

# 8668

Diag. Cht. No. 1000-3.

<b>Form 504</b> U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY  <b>DESCRIPTIVE REPORT</b>	
<i>Type of Survey</i> Hydrographic	
<i>Field No.</i> EX-60-2-62 <i>Office No.</i> H-8668	
<b>LOCALITY</b>	
<i>State</i> Maine	
<i>General locality</i> Gulf of Maine	
<i>Locality</i> Northeast Portion - Gulf of Maine	
<u>1962</u>	
<b>CHIEF OF PARTY</b>	
E. L. Jones	
<b>LIBRARY &amp; ARCHIVES</b>	
<b>DATE</b> February 25, 1963	

USCOMM-DC 5087

8668

**HYDROGRAPHIC TITLE SHEET**

H-8668

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

EX 60-2-62

State Maine

General locality Gulf of Maine

Locality Northeast Portion - Gulf of Maine

Scale 1:60,000 Date of survey 10 August - 9 September 1962

Instructions dated 10 July 1962, amended 1 Aug 1962 Project No. OPR-376

Vessel USC&GS Ship EXPLORER

Chief of party Edmund L. Jones

Surveyed by Ships Officer

Soundings taken by ~~Echo sounder, hand lead, pole~~ Fathometer, DE-723, No. 248

Graphic record scaled by Ships Personnel

Graphic record checked by Ships Personnel

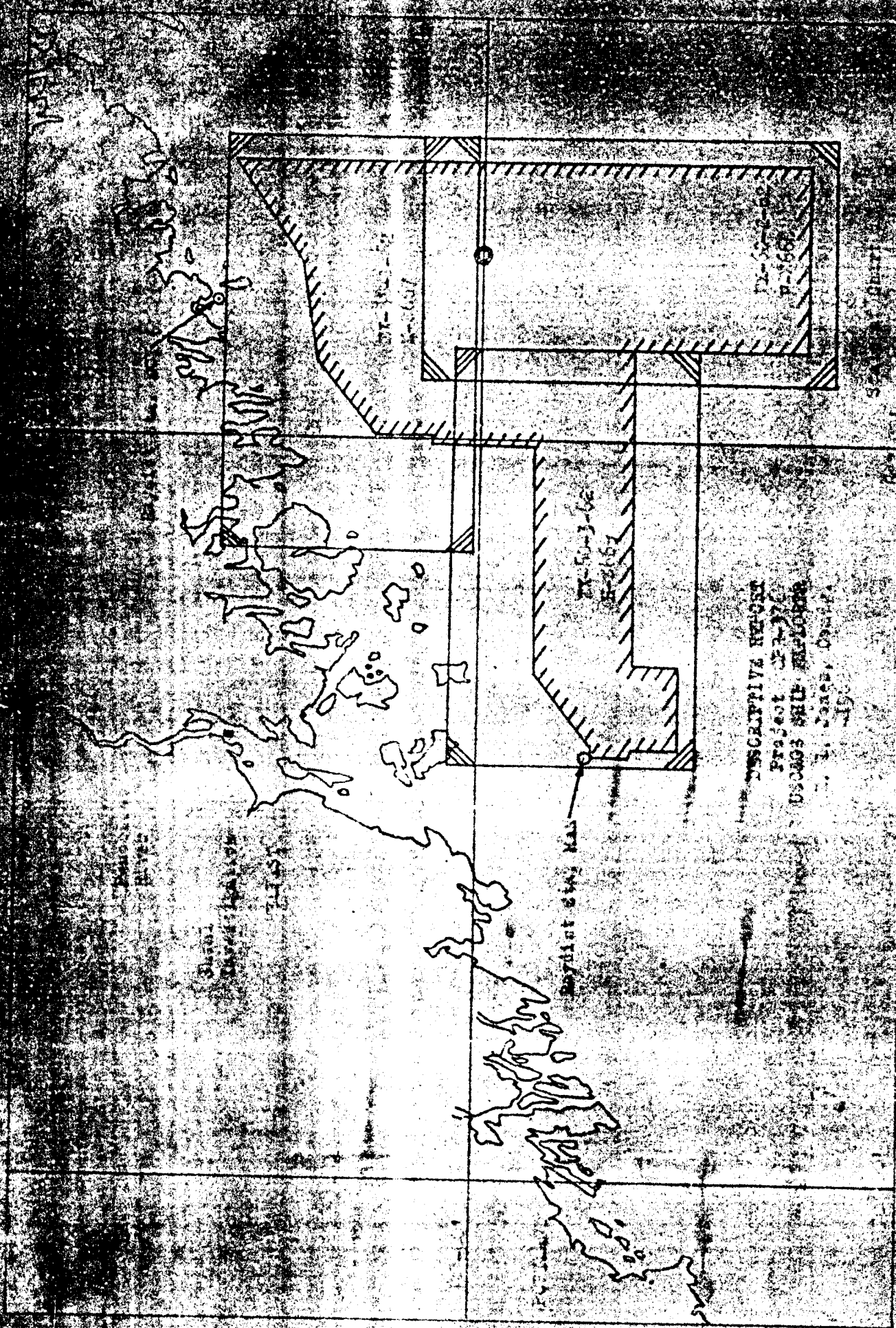
Protracted by Lt(jg) Robert J. Lewis

Soundings penciled by Lt(jg) Robert J. Lewis

oundings in fathoms ~~###~~ at MLW ~~###~~

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

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DESCRIPTIVE REPORT  
 Project 27-176  
 USCGC SHIP REPAIR  
 I. Jones, Design  
 450

Scale 1/8" = 1'-0"  
 Sheet 1 of 1

DESCRIPTIVE REPORT  
To Accompany  
Hydrographic Survey  
EX 60-2-62 H-8668  
USC&GS Ship EXPLORER  
E. L. Jones, Comdg.

Surveyed By: A. L. Powell, R. E. Williams, D. E. Westbrook,  
G. F. Wirth, J. S. Midgley, V. R. Smith, J. W.  
Bricker, D. J. Florwick, F. P. Kapinos, R. J. Lewis,  
