8063

Diag. Cht. Nos. 1107, & 1207-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ACSP-1152 *Office No.* H-8063

LOCALITY

State Massahusetts

General locality Appr. to Boston Harbor

Locality Stellwagen Ledges

19~~4~~52 - 53

CHIEF OF PARTY

J.C. Tribble, J. S. Morton, & E.B. Brown

LIBRARY & ARCHIVES

DATE February 8, 1954

B-1870-1 (1)

8063

FEB 8 1954

Form 537
(Ed. June 1946)

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-8063

Field No. ACSP-1152 ~~H1-1152~~

State MASSACHUSETTS

General locality OUTER APPROACHES TO BOSTON HARBOR

Locality STELLWAGEN LEDGES

Scale 1:10,000 Date of survey 2 July to 17 Oct. 1952 (Add'l work Oct. 1953)

Instructions dated 9 May 1952 & 27 June 1952

Vessel HILGARD

Chief of party J.C. TRIBBLE, J.S. Morton & E.B. Brown

Surveyed by J.C. TRIBBLE & M.C. FOX, J.S. Morton & E.B. Brown

Soundings taken by ~~echo sounder~~, graphic recorder, hand lead, ~~wire~~

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by SHIP PERSONNEL & NORFOLK PROCESSING OFFICE

Protracted by ALPHA G. ATWILL

Soundings penciled by ALPHA G. ATWILL

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~ and are true depths

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

U. S. GOVERNMENT PRINTING OFFICE 777032

106

DESCRIPTIVE REPORT
TO ACCOMPANY

HYDROGRAPHIC SURVEY NUMBER -
Field No. ACOP-1152
OUTER BOSTON HARBOR

A. PROJECT:- Project Number CS-349, instructions dated 9 May 1952 and 27 June 1952.

B. SURVEY LIMITS AND DATES:- This survey covers the off shore area of Project No. CS-349, making a junction with the inshore area surveyed by the Atlantic Coast Shore Party. Survey by the HILGARD was begun on 2 July and completed on 17 October 1952. Prior survey in this area is No. H-2133, date:- 1892, scale, 1:10,000.

C. VESSEL AND EQUIPMENT:- The Ship HILGARD was used for the off shore survey of this project. Two portable recording fathometers were used to obtain depths, model 808a numbers 67 and 585. Depths varied from about 12 feet to about 90 feet.

D. TIDE AND CURRENT STATIONS:- Tide reducers were furnished by the Washington Office from observed tides at Boston Light and the Boston Primary tide station (see acting Directors letter No. 36-rcb, dated 12 November 1952).
No current observations were made on this survey.

E. SMOOTH SHEET:- (to be submitted by Processing Office).

The smooth sheet projection was made by hand in the Norfolk Processing Office. The control and Shoreline was plotted in the conventional manner.

F. CONTROL STATIONS:- See attached list on signals for dates of Triangulation. See report of Atlantic Coast Shore Party (Comdr. C.R. Reed, Chief of Party) for data on topographic signals, if any). Several signals were located by sextant, all sextant fixes and cuts are recorded in the sounding Vol's and indexed in the front of the book.

G. SHORELINE AND TOPOGRAPHY:- See report of Atlantic Coast Shore Party on same Project (Comdr. C.R. Reed, Chief of Party) for information regarding Shoreline and Topography. Review, par. 1.

H. SOUNDINGS: All soundings obtained on this survey were by type 808a depth recorder. Transceiver units were mounted inboard.
Corrections to soundings were obtained by bar checks and from temperature and salinity observations. Tabulation of results are a part of this report.

I. CONTROL OF HYDROGRAPHY:- All sounding lines were controlled

by visual three-point fixes.

J. ADEQUACY OF SURVEY:- The area surveyed is considered adequate and should supercede prior surveys for charting purposes (subject to possible error that may be found in smooth plot). *Review, par. 5.*

A comparison of boat sheets (East Coast Shore Party and HILGARD) showed a satisfactory junction with adequate overlap. Deph curves were adequately drawn at the junctions.

K. CROSSLINES:- About 8% crosslines were run on this survey. Examination of boat sheets indicate that discrepancies will be less than 1% of depth.

L. COMPARISON WITH PRIOR SURVEYS:- The boat sheet comparison with prior survey No. H-2133 (1892) showed very good general agreement. The boat sheet soundings (based on field computations) indicated that the charted shoals were in general slightly shoaler than charted. *Review, par. 5.*

M. COMPARISON WITH CHART:- Boat sheet comparison with chart No. 1207, 52-6/9 showed the same general agreement as described in L. *See Review, par. 6.*

J.C. Tribble Jr.

J.C. Tribble Jr.
Comdr., C.&G. Survey

VELOCITY CORRECTION ABSTRACT

Corrections from 2 July to 19 August 1952:-
from 30.0'-69.5; correction zero
from 69.6'- and over; correction -0.5'

Corrections from 20 August to 17 October 1952:-

from 30.0' to 59.5'; correction zero
from 59.6' and over; correction -0.5'

Original observations for temperatures and salinities (29 July and 6 September) are enclosed.

One other observation was attempted near the close of the season which was prevented by weather.

LIST OF SIGNALS
H-8063

TRIANGULATION STATIONS

DAY	BARREL ROCK DAY BEACON, 1950
WAT	CEDAR POINT, BREAKWATER LIGHT, 1943-50
OLD	CEDAR POINT TOWER, 1940-50 (SCITUATE L.H.)
	FOURTH CLIFF, (USE), 1943-49
HOT	HAYDENS HOTEL, OCEAN HOUSE, 1847
MIN	MINOTS LEDGE LIGHTHOUSE, 1915-34
STACK	NORTH SCITUATE, STACK, 1934
LAW	SCITUATE, DAWSON, TOWER, 1915-35
TOW	SCITUATE, 2ND. CLIFF TOWER, (TOWER, USC&GS), 1908-50
LIT	WHITE HEAD LIGHT, 1950

TOPOGRAPHIC STATIONS

C.G. (Coast Guard Cupola # 27) (Compilation T-9513)

HYDROGRAPHIC STATIONS

Bic	Vol. 2, pg. 4	
Flag	" 1, " 7 & 15	→ checks air-photo location of Mast, 1950 T-9513
For	" 1, " 7, 11 & 15	
Rat	" 5, " 13, 14, 15, 16 & 20	
Sin	" 1, " 15	
	" 2, " 64	
Tel	" 5, " 12, 14, 15, 16 &20	

CON CONCRETE MILITARY LOOKOUT TOWER, 1943

FLOATING AIDS TO NAVIGATION
H-8063

BUOY 1953 LIGHT LIST	POSITION	DEPTH	POS. NO.	DATE
Davis Ledge Bell Buoy 1	42-16.35 ~~31~~ 70-~~44.91~~ 45.10		95VA	10/9/52
Twenty-one Foot Lighted Whistle Buoy 1	42-16.57 70-42.31		55C	7/8/52
Tar Pouch Buoy 2	42-13.02 70-42.29	49'	1A	7/2/52
Scituate Harbor Chan. Buoy 1	42-12.08 70-42.74		2C	7/2/52
Scituate Harbor Chan. Buoy 2	42-12.17 70-42.71		3C	"
Scituate Harbor Chan. Buoy 3	42-12.12 70-42.85		1C	"
New Inlet Bell Buoy	42-10.32 70-42.12		59S	8/15/52

STATISTICS, SHEET #ASCP-1152

OUTER BOSTON HARBOR, PROJ. # CS-349

DATE	DAY LETTER	STAT. MILES SDG. LINES	NO. POSITIONS
7/2/52	A	4.0	28
7/3/52	B	15.2	80
7/8/52	C	33.2	155
7/9/52	D	12.6	58
7/17/52	E	12.0	49
7/22/52	F	20.3	96
7/23/52	G	42.6	197
7/24/52	H	20.5	101
7/25/52	J	19.6	94
7/28/52	K	4.0	18
7/29/52	L	33.2	151
7/30/52	M	11.2	58
7/31/52	N	9.7	59
8/1/52	P	18.1	96
8/5/52	Q	3.6	17
8/14/52	R	36.8	196
8/15/52	S	15.8	84
8/18/52	T	8.6	44
8/19/52	U	11.5	49
8/20/52	V	12.5	55
8/21/52	W	10.8	47
8/22/52	X	5.8	32
8/27/52	Y	24.9	122
8/28/52	Z	38.3	193
8/29/52	AA	19.2	85
9/4/52	BA	10.6	43
9/5/52	CA	13.8	72
9/6/52	DA	3.2	15
9/10/52	EA	8.0	32
9/11/52	FA	16.1	94
9/12/52	GA	3.4	15
9/16/52	HA	2.8	12
9/17/52	JA	2.5	10
9/18/52	KA	4.7	18
9/19/52	LA	detached positions	45
9/22/52	MA	8.7	90
9/23/52	NA	18.3	25
9/24/52	PA	5.1	44
9/25/52	QA	8.0	21
9/29/52	RA	detached positions	12
9/30/52	SA	4.6	12
10/1/52	TA	2.1	76
10/6/52	UA	15.6	15
10/9/52	VA	3.0	147
10/14/52	WA	20.6	23.
10/15/52	XA	3.1	16
10/16/52	YA	2.4	11
10/17/52	ZA	23.8	128
	TOTAL	624.4	3140

Area in Square Statute Miles: - 12.0

TIDE NOTE

TO ACCOMPANY DESCRIPTIVE REPORT

FOR HYDROGRAPHIC SURVEY NO. 8063 FIELD NO. ~~ASP~~ HI-1152

OUTER BOSTON HARBOR

The portable tide station at Boston Light and the Boston Prima ry Tide Sta tion were used to obtain tide reducers throughout this survey. See Acting Directors letter No. 36-rcb, dated 12 November 1952; under subject:- Tide Reducers, Boston Harbor.

