smooth plot (Boat sheet)</i>
5-22-64	206	J.T. Callahan	<del>Before</del> After Verification and Review <i>no corrections</i>
3-19-65	306	G.R. McCANN	<del>Before</del> After Verification and Review <i>Fully applied</i>
3-22-65	1202	G.R. McCANN	<del>Before</del> After Verification and Review <i>Fully applied thru Chart 306</i>
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.