F. H. Gramling, R. P. Bertocchi, J. W. Drosendahl

A. Project

Hydrography was done in accordance with instructions, Project OPR-376, dated 10 July 1962 and amended instructions, Project OPR-376, dated 1 August 1962.

B. Area Surveyed

This survey was done in the northeast portion of the Gulf of Maine. The survey area is bounded by latitude  $43^{\circ} 20.0'N$  to  $44^{\circ} 04.0'N$  and longitudes  $67^{\circ} 15.0'W$  to  $67^{\circ} 46.0'W$ . The survey also includes an area on its northwest corner which is bounded by latitude  $43^{\circ} 42.0'N$  to  $44^{\circ} 03.0'N$  and longitudes  $67^{\circ} 45.0'W$  to  $67^{\circ} 48.0'W$ . The survey was accomplished during the dates 10 August 1962 to 9 September 1962.

Junctions were made with the following prior surveys: H-8198, <sup>number reassigned</sup> ~~H-8199~~, and H-8200. ~~All~~ <sup>BOTH</sup> are ~~1:20,000~~ <sup>1:120,000</sup> scale surveys done in 1955. <sub>incomplete survey.</sub>

The survey also joins contemporary surveys H-8667 (EX 60-1-62)(1962) and H-8669 (EX 60-3-62). (see included sketch)  
(1962)

C. Sounding Vessel

All Hydrography was done by the USC&GS Ship EXPLORER. ✓

D. Sounding Equipment

Raytheon fathometer DE-723, number 248, was used for this survey. ✓  
The calibrated speed is 800 fms/sec. Additional information may be obtained from the EXPLORER "Fathometer and Velocity Correction Report 1962". *Special Report 83/62*

E. Smooth Sheet

The Washington Office furnished the machine ruled smooth sheet with raydist curves drawn as follows: blue curves -  $R_1$  red curve -  $R_2$  ✓

The boat-smooth sheet method was used in the original plotting by ✓  
pricking the positions through a mylar overlay onto the smooth sheet.