Hourly heights were furnished by the Washington Office; the hourly heights were submitted to the Norfolk Processing Office with "DESCRIPTIVE REPORT" accompaning HYDROGRAPHIC SURVEY (field # 25/152).

Location of tide gages:-

Boston Primary tide station:- Lat. 42-21-17 N.
Long. 71-03-03 W.

Boston Light tide gage:- Lat. 42-19-40 N.
Long. 70-53-33 W.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form [redacted]. 717
Ed. May 1935

C-THERM. # 1159
F-THERM. # 4397
HYDROMETER # T-4034
DEEP-SEA-THERM # 41-09

SHEET NO. .....
OF ..... SHEETS

RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

U. S. C. and G. S. Ship HILGARD, J. C. TRIBBLE, JR., *Commanding*

Project CS-349, *Locality* BOSTON, MASS, 29 JULY, 1952

Date	Time 75 mer. h. m.	Latitude ° ′	Longitude ° ′	Depth * Fathoms	Specific Gravity	At Temp. °C.	Salinity † ‰	Temp. at Depth °C.	Velocity (Theoretical) Meters/Sec.	Comp. by—	Check. by—	REMARKS
7/29/52	0850	42°17	~~72°41~~ 70°41?	SURFACE	1.0218	21.5		21.5		[illegible]		
	0904			~~2~~ 12′	1.0218	20.6		20.6				
			~~At Temp °C~~			OF						
(1)	0910		19°C	~~5~~ 30′	1.0224	~~66.2~~ ~~18.3~~	31.7	19.8	1514.5	X		corr. -3.6
	0915		14.5°C	~~8~~ 48′	1.0234	~~58.0~~	31.7	9.8	1482.0	X		corr. -4.0
	0919		17°C	~~6.1~~ 36.6′	1.0228	~~62.6~~	31.4	14.2	1497.0 ~~1505.8~~	X		corr -4.2
(2)	0922		19.2°C	~~5.1~~ 30.6′	1.0224	~~66.5~~	31.5	19.4	1511.6	X		corr -5.4
	0925		17.8°C	~~5.5~~ 33′	1.0226	~~64.0~~ 64	31.3	15.0	1499.5	X		corr. -4.3
	0930 ~~0925~~		16.7°C	~~15.0~~ 90′	1.0232	~~62.0~~	31.9	7.3	1472.7	X		-3.8
	0933		17.2°C	~~10.0~~ 60′	1.0228	~~63.0~~	31.4	9.5	1480.5	X		-4.3
	0936		18.1°C	~~12.0~~ 72′	1.0228	~~64.5~~	31.7	8.0	1475.1	X		-4.1
	0940		17.7°C	~~7.0~~ 42′	1.0228	~~63.8~~	31.5	13.7	1495.5	X		-4.1
	0945		16.1°C	~~7.5~~ 45′	1.0232	~~61.0~~	31.7	11.2	1487.0	X		-4.0
	~~0951~~			~~5.5~~				~~14.4~~				
	0951		17.6°C	~~5.2~~ 31.2	1.0228	~~63.7~~	31.5	14.4	1497.7	X		-4.2
	0955		16.9°C	32 ft.	1.0230	~~62.5~~	31.6	14.3	1497.5	X		-4.0

Corr. factor for each depth.

[illegible]	30′	=	+0.0100	, Corr. in ft.
do	35′	=	-0.00140	,
do	40′	=	-0.00206	, — 0.0
do	50′	=	-0.0117	
do	60′	=	-0.0137	
do	70′		-0.0157	
do	80′		-0.0170	
do	90′		-0.0180	
do	120′		-0.0200	

*If depth recorded is bottom, indicate in remarks column.
†If salinity by titration, indicate in remarks column.

U. S. GOVERNMENT PRINTING OFFICE 11—11506

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM NO. 717
Ed. May 1935

SHEET NO. .....
OF ..... SHEETS

RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

U. S. C. and G. S. Ship HILGARD, J. C. Tribble Jr., Commanding

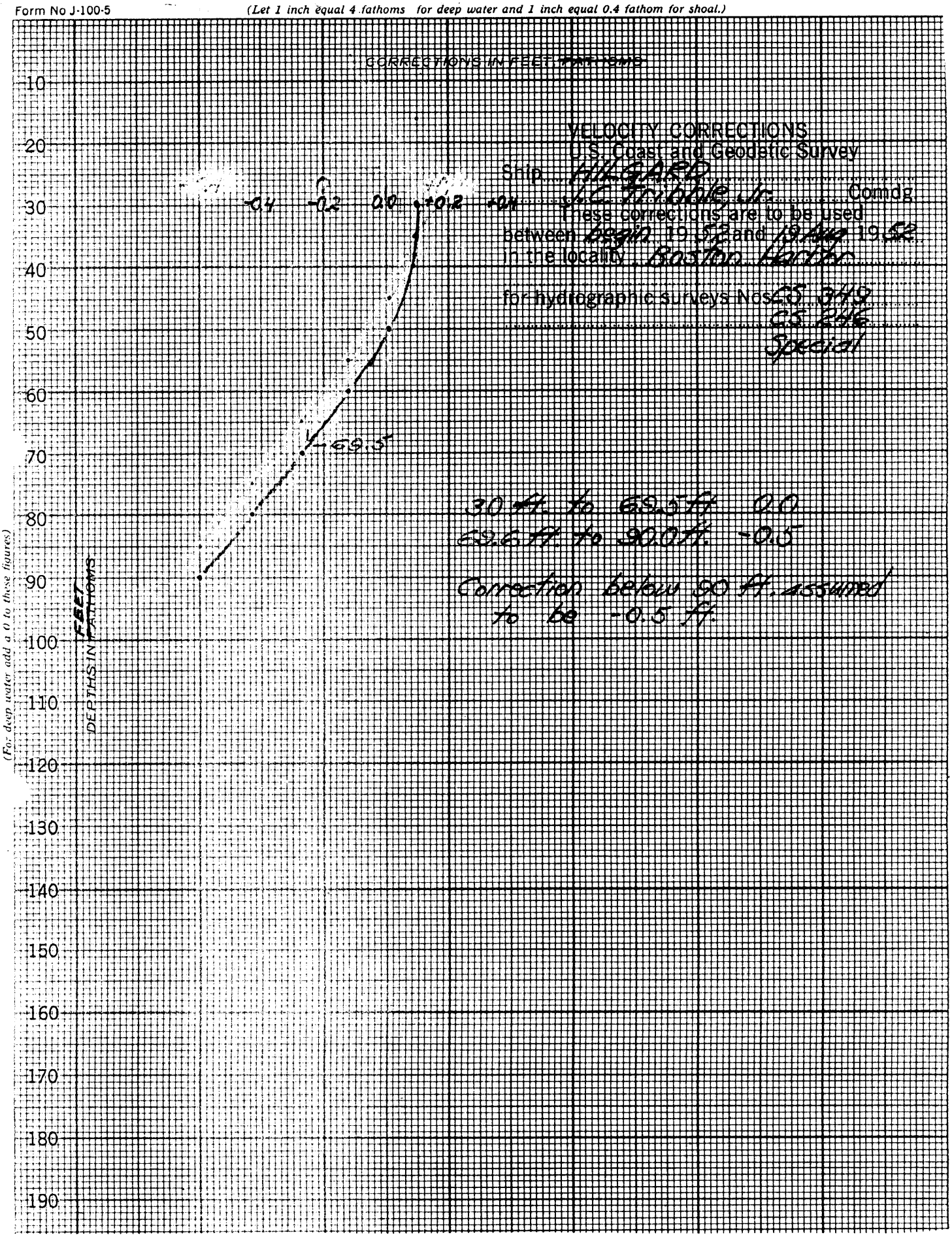
Project CS 349, Locality Boston, Mass., 6 Sept., 1952