After raydist corrections had been determined and misplots determined, those positions found to be in error by smooth plotter were replotted to agree within 2 mm maximum error of the true position.

#### F. Control

Horizontal control was maintained throughout this survey by the Hasting Raydist, model GA 38. Frequent calibrations were made to determine the stability of this system.

Reconnaissance and selection of raydist shore stations was accomplished by the Boston District Office.

The tabulation of stations is as follows:

- (Blue Arc)
- R<sub>1</sub> - Station MAN (Red): Matinicus Island, Maine  
latitude 43° 50' 56.937"N  
longitude 68° 53' 52.849"W
- (Red Arc)
- R<sub>2</sub> - Station DOY (Green): Doyle Island, Maine  
latitude 44° 31' 36.648"N  
longitude 67° 38' 48.929"W

Raydist baseline: 125,203.52 meters or 2757.85 fathoms.

Station MAN was located by placing the antenna on a reference mark for triangulation station "MATAMES No. 3, 1962". Station DOY was located by offsetting the antenna from the triangulation station "DOY 1913".

Additional information may be obtained from the special report on "Raydist Operations 1962". *Special Report 57/62*

#### G. Shoreline

There is no shoreline within the limits of this survey. ✓

#### H. Crosslines

Approximately 12.5% crosslines were run on this survey. Final *see Review* review of crossings will be made by smooth plot reviewer.

I. Junctions

This section to be completed after the two surveys H-8669 and H-8667 have been smooth plotted. *see Review*

J. Comparison with Prior Surveys

There were no presurvey review items within the limits of this survey.

*H-8199 not correct. This number is West Coast Survey. The field number is H-122-55 and is incomplete.*  
Good general agreement was found to exist between this survey and surveys H-6198, H-6199, and H-6200, 1:120,000 scale surveyed in 1955. One serious discrepancy was resolved by running a grid pattern around the area to disprove the existence of a 75 fathom sounding.

K. Comparison with the Chart

A comparison with chart 1106, 8th edition, 1/22/62 was made and no discrepancies nor any new dangers to navigation were found to exist. *see Review*

L. Adequacy of Survey

This survey is complete and adequate to supersede prior surveys for charting. ✓

M. Aids to Navigation

No aids to navigation are found within the limits of this survey. ✓

N. Statistics

Total days operated on sheet	- 13
Total number of positions	- 960 997
Total nautical miles of sounding lines	- 1057.5
Total surveyed area in square nautical miles	- 1010.0
Total number of bottom samples	- 28

One oceanographic station was observed three times at latitude 44° 00.0'N and longitude 67° 30.0'W.

O. Miscellaneous

The geological echo profiler and the proton magnetometer were towed during the entire survey except for areas where the ships turns were too sharp and too frequent in development areas and on shoals. There were also times when these instruments were being repaired, therefore were not functioning.

Additional information regarding these two instruments may be obtained from the following reports:

- 1.) Special Report, Geological Echo Profiler Operations, USC&GS Ship EXPLORER, OPR-376, by Reginald N. Harbison, forwarded to Washington Office 27 September 1962.
- 2.) Special Report, Towed Proton Magnetometer Operations 1962, USC&GSS EXPLORER, OPR-376, by Ltjg D. J. Florwick, forwarded to the Washington Office on 2 November 1962.

P. Recommendations

There are no recommendations concerning this survey which have not previously been made.

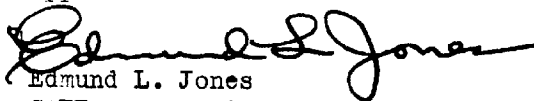
Q. References to Reports

All reports pertaining to this survey are as follows:

Season's Report, Maine, OPR-376 - 5 October 1962  
Raydist Operations 1962, OPR-376 - 8 October 1962 SR 57/62  
Fathometer & Velocity Correction Report SR 83/62

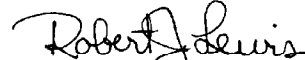
January 1963

Approved



Edmund L. Jones  
CAPT C&GS  
USC&GSS EXPLORER  
Comdg.

Submitted By



Robert J. Lewis  
Ltjg C&GS

TIDE NOTE

To accompany Hydrographic Survey  
H-8668 EX 60-2-62  
USC&GS Ship EXPLORER

Tides were furnished by the Washington Office from the standard tide gage located at Bar Harbor, Maine. Corrections were made as follows:

Range ratio - 1.0  
Time Correction -  $\frac{1}{2}$  hr.  
Time Meridan - 75th



GEOGRAPHIC NAMES LIST  
To Accompany  
Hydrographic Survey  
H-8668 EX 60-2-62

There are no geographic names within the limits of this survey.

LIST OF SIGNALS  
To Accompany Hydrographic Survey  
H-8668 EX 60-2-62  
USC&GS Ship EXPLORER

There were two raydist stations used for this survey.

MAN: Red Station (R<sub>1</sub>) Latitude: 43° 50' 56.937"N  
Longitude: 68° 53' 52.849"W

DOY: Green Station (R<sub>2</sub>) Latitude: 44° 31' 36.648"N  
Longitude: 67° 38' 48.929"W

TO ACCOMPANY  
BATHYMETRIC AND VELOCITY REPORT

PROJECT OPR-376  
EX 60-2-62 H-8668

<u>A-E day</u>	<u>Depth (fm.)</u>	<u>Corr. (fm.)</u>
	7.0-20.0	/0.2
	20.1-46.0	/0.4
	46.1-78.0	/0.6
	78.1-106.0	/0.8
	106.1-129.0	/1.0
	129.1-151.0	/1.2

<u>F-L day</u>	<u>Depth (fm.)</u>	<u>Corr. (fm.)</u>
	7.0-21.0	/0.2
	21.1-42.0	/0.4
	42.1-70.0	/0.6
	70.1-95.0	/0.8
	95.1-116.5	/1.0
	116.6-137.5	/1.2
	137.6-158.5	/1.4

<u>M-N day</u>	<u>Depth (fm.)</u>	<u>Corr. (fm.)</u>
	7.0-22.0	/0.2
	22.1-43.0	/0.4
	43.1-63.0	/0.6
	63.1-83.5	/0.8
	83.6-104.0	/1.0
	104.1-123.0	/1.2
	123.1-142.5	/1.4
	142.6-155.0	/1.6

ABSTRACT OF DRAFT CORRECTIONS  
TO ACCOMPANY  
FATHOMETER AND VELOCITY REPORT

PROJECT OPR-376  
EX 60-2-62 H-8668

<u>Period</u>	<u>Corr. (ft.)</u>
A-B day (10 Aug.-11 Aug.)	-0.4
C-E day (13 Aug.-15 Aug.)	-0.2
F-K day (26 Aug.-30 Aug.)	0.0
L-N day (6 Sept.-9 Sept.)	-0.2

These corrections include a  $\pm 0.2$  fathometer initial correction not applied to the original initial corrections. See special report on Fathometer and Velocity Corrections 1962.

SUMMARY OF RAYLIST CORRECTIONS

SHEET RX 60-2-62  
PROJECT OPR-376

USCARS EXPLORE E.L. JONES, COMED.

DATE	DAY	POSITIONS	1962	
			Red R1	Green R2
10 AUG	A	1-76	+6.4	-9.9
		77	+5.4	-10.9
		78	-14.6	+6.1
11 AUG	B	1-31	-14.6	+6.1
		32-78	-14.6	+6.1
13 AUG	C	1-60	+2.3	+6.2
		61-78	+4.3	+2.2
		79-101	+5.3	+3.2
		102-130	+5.3	+1.2
		131-142	+4.3	+1.2
14 AUG	D	1-11	+4.3	+1.2
		12-50	+3.3	+2.2
		51-102	+1.3	+3.2
		103-113	+15.3	-6.2
15 AUG	E	1-40	+15.3	-6.2
		41-45	+15.3	-4.2
		46-70	+14.3	-2.2
		71-73	+14.3	-7.2
		74-77	+13.3	-6.2
		78	+13.3	-8.2
		79-115	+0.3	-0.8
26 AUG	F	1-113	+2.3	-2.8
		114-148	-0.7	+3.2
27 AUG	G	1-4	-0.7	+3.2
		5-70	-1.7	-2.2
		71	-3.7	-4.2
		72	-4.7	-7.2
		73-83	-3.7	-8.2
		84-89	-2.7	-2.8
28 AUG	H	1-70	-2.7	-2.8
		71-111	+0.3	-0.8