Date	Time 75 mer.	Latitude	Longitude	Depth *	Specific Gravity	At Temp.	Salinity †	Temp. at Depth	Velocity (Theoretical)	Comp. by—	Check. by—	REMARKS
	h. m.	° '	° '	~~Fathoms~~ Feet	°C	~~°C.~~	Specif Grav.	°C.	Meters/Sec.			Deep Ther 84913 Far. ther 4397 Hydrom T-4024
9-6-52	0933	42 16.6	70 41.9	~~12~~		~~62.5~~	~~1.0230~~					
	0950			12	27.5	61.5	1.0230	15.8				
	0954			24	~~13.1~~	58.1	1.0236	13.5				
	0955			0		61.6	1.0232	~~61.0 F.~~ 16.1°C				
	0958			34	13.1	55.5	1.0238	10.5				
	1004			54	12.2	54.0	1.0238	8.0				
	1008			74	12.2	54.0	1.0241	8.0				
	1014			79	11.7	53.0	1.0244	7.8				lead on bot.
	1018			44	12.4	54.3	1.0240	10.0				
	1021			49	12.8	55	1.0238	9.6				
	1026			51	13.3	56	1.0238	9.4				
	1030			53	13.9	57	1.0238	9.5				
	1034			60	12.2	54	1.0242	9.0				
18	1037			29	14.7	58.5	1.0234	13.0				
29	1041			32	15.3	59.5	1.0230	14.8				
	1045			35	16.1	61	1.0228	15.5				
	1048			40	15.6	60	1.0230	14.8				
	1052			42	14.4	58	1.0238	10.6				
	1055			18	15.8	60.5	1.0230	15.5				
	1057			21	16.1	61.0	1.0230	15.5				
	1101			23	16.1	61.0	1.0230	15.8				

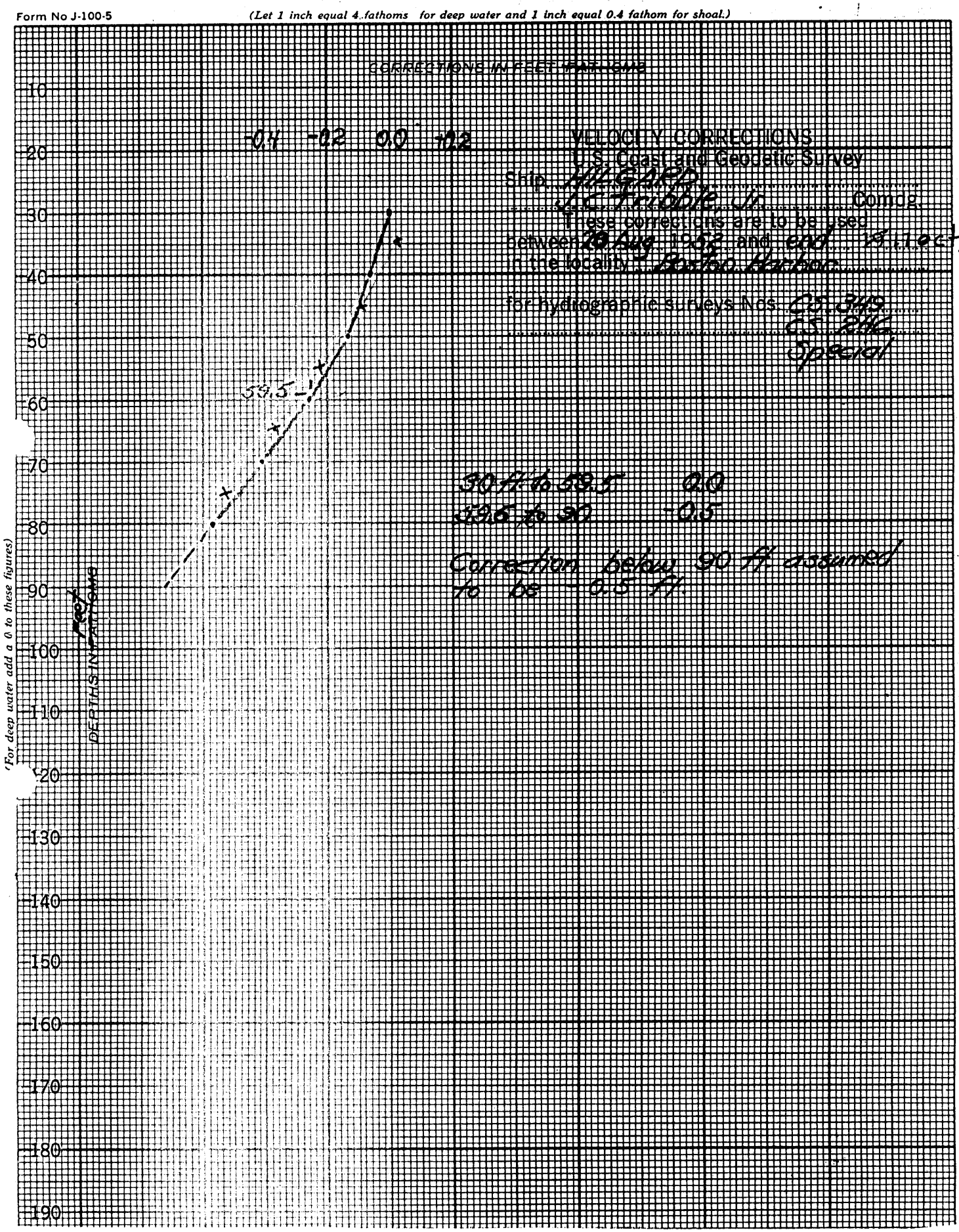
*If depth recorded is bottom, indicate in remarks column.
†If salinity by titration, indicate in remarks column.

U. S. GOVERNMENT PRINTING OFFICE 11—11506

Form No J-100-5 *(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)*



Form No J-100-5 *(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)*



TABULATION OF BAR CHECKS, FATHOMETER 67

1952

DATE	DAY LETTER	SHEET	10'	15'	20'	25'	30'	35'	40'
7-2	A	1152		0.0	-0.2				
				0.0	-0.2				
7-8	C	1152	-0.2		- 0.4	-0.2			
			∕0.2	∕0.4	∕0.2				
		TOTAL	2	3	4	1			
		ALGEBRAIC SUM	0.0	∕0.4	∕0.2	-0.2			
		MEAN	0.0	∕0.13	∕0.05	-0.2			

All corrections 0.0, 2 July thru 9 July

7-28	K	1152	∕1.0	∕0.4	0.0	∕0.6	0.0		
			∕0.6	∕0.6	∕0.4	∕0.6	0.0		
7-29	L	1152	∕0.8	∕0.4	-0.2	0.0	∕0.2		
			∕0.8	∕0.6	∕0.2	∕0.4	∕0.2		
7-31	N	1152		∕0.5	∕0.2	∕0.6	0.0		
				∕0.4	∕0.4	∕0.2			
8-1	P	1152	∕1.0	∕0.8	∕0.2	∕0.2	0.0		
			∕ 1.0	∕0.4	∕ 0.4	∕0.4	0.0		
8-14	R	1152	∕0.4	∕0.2	∕0.2	-0.2			
			∕0.6	∕0.4	0.0	-0.2			
		TOTAL	8	10	10	10	7		
		ALGEBRAIC SUM	∕5.4	∕4.7	∕1.6	∕2.6	∕0.4		
		MEAN	∕0.67	∕0.47	∕0.16	∕0.25	∕0.06		

All corrections as shown on graph, 25 July thru 15 August

TABULATION OF BAR CHECKS - FATHOMETER 58S

DATE	LETTER DAY	SHEET	5'	10'	15'	20'	25'	30'	35'	40'	45'
7-22	F	1152		∕0.4	∕0.8	∕0.4	0.0	-0.2	-0.2		
				∕0.8	∕1.0	∕0.6	0.0	-0.2	-0.2		
7-23	G	1152			∕1.0	∕0.6	∕0.4	∕0.4	∕0.2	∕0.2	
					∕1.0	∕0.4	∕0.6	0.0	0.0	∕0.2	
		TOTAL		2	4	4	4	4	4	2	
		ALGEBRAIC SUM		∕1.2	∕3.8	∕2.0	∕1.0	∕0.2	∕0.2	∕0.4	
		MEAN		∕0.6	∕0.95	∕0.5	∕0.25	∕0.05	-0.05	∕0.2	

All corrections as shown on graph, 17 July thru 24 July 1952

TABULATION OF BAR CHECKS - FATHOMETER 67

DATE	LETTER DAY	SHEET	10'	15'	20'	25'	30'	35'	40'a	40'b	45'a	45'b
8-20	V	1152	-0.8	-0.4	0.0	∕0.4						
			-0.6	∕0.2	0.0	∕0.4						
8-21	W	1152	-0.2	0.0	-0.1	∕0.6						
			0.0	0.0	0.0	∕0.6						
8-22	X	1152	∕0.4	∕0.4	0.0	∕0.4	0.0					
			∕0.6	∕0.4	∕0.4	∕0.4						
8-27	Y	1152	∕0.4	0.0	0.0	0.0	0.0					
			∕0.4	0.0	0.0	0.0	0.0					
8-28	Z	1152	0.0	0.0	0.0	0.0	0.0					
			0.0	0.0	-0.4	0.0	0.0					
					-0.2							
8-29	A'	1152	-0.2	-0.4	0.0	∕0.2	∕0.2					
			-0.2	∕0.2	∕0.2	∕0.2	∕0.2					
9-4	B'	1152	∕0.2	0.0	0.0	0.0	0.0					
			0.0	0.0	0.0	0.0	0.0					
9-5	C'	1152	0.0	0.0	0.0	∕0.2	∕0.4					
			-0.2	∕0.8	∕0.2	∕0.6	∕0.4					
			∕0.2	∕0.2	0.0	0.0	0.0					
			0.0	0.0	0.0	0.0	0.0					
9-10	E'	1152	∕0.2	0.0	-0.2	-0.2	0.0					
			∕0.2	∕0.4	-0.6	-0.2	∕0.2					
9-12	G'	1152	-0.2	∕0.2	0.0	0.0	0.0					
			0.0	∕0.2	0.0	0.0	0.0					
9-16	H'	1152		0.0	-0.4	-0.4						
				0.0	0.0	-0.2						
9-17	J'	1152	0.0	∕0.2	0.0	0.0	0.0					
			0.0	∕0.2	0.0	0.0	0.0					

DATE	LETTER DAY	SHEET	10'	15'	20'	25'	30'	FATH. SCALE Cor. Ft.	35'	40'	45'
9-18	K'	2.5/152	0.0	0.0	0.0	+0.2	+0.2		0.0	0.0	
			0.0	+0.4	+0.2	+0.2	+0.2		0.0	0.0	
9-22	M'	1152	0.0	0.0	0.0	0.0					
			-0.2	-0.0	0.0	0.0	~~0.0~~				
9-23	N'	1152	0.0	0.0	0.0	0.0	0.0	+1.2			
			0.0	0.0	0.0	0.0	0.0	+1.2			
9-24	P'	1152	0.0	0.0	0.0	-0.1	0.0	+1.8			
			0.0	0.0	0.0	0.0	0.0	+1.8			
9-25	Q'	1152		0.0	0.0	0.0					
				0.0	0.0	0.0					
9-30	S'	1152	0.0	0.0	0.0	0.0	0.0				
			0.0	0.0	0.0	0.0	-0.2				
							0.0				
							0.0				
10-1	T'	1152	0.0	0.0	0.0	0.0	-0.4	+1.2			
			0.0	0.0	0.0	0.0	-0.4	+1.2			
10-9	V'	1152	0.0	0.0	0.0	0.0	-0.2	+0.6			
			0.0	0.0	0.0	0.0	-0.4	+0.6			
10-14	W'	1152	0.0	0.0	0.0	0.0	-0.1	+0.6			
			-0.1	0.0	0.0	0.0	-0.2	+0.6			
		TOTAL	40	44	45	44	36	10	2	2	
		ALGEBRAIC SUM	-0.1	+3.0	-0.9	+3.3	-0.1	+10.8	0.0	0.0	
		MEAN	0.0	+0.07	-0.02	+0.08	0.0	+1.08	0.0	0.0	

All corrections 0.0 18 gust through 17 October 1952

Form No J-100-5 (Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTION CURVE~~X~~ FROM TABULATED BAR CHECKS " FATHOMETER NO. 67"

CORRECTIONS IN FEET, ~~XXXXXXXX~~

FATHOMETER
~~VELOCITY~~ CORRECTIONS
U.S. Coast and Geodetic Survey

Ship HILGARD
J.C. Tribble Comdg.

These corrections are to be used
between * 19 and 19
in the locality Outer Boston Harbor

for hydrographic surveys Nos. ASCP- 1152
HI- 25/152
Special

Graph # 1, 25 July thru
15 August, 1952.

Graph # 2, 18 August thru
17 October 1952.(Corr. 0.0)

0.0

DEPTHS IN ~~FATHOMS~~ Feet

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190

Grap 2

All Corrections Plus

use mean between 20 ft. & 25 ft.

Graph 1

to 17'; Sdg. Corr = 0.5 ft.
17.1' to 40' Corr = 0.0 ft.

(For deep water add a 0 to these figures)

+ 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8

B-1736-5

CORRECTION CURVE FROM TABULATED BAR CHECKS

Form No J-100-5

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, ~~FATHOMS~~

Fathometer 58 & S

~~VELOCITY CORRECTIONS~~

U.S. Coast and Geodetic Survey

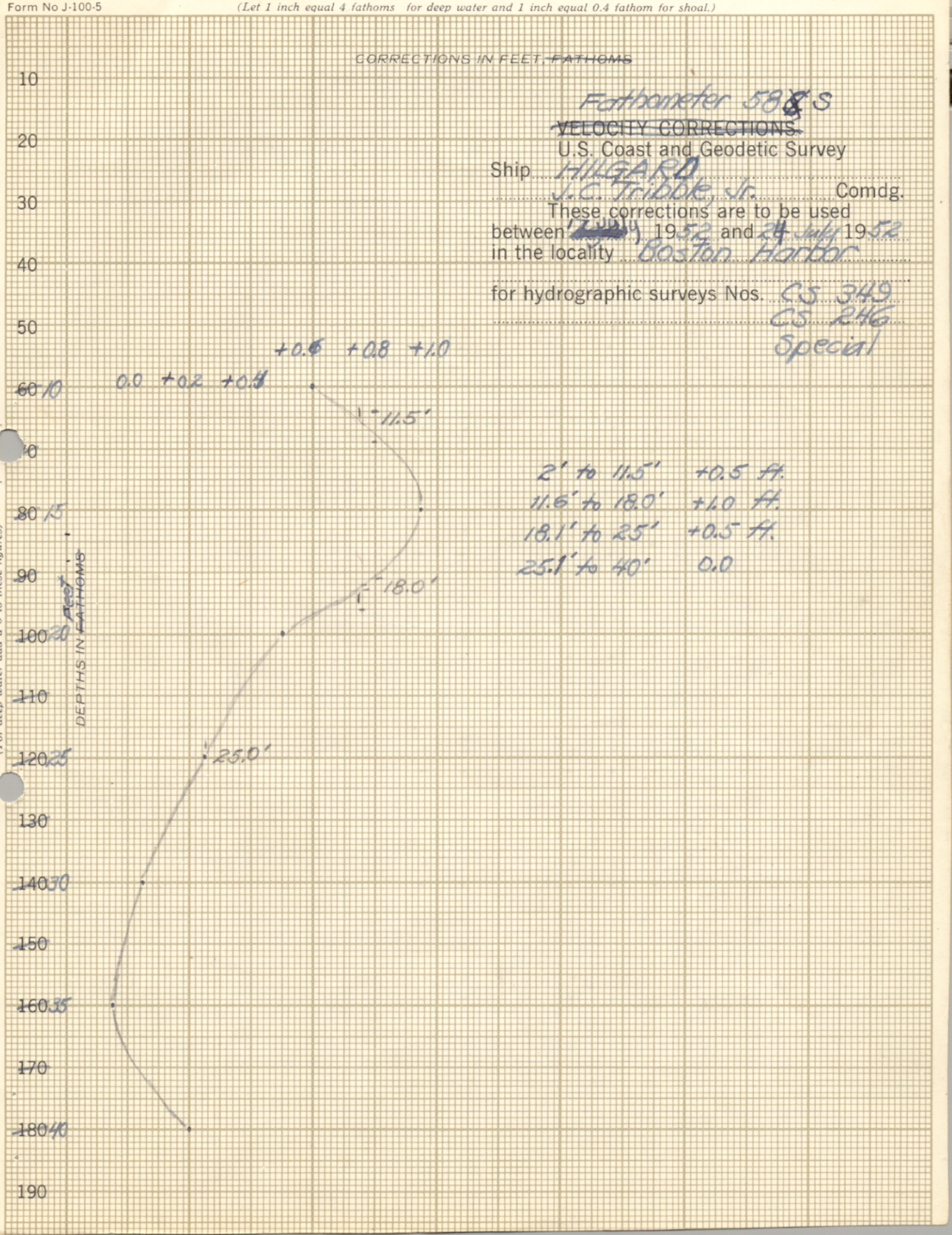
Ship HILGARD

J.C. Tribble, Jr. Comdg.