29 Aug	J	1-16	+0.3	-0.8
		17	+0.3	+1.2
		18-36	+0.3	+3.2
		37	+1.3	+2.2
		38-40	+1.3	-0.8
30 Aug	K	1-5	+1.3	-0.8
		6-15	+1.3	-2.8
		16-17	+2.3	-3.8
6 Sept	L	1-21	-6.5	-4.2
8 Sept	M	1-25	-7.5	-1.2
9 Sept	N	1-20	-0.5	+8.8

APPROVAL SHEET

To accompany Hydrographic Survey

H-8668

EX 60-2-62

USC&GSS EXPLORER

The boat sheet and accompanying sheet have been examined and are approved. The work was done under close supervision with an inspection of the boat sheet and records daily. The field work is considered complete and adequate and no additional work is recommended.

January 1963



Edmund L. Jones

CAPT, C&GS

Comdg. Ship EXPLORER

NORFOLK PROCESSING OFFICE  
ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8668 (Ex-60-2-62)

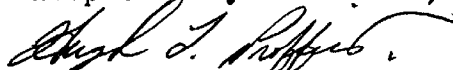
GENERAL

This survey was smooth plotted aboard Ship Explorer and then sent to this office because of unresolved crossing discrepancies. These discrepancies were eliminated by closer scanning of the fathograms.  
*see Review.*

DEPTH CURVES

Depth curves were drafted in this office, with standard curves shown in a solid pencil line, and non-standard curves in dashed lines.  
*see Review*

Respectfully submitted,



Hugh E. Proffitt  
Cartographer

Norfolk, Va.  
19 February 1963



GEOGRAPHIC NAMES  
Survey No. H-8668

Name on Survey												
	A	B	C	D	E	F	G	H	K			
<i>Gulf of Maine</i>												1
												2
												3
												4
												5
												6
												7
												8
												9
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*George D. Ball*  
*Geographic Names*  
*26 March 1963*

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8668

Records accompanying survey: Smooth sheets ...1..;  
 boat sheets .1...; sounding vols. ..5...; wire drag vols. ....;  
 (Mylar overlay)  
 Descriptive Reports ...1..; graphic recorder envelopes .6...;  
 special reports, etc. Cahiers: 1-Raydist plotting abstracts and  
 corrections, 1-Raydist calibration tapes.....

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

Number of positions on sheet		.997.
Number of positions checked		..35..
Number of positions revised		.....0.....
Number of soundings revised (refers to depth only)		..150 * plus
Number of soundings erroneously spaced		..20..
Number of signals erroneously plotted or transferred		..0 (RAYDIST)
Topographic details	Time	..0...
Junctions	Time	..1hr..
Verification of soundings from graphic record	Time	..10 hrs
* Special adjustments (DEPTH CORRECTIONS) plus - *Intermediate soundings added	Time	..23 hrs 345

Verification by F.P. SAULSBURY Total time 84 hrs Date 5-16-63

Reviewed by E.E. Johnson Time 31 hrs Date 10/27/63  
 \* SHAL OR DEEP SOUNDINGS

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY  
REVIEW SECTION -- MARINE CHART DIVISION  
REVIEW OF HYDROGRAPHY SURVEY

REGISTRY NO. H-8668

FIELD NO. EX 6--2-62

Northeast Portion - Gulf of Maine

SURVEYED: Aug.-Sept.