These corrections are to be used between (illegible) 1952 and 24 July 1952 in the locality Boston Harbor

for hydrographic surveys Nos. CS 349 CS 246 Special

2' to 11.5'	+0.5 ft.
11.6' to 18.0'	+1.0 ft.
18.1' to 25'	+0.5 ft.
25.1' to 40'	0.0



ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8063 (Field No. Hi-1152)

GENERAL

An *overlay is being submitted with the smooth sheet showing critical soundings with their position numbers, in order that they may be easily reviewed for immediate charting. Chart comparisons are also shown on this overlay. *overlay utilized & destroyed

CONTROL

Positioning along the northern edge of this survey is, in some cases questionable, due to the distances from control stations and the use of small angles on relatively weak fixes. See Review, par. 7.

SHORELINE

Shoreline and topographic detail was transferred directly from air-photo compilations T-9512 and T-9513. (1950)

Respectfully submitted,

Hugh L. Proffitt
Cartographer

Norfolk, Va.
3 February 1954

* *

REPORT OF ADDITIONAL WORK

ON

PROJECT CS-349

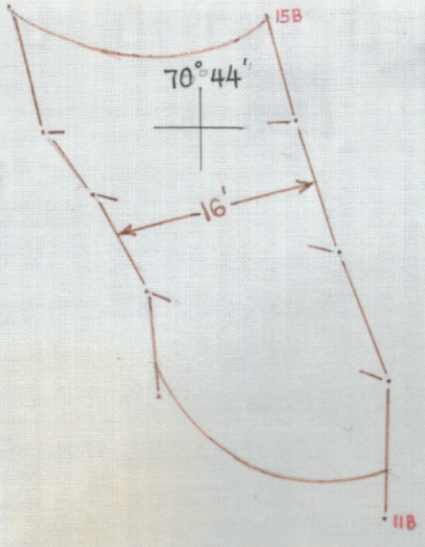
SCITUATE AND COHASSET HARBORS

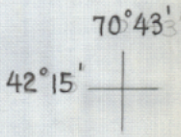
MASSACHUSETTS

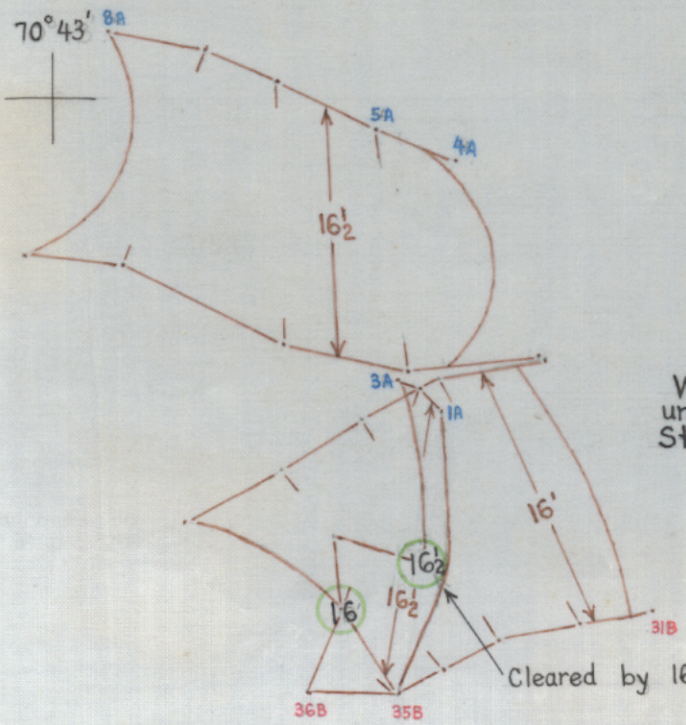
1953

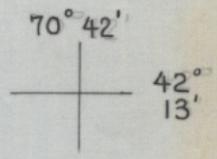
CHIEF OF PARTY: J. S. MORTON
E. B. BROWN

* *





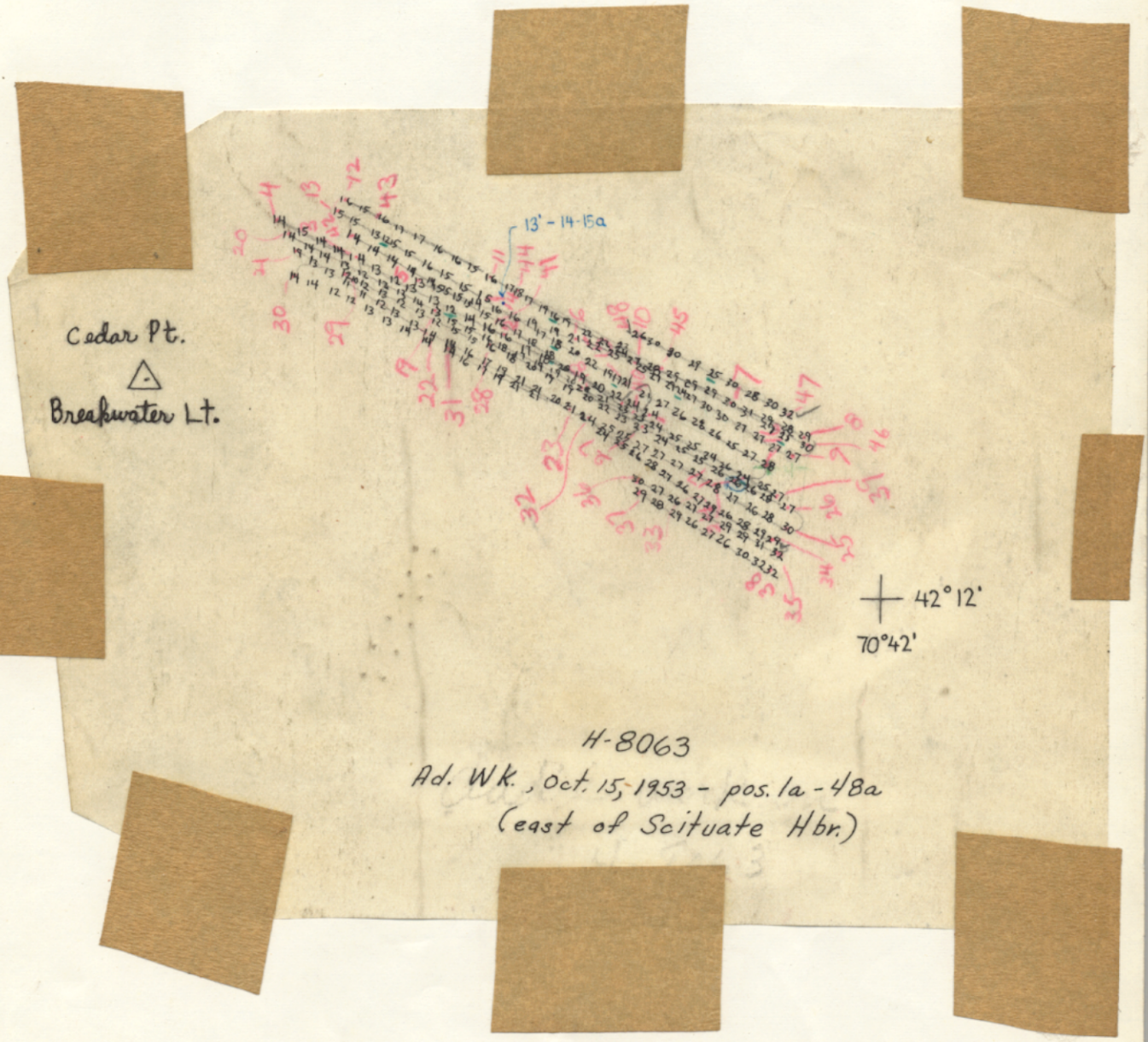




Wire Drag Investigation of undeveloped shoals along Stellwagen Ledges

H-8063

Additional work on Project CS-349
Surveyed October 13-15, 1953



H-8063

Ad. W.K., Oct. 15, 1953 - pos. 1a - 48a

(east of Scituate Hbr.)

SUPPLEMENTAL REPORT

ADDITIONAL WORK ON PROJECT CS-349
SCITUATE AND COHASSET HARBORS, MASSACHUSETTS

CHIEF OF PARTY E. B. BROWN

In accordance with instructions dated 3 September 1953 this work was begun on 13 October and was completed on 16 October 1953.

A total of 3.7 miles of wire dragging and 6.4 miles of hydrography were done by this party. The dragging was done with the WAINWRIGHT and HILGARD using skiff as a tender. The hydrography was done by the HILGARD and Launch 171.

The USC&GS Ship STIRNI, CDR J. S. Morton, Commanding, working in conjunction with this party, used launch 171 to accomplish all the hydrography except that done by the launch and the HILGARD on 16 October. The report of the work of the STIRNI is attached.

The following items were investigated by this party.

BOAT SHEET ACSP 1252 (H-8008)

(a) The work on the 26-foot sounding in latitude 42°16.40', longitude 70°47.80', was done on tracings of boat sheet HI-2.5/152. A hang at an effective 23.5 feet was obtained between positions 1-5B and a clear at an effective 20.5 feet between positions 6-10B. A detached sounging of 24.4 feet reduced on position 1A, (13 October) was obtained by the HILGARD. A.report of this hang was submitted on 3 November 1953. a copy of which is included in this report. H-8008

(b) The questionable 22-foot sounding in latitude 42°14.90' longitude 70°44.40' was disproved with a drag at an effective depth of 32 feet between positions 9-12B. H-8008

(c) The undeveloped 21-foot sounding in latitude 42°14.60' longitude 70°44.~~20~~17' was cleared with a drag set at an effective depth of 20 feet between positions ~~13-22A~~ 15-18A. On 16 October the HILGARD ran several sounding lines in this area and obtained a reduced sounding of 24 feet on position 37C indicating that the 21-foot sounding was correct.(*)

* ✓ O.K. verified by a 24-ft. sdg. on "c" day (Add'l wk. of 1953)

* 21 obtained on H-8063 ✓

(*) Add'l development of "c" day (1953) covers portions of both H-8008 & H-8063.) Fathograms filed w/ H-8063; sdgs. are recorded in Vol. 1, (Guide Launch) W. D. wk. of 1953

(*) This additional work was plotted and verified on H-8008 (1952-53) by A.J.H.
on H-8063 (1952) by F.P.S.

(d) The 21-foot sounding in latitude 42°14.45', longitude 70°44.25' was cleared with a drag set at an effective depth of 20 feet between positions 13-22A. H-8008

(e) The 25-foot sounding in latitude 42°14.05', longitude 70°44.25', was cleared with a drag set at an effective depth of 22 feet between positions 24-30B. H-8008

(f) The 37-foot sounding in latitude 42°14.10', longitude 70°43.90', was cleared with a drag at an effective depth of 35 feet between positions 16-20B. H-8008

BOAT SHEET ACSP 1152 (H-~~8008~~ 8063)

(a, b, c) This work was done by personnel of the Ship STIRNI, using launch 171 . See Report of Ship STIRNI

(d) The ~~18~~ 20 smooth sheet -foot sounding in latitude 42°12.9~~5~~4', longitude 70°42.73', was cleared with a drag set at an effective depth of 16 feet between positions 4-8A. ✓

(e) The ~~19~~ 23 smooth sheet -foot sounding in latitude 42°~~12.95~~ 14.91, longitude 70°43.99', was cleared with a drag set at an effective depth of ~~17~~ 16½ feet between positions 11-15B. (21' retained from H-3780 W.D.(1915) ✓

(f) At latitude 42°12.67', longitude 70°42.6~~5~~4', a 16½ foot effective drag, positions 1-3A, hung in charted deeper water about 100 meters off a shoal point. This was cleared with an effective 16 at positions 31-35B. ✓

BOAT SHEET ACSP-05152 (H-8009)

(a & b) The reported rock with a 2-foot sounding and the submerged pipe were investigated by a 200 foot wire sweep using launch 171 and the WAINWRIGHT's skiff as suggested in the Directors letter dated 22 September 1953 (22/MEK S-1 W&H). This work was done under the immediate direction of Lieutenant (j.g.) Robert A. Parker. The Harbor-Master of Cohasset and some lobstermen in the area stated that these objects had been removed some time ago. The investigation indicates that the objects have been removed.

A small rock was located in the vicinity of item (a) and the sweep hung on this spot. Position 2-3c. This rock was about 9 inches in diameter and 6 inches off the bottom in 4 to 5 foot depths. It was clearly visable from the launch and does not constitute a menace to navigation.

A pipe extending about 2 feet off the bottom was located with the aid of local lobstermen at latitude 42°15.00', longitude 70°47.06' position 1c in general depths of five feet on the west side of the Cohasset Harbor Channel. A report to this effect was submitted on 3 November 1953, a copy of which is included in this report.

(c, d, e, f, & g) These items were done by the Ship STIRNI. This party ran splits on the southern part of the area specified in item e½ on the afternoon of 16 October 1953, using launch 171. Shoalest sounding obtained was 9½ feet between positions 14 and 15C at latitude 42°15.53', longitude 70°46.54'.

E. B. Brown
CDR USC&GS
Chief of Party

Report of Work by
Ship Stirni

SUPPLEMENT TO DESCRIPTIVE REPORT FOR CS-349

In accordance with supplemental instructions to the Ships WAINWRIGHT and HILGARD, dated 3 September 1953, and in accordance with paragraph one of Sailing Orders to the Ship STIRNI, dated 30 September 1953, 21.7 statute miles of additional hydrography was accomplished and is listed below.

Boat Sheet ACSP-1252 (H-8008)

See Wire Drag work of Ships Wainwright and Hilgard.

Boat Sheet ACSP-1152 (H-~~8008~~ 8063)

in φ 42° 11.28', λ 70° 42.30' (pos. 66-67a)

(a) A minimum depth of 17.5 feet was obtained. Previous hydrography showed a minimum of ~~20~~ 21 smooth sheet feet and chart 1207 shows a 24 footminimum sounding nearby.

(b) A minimum depth of 24 feet was obtained. Previous hydrography shows a minimum depth of 24 feet. (21 retained in φ 42° 12.10', λ 70° 42.12', from H-3775 W.D. (1915)

(c) 1. A minimum depth of ~~23~~ 17 feet was obtained at Lat. 42° 12.16', Long. 70° 42.28'. Previous hydrography shows a minimum sounding of 16 feet.

2. A minimum of 24 feet was obtained about 100 meters NE of the above 16 foot soundings. Previous hydrography shows a minimum depth of 18 feet. 29 foot soundings fell on top of the 18 foot soundings of the previous surveys.

3. A minimum of 19 feet was obtained at Lat. 42° 12.19', Long. 70° 42.35'. Previous hydrography shows a minimum depth of 13 feet. 13 ft. on present survey

4. A minimum of 12 feet was obtained at Lat. 42° 12.25', Long. 70° 42.50'. Previous hydrography shows a minimum depth of 10 feet. 9 ft. on present survey

5. A minimum of 12 feet was obtained at Lat. 42° 12.26', Long. 70° 42.56'. A depth of 8 feet was determined by previous hydrography. 8 ft. on present survey

Boat Sheet ACSP-05152 (H-8009)

(a) and (b) These items done by Wainwright and Hilgard.

(c) Additional hydrography was conducted in Lat. 42° 15' plus 542m, Long. 70° 47' plus 255m (the 100 meter square holiday on the west side of Sutton Rocks), but the minimum sounding at this spot was found to be 8 feet as compared with the 4 foot sounding shown on the chart 242. However, in this 100 meter area there was a 2 foot sounding obtained approximately 50 meters east of the above reported 4 foot undeveloped shoal.

(d) In Lat. 42° 15' plus 700m, Long. 70° 46' plus 1215m, additional sounding lines were run along the top of the ridge. The shoalest sounding obtained was 6 feet. The two 5 feet soundings shown on chart 242 were not found in this developement. At Lat. 42° 15' plus 700m, 70° 46' plus 1115m, where one 5 foot sounding is shown, the developement shows a minimum depth of 7 feet. At. Lat. 42° 15' plus 670m, Long. 70° 46' plus 1055m, where the other 5 foot sounding is shown, the developement shows a minimum depth of 7 feet.

(e) In Lat. 42° 15' plus 970 m, 70° 47' plus 90 m, additional sounding lines were run along the narrow ridge to the east of Barrel Rock Beacon. A number of 5 foot shoals are shown on chart 242 along this ridge. The developement shows only one 5 foot shoal which lies approximately 35 meters east of Barrel Rock Beacon.

(e½) The northern portion of this area was developed by Launch No. 171. The minimum depth was 16 feet at Lat. 42° 15' plus 1130m, Long. 70° 46' plus 750m. The ships Wainwright and Hilgard completed the southern section of the area on the tracing.