SCALE: 1:60,000

PROJECT NO. OPR-376

SOUNDINGS: 723 Depth Recorder

CONTROL: Raydist

Chief of Party-----E. L. Jones  
Surveyed by-----Ships Officers  
Protracted by-----R. J. Lewis  
Soundings Plotted by-----R. J. Lewis  
Verified and Inked by-----F. P. Saulsbury  
Reviewed by-----E. E. Thomas  
Inspected by-----R. H. Carstens

Date: September 12, 1963

1. Description of the Area

The present survey covers a portion of the Gulf of Maine bounded by general Latitudes of 43°20.0' to 44°04.0' and Longitudes of 67°15.0' to 67°48.0'.

The bottom, in general, is regular in depths greater than 100 fathoms but great irregularity occurs in depths from 77 to 100 fathoms possibly as a result of glaciation.

2. Shoreline and Signals

The origin of the control is adequately described in the Descriptive Report.

This is an offshore survey and contains no high water features.

3. Hydrography

- a. Depths at the crossings are in good agreement.
- b. The standard depth curves are adequately delineated. Non-standard depth curves are shown in brown.
- c. The development of the bottom configuration and investigation of least depths is considered adequate for charting. Additional split lines in the irregular areas would have been useful for the bottom studies presently in progress.

4. Condition of Survey

The field plotting contained crossing discrepancies that were eliminated in the Processing Office by scanning of the fathograms. However, it was still necessary for the verifier to revise approximately 160 soundings because of initial, phase and 5 unit reading errors. Also 345 intermediate soundings were added to the sheet by the verifier, many of which were prominent on the fathogram. Except as noted the sounding records and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual.

5. Junctions

An adequate junction was effected with H-8669 (1962) on the west. The junctions with the verified surveys - H-8667 (1962) on the north, H-8198 (1955) on the southwest, and H-8200 (1955) on the south will be discussed in the reviews of these surveys.

6. Comparison with prior surveys

H-1305 (1854-75) 1:40,000

Most of the soundings shown on this survey originate with H-440, H-593, H-457, H-700, H-861, H-1207 a and b, H-1208, H-1302 a and b, H-1303 a and b, and H-1304. These surveys were made during a period from 1854 to 1875.

This survey provides the prior coverage of the area for comparison with the present survey. A comparison of the prior and present survey reveals no significant changes in the bottom configuration, however, the present survey is more detailed and shows numerous shoal features not as adequately developed on the prior survey.

The soundings shown on H-1305 should be disregarded since their positions were established by dead reckoning and many soundings are apparently displaced.

7. Comparison with Chart 1106 (latest print 3/25/63)

A. Hydrography

The charted hydrography originates with the prior survey together with partial application of the present survey through the boat sheet (Bp 63245), the unverified smooth sheet, and the incomplete survey by the Bureau in 1955, (Bp 52874).

Except for supplementary soundings from the 1955 survey (see Bp 62354) the present survey supersedes the charted hydrography in the common area.

B. Aids to Navigation

There are no aids to navigation within the limits of the survey.


8. Compliance with Instructions


The survey adequately complies with the project instructions.

9. Additional Field Work

This survey is considered to be a good basic survey and no additional field work is necessary.

Examined and approved:

  
Chief,  
Marine Chart Division

  
Associate Director  
Hydrography and Oceanography



RMC

TIDE NOTE FOR HYDROGRAPHIC SHEET

4/8/63

Nautical Chart Division: R. H. Carstens

Plane of reference approved in  
5 volumes of sounding records for

HYDROGRAPHIC SHEET 8668

Locality Mt. Desert Rock, Gulf of Maine

Chief of Party: E. L. Jones in 1962

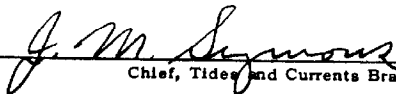
Plane of reference is mean low water

~~from the surface~~

~~to below datum~~

Height of mean high water above plane of reference is 10.4 feet.

Condition of records satisfactory except as noted below:

  
Chief, Tides and Currents Branch