(f) Additional sounding lines were run in the vicinity of Lat. 42° 16' plus 195m, Long. 70° 46' plus 1050m to develop the 23 foot sounding shown on chart 242. The developement shows a depth of 22 feet in the immediate vicinity of the above 23 foot sounding. A minimum depth of 21 feet was obtained 60 meters north of the 23 foot sounding shown on chart 242.

(g) Additional sounding lines were run in Lat. 42° 15' plus 1540m, Long. 70° 47' plus 655m to develop a 19 foot sounding shown on chart 242, and a 23 foot sounding shown on the previous survey. Development shows a 26.5 foot minimum depth at the geographic position mentioned in the supplemental instructions. However, a minimum sounding of 27 feet was obtained at the 19 foot sounding which is 60 m north of the geographic position.

J. S. Morton DMR

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

ADDITIONAL DATA FOR SUPPLEMENTAL SURVEYS OF CS-349

1. Index corrections were taken directly from the fathograms. The initial set of one foot was maintained during this work.

2. Velocity corrections were based on one bar check taken on 14 October 1953 and entered in Volume L, page 21, vicinity of Cohasset Harbor. The tabulated bar check using fathometer No. 65 with the initial reading of one foot reads as follows:

Fathometer Reading	True Depth	Correction
9.5	10.0	0.5 plus
19.5	20.0	0.5 plus
29.6	30.0	0.4 plus
34.5	35.0	0.5 plus
19.5	20.0	0.5 plus
9.5	10.0	0.5 plus

Correction used on work conducted at Cohasset Harbor and Scituate Harbor, Mass. was plus 0.5 foot.

The signals used by this party were those shown on the boat sheets. No additional signals were located.

J.S. Morton DAR

J.S. Morton
Commander, USC&GS
Comd'g Ship STIRNI

T I D E N O T E

TO ACCOMPANY

SUPPLEMENTAL REPORT
ADDITIONAL WORK ON PROJECT CS-349
SCITUATE AND COHASSET HARBORS, MASSACHUSETTS

* *

An automatic portable tide gage was installed and maintained by party personnel at the Town Pier, Scituate, Mass. latitude 42°11.9' longitude 70°43.5' on 14 October 1953. The gage was removed on 16 October 1953.

Mean Low Water on the staff was 2.9 feet.

Staff readings were taken on the evening of 13 October 1953 to reduce a sounding obtained by the HILGARD on that day.

Tides obtained from this gage were used without correction for differences of time or height.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

H-8063
Ad. WK. 1953

3 Nov. 1953

POST OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

Ships WAINWRIGHT & HILGARD
U.S.Coast and Geodetic Survey
Room 418,P.O.Building
Norfolk, Va.

To: The Director
U.S.Coast and Geodetic Survey
Washington, D.C.

Item(f)

Subject: Chart Letter, Massachusetts Bay

References: (a) Project Instructions CS 349 dated 3 Sept. 1953.
(b) Boat Sheet ACSP - 1152 (~~H8008~~) H-8063

The wire drag hung with an effective 17 feet a t Lat.42-12.67, Long. 70-42.64 and cleared with an effective 16 foot drag. Accomplished by the WAINWRIGHT & HILGARD on 14 and 15 Oct. 1953, positions 1A-3A and 31B-36B respectively.

A copy of a section of boat sheet ACSP-1152 (~~H8008~~) H-8063 is inclosed.

Charts affected is 1207.

Harold J. Seaborg,
Officer in Charge
Ship HILGARD

COPY COPY COPY COPY

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON 25

EXCERPT TAKEN FROM LETTER DATED 22 SEPTEMBER 1953 22/MEK S-1-W&H

When we forwarded the data for the additional field work on Project CS-349, along the Massachusetts coast, we inadvertently neglected to forward the tracings which show the positions of the items to be investigated. I am forwarding the tracings in a separate package at this time.

In preparing the memo. for the field work to be accomplished the Chart Division made several errors in the positions of the items to be investigated on boat sheet ACSP-05152. The correct positions of these items are shown on the tracing for the sheet. The biggest errors occured in items (b) and (e½).

The reported rock and the submerged pipe mentioned in items (a) and (b) of boat sheet ACSP-05152 will require investigation with a pipe or rope drag to disprove the existence of these obstructions. In a recent survey in the York River, John Brittain used a 20-foot length of pipe suspended below the boat to disprove the existence of a submerged piling. A similar method might be used to investigate the above obstructions, or it might be possible to use a rope drag pulled along the bottom. Several fishermen working off the New Jersey coast used this method to find wrecks in areas too far offshore for the use of ranges.

COPY COPY COPY

22/MEK
S-1-W&H

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

30 September 1953

To: Commanding Officer
POST-OFFICE ADDRESS: USC&GS Ships WAINWRIGHT & HILGARD
General Delivery,
TELEGRAPH ADDRESS: Boothbay Harbor, Maine

EXPRESS ADDRESS:

Subject: Additional Field Work on Project cS-349
Vicinities of Cohasset and Scituate Harbors

Reference: (a) Director's ltr of 3 September 1953
File No. 22/MEK S-2-W&H

(b) Your letter of 24 September 1953

In reply to reference (b), it will be satisfactory to investigate the items listed in your letter with the wire drag. If wire drag is used to determine the least depth on item (a) of boat sheet ACSP-1152 (H-8008), sufficient sounding lines shall be run acrosssthe top of the shoal area so that the bottom configuration can be correctly charted.

Item (b) of boat sheet ACSP-05152 (H-8009) is the investigation of a submerged pipe, instead of a submerged pile. Please change your copy of the instructions.

A tracing of the boat sheet will be furnished for the investigation of item (a) of boat sheet ACSP-1252, as requested in your letter.

The 17-foot sounding in latitude 42° 16.20', longitude 70° 47.55' was charted from advance information prior to the receipt of the field records in this office. The 17-foot sounding is considered to be an erroneous trace on the fathogram, and has been deleted from the chart.

/s/ Robert W. Knox

acting Director

cc/Supervisor, Southeastern District
Supervisor, Northeastern District
Nautical Charts Branch, Chart Division

SHIPS WAINWRIGHT & HILGARD

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Ships WAINWRIGHT & HILGARD
U. S. Coast & Geodetic Survey
% General Delivery,
Boothbay Harbor, Maine

POST OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

24 September 1953

To: Director
U. S. Coast & Geodetic Survey
Department of Commerce Bldg.,
Washington 25, D. C.

Subject: Additional Field work for project cs-349

Ref.: No. 22/MEK, S-2-W&H dated 3 Sept. 1953

The data for this additional field work have been examined. It is believed that, if weather conditions are favorable, the following items could best be investigated with the wire drag.

Boat Sheet ACSP-1252 (H-8008)
(b). Disproval of 22 foot sounding.
(c). Determination of least depth on 21 foot sounding.
(d). Determination of least depth on 21 foot sounding.
(e). Determination of least depth on 25 foot sounding.
(f). Determination of least depth on 37 foot sounding.

Boat Sheet ACSP-1152 ~~(H-8008)~~ H-8063
(a). Determination of least depth on 20 foot sounding
(d). Determination of least depth on 18 foot sounding
(e). Determination of least depth on 19 foot sounding

Boat Sheet ACSP-05152 (H-8009)
(b). Investigations of submerged pile.

On all investigations on sheet H-8009 except item (b), a launch will be required.

It is respectfully requested that the instructions be ammended to authorize the use of the wire drag for investigations when deemed more expedient by this party.

It is further requested that the boat sheet be furnished which shows item (a) of ACSP 1252 (H-8008), This 25 foot sounding in latitude 42°16'40, Longitude 70°47'80 falls off the limits of the boat sheets which were furnished.

It is believed that, if the weather conditions in Scituate are similar to those now encountered in Maine, this project can be completed in about two or three weeks.

It is noticed that chart No. 246 contains a 17 foot sounding as a hand correction at latitude 42°16'20 longitude 70°47'55. If additional work is needed in this vicinity, it is recommended that the instructions be ammended accordingly.

E. B. Brown
CDR USC&GS
Chief of Party

EBB/rog

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys:~~ 17 February 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 8063

Locality Approaches to Boston Harbor, Massachusetts

Chief of Party: J. C. Tribble in 1952
Plane of reference is mean low water, reading
3.3 ft. on tide staff at Boston
16.2 ft. below B. M. 13 (1939)

2.2 ft. on tide staff at Boston Lighthouse
25.6 ft. below B. M. 8 (1916)

2.8 ft. on tide staff at Scituate
16.5 ft. below B. M. 4 (USE)(1924)

Height of mean high water above plane of reference is as follows:

Boston	=	9.5 feet
Boston Lighthouse	=	9.0 feet
Scituate	=	9.0 feet

Condition of records satisfactory except as noted below:

E. C. McKay
Section of Tides
Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 877938

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys:~~ 23 February 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
3 volumes of ~~Sounding records for~~ wire drag records for

HYDROGRAPHIC SHEET 8063

Locality Scituate Harbor, Massachusetts

Chief of Party: E. B. Brown in 1953
Plane of reference is mean low water, reading
2.9 ft. on tide staff at Scituate
16.4 ft. below B. M. 4(USE)(1924)

Height of mean high water above plane of reference is 9.0 feet.

Condition of records satisfactory except as noted below:

E.C. McKay
Section of Tides
Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 877033

GEOGRAPHIC NAMES

Survey No. H-8063

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Massachusetts									BHY	1
Stellwagen Ledges										2
Minots Ledge									BGN	3
Strawberry Point										4
Scituate Harbor										5
Second Cliff										6
· First Cliff										7
CEDAR PT.										8
				Names approved 5-27-54						9
				L Heck						10
										11
										12
										13
										14
										15
										16
										17
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										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8063....

Records accompanying survey:

Boat sheets ..1..; sounding vols. 10 for 1952, 1 for 1953; wire drag vols. 2....;

bomb vols. .....; graphic recorder rolls 17 Env.-1952, 1 Env.-1953 & 1 Env.-1953 for 8063 & 8008 filed with 8063;

special reports, etc. 1 Descriptive Report; 1 Smoot Sheet; 1 Area-Depth Diagram on Trading Paper from Boat Sheets; 1 Tracing Boat Sheet; 1 Vol. Sounding Record (Wire Drag Tender).....

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

Number of positions on sheet		3227*
Number of positions checked		178
Number of positions revised		18
Number of soundings revised (refers to depth only)		Approx. 1000
Number of soundings erroneously spaced		47
Number of signals erroneously plotted or transferred		0
Topographic details	Time	1
Junctions	Time	82
Verification of soundings from graphic record	Time	40

Verification by F.P. SAULSBURY Total time 525* Date 8-11-55

Reviewed by T.A. Dinsmore Time 56 Date 9-19-55

* Includes Hd. Wk - Oct. 15, 1953 - 14-734 (Vol. II)

Prelim. Verification & Review by: T.A. Dinsmore (100 hrs.) 3-8-54

M-2232-1

H.8063 had had a special preliminary review (not ordinarily done in an area of this type) but not a written review. Prior surveys have been examined and certain soundings carried forward. The boat sheet can now be disregarded. This information from J. A. Dinsmore in connection with disposal of a 26 ft sdg. (a stray) lat. 42°16.16 and long. 70°44.33 which came from boat sheet and was published in notice to mariners 33-1953. 36 ft. now charted at this point from H 8063.

F. M. Albert
4-15-53

Disregard, - Survey now completely verified and reviewed

J. A. Dinsmore
9-19-53

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8063 FIELD NO. ACSP-1152

Mass., Outer Approaches to Boston Harbor, Stellwagen Ledges

Project No. CS-349

Surveyed - July, Oct., 1952 and Oct., 1953 Scale 1:10,000

Soundings: Control:

808 Fathometer
Hand lead

Sextant fixes on shore signals

Chief of Party - J. C. Tribble, J. S. Morton and E. B. Brown
Surveyed by - J. C. Tribble, M. C. Fox, J. S. Morton and E. B. Brown
Protracted by - A. G. Atwill
Soundings plotted by - A. G. Atwill
Verified and inked by - F. P. Saulsbury
Reviewed by - T. A. Dinsmore 19 September 1955
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline and signals originate with T-9512 and T-9513 of 1950. The fixes for the supplementary hydrographic signals are recorded in the sounding volumes of the present survey.

2. Sounding Line Crossings

Considering the irregularities in the bottom, depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

This offshore survey covers the outer portion of Stellwagen Ledges. Submerged reefs, and pinnacles contribute to the extreme irregularities in the bottom.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-8008 (1952-53) on the north and west and with H-8010 (1952) on the southwest in the vicinity of Scituate Harbor. There are no contemporary surveys

on the east and south. However, charted depths at the eastern and southern limits of the survey are in harmony with the depths on the present survey.

5. Comparison with Prior Surveys

a. H-221 (1846-48), 1:20,000
H-516 (1854-55), 1:80,000
H-582 (1856), 1:10,000
H-2133 (1892-94), 1:10,000
H-3412 (1912), 1:20,000
H-4370 (1924), 1:5,000

These prior surveys taken together cover the area of the present survey. A comparison of the prior and present depths reveals no changes in bottom. However, some differences in depths are apparent. These are attributed mainly to the extreme uneveness of the bottom and the more complete development of the area generally on the present survey.

The 34-ft. sounding (uncharted) in lat. 42°11.61', long. 70° 41.90', on H-516 should be disregarded. Falling in present depths of 47-50 ft., the prior sounding is considered to be out of position and should actually fall about 170 meters northwestward where comparable depths were obtained on the present survey.

Although the delineation of bottom features is more complete on the present survey than on the prior surveys, seven prior soundings have been carried forward to supplement present depths. Several of these prior soundings represent the least depths obtained on important shoals by intensive spot development on the prior surveys.

The present survey with the indicated additions is adequate to supersede the prior surveys within the common area.

b. H-3775 W.D. (1915) and H-3780 W.D. (1915), 1:25,000

These wire-drag surveys taken together cover the area of the present survey except the immediate approaches to Scituate Harbor entrance. No conflicts are noted between the effective drag depths and depths on the present survey. However, the thirty-five soundings which have been retained from these wire-drag surveys attest to the value of wire-drag coverage over areas of irregular bottom.

6. Comparison with Chart 244 (Latest print date 7-14-55)
Chart 1207 (Latest print date 8-22-55)

A. Hydrography

Charted hydrography originates principally with the present survey prior to complete verification and review. Numerous

revisions have been made to smooth-sheet depths during verification and review.

The more important differences in depths with large-scale chart 244 which covers most of the surveyed area are indicated in the following comparison:

Latitude	Longitude	Survey	Chart
42°16.73'	70°42.17'	70-80	52
42°15.97'	70°41.86'	60-90	49
42°15.18'	70°41.92'	49	uncharted
42°14.61'	70°44.04'	35	39 closeby
42°13.05'	70°42.94'	19	21 closeby
42°13.10'	70°42.09'	39	uncharted
42°12.63'	70°42.73'	16	18-20
42°12.37'	70°42.57'	19	14
42°12.28'	70°42.37'	13	20 closeby
42°12.11'	70°42.31'	18	23 closeby
42°12.09'	70°42.61'	16	18-19
42°11.83	70°42.18'	26	28

The 23-ft. sounding charted in lat. 42°13.45', long 70°43.07', on chart 1207 from the present survey (boat sheet) prior to verification and review should be disregarded. The sounding was considered to be a stray fathogram recording and was revised in depth during verification of the survey. The locality had been previously cleared by an effective drag depth of 24 ft. on wire-drag survey H-3775 W.D. (1915).

The present survey entirely supersedes the charted information.

B. Aids to Navigation

Inasmuch as most of the floating aids to navigation located on the present survey have been subsequently changed in position a comparison with the chart would serve no useful purpose. The charted aids adequately mark the features intended.

7. Condition of Survey

(a) The sounding records are complete; the Descriptive Report covers all matters of importance. Most of the 1000 soundings revised in depth during verification resulted from rescanning portions of the fathograms at uneven time intervals thereby recording numerous peaks and deeps that had been missed by even-interval scanning. A more accurate configuration of the bottom features has resulted from these revisions.

(b) The smooth plotting was adequate. Positioning of the sextant fixes in the northern part of this survey is in some instances questionable due to the weak control resulting from the use of small angles. The bottom is extremely irregular and depths on portions of many sounding lines appear to be in conflict with the adjacent hydrography. The verifier has expended considerable time in attempting to improve the agreement of the hydrography, and although several positioning adjustments were made, satisfactory agreement over much of the area was not achieved. In general, the least depths on all lines were inked regardless of the lack of agreement with other soundings.

(c) The additional work of 1953 on this survey together with the results is fully described in the Descriptive Report. The additional work was smooth plotted in the Washington Office. The wire-drag work covering several undeveloped shoals is shown on overlays attached to the Descriptive Reports of the present survey and adjoining survey H-8008 (1952-53).

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

With the retention of forty-two prior soundings, this survey is considered basic and no further field work is recommended. In the northern part of the surveyed area, many shoal indications were not developed because the area had been previously wire dragged.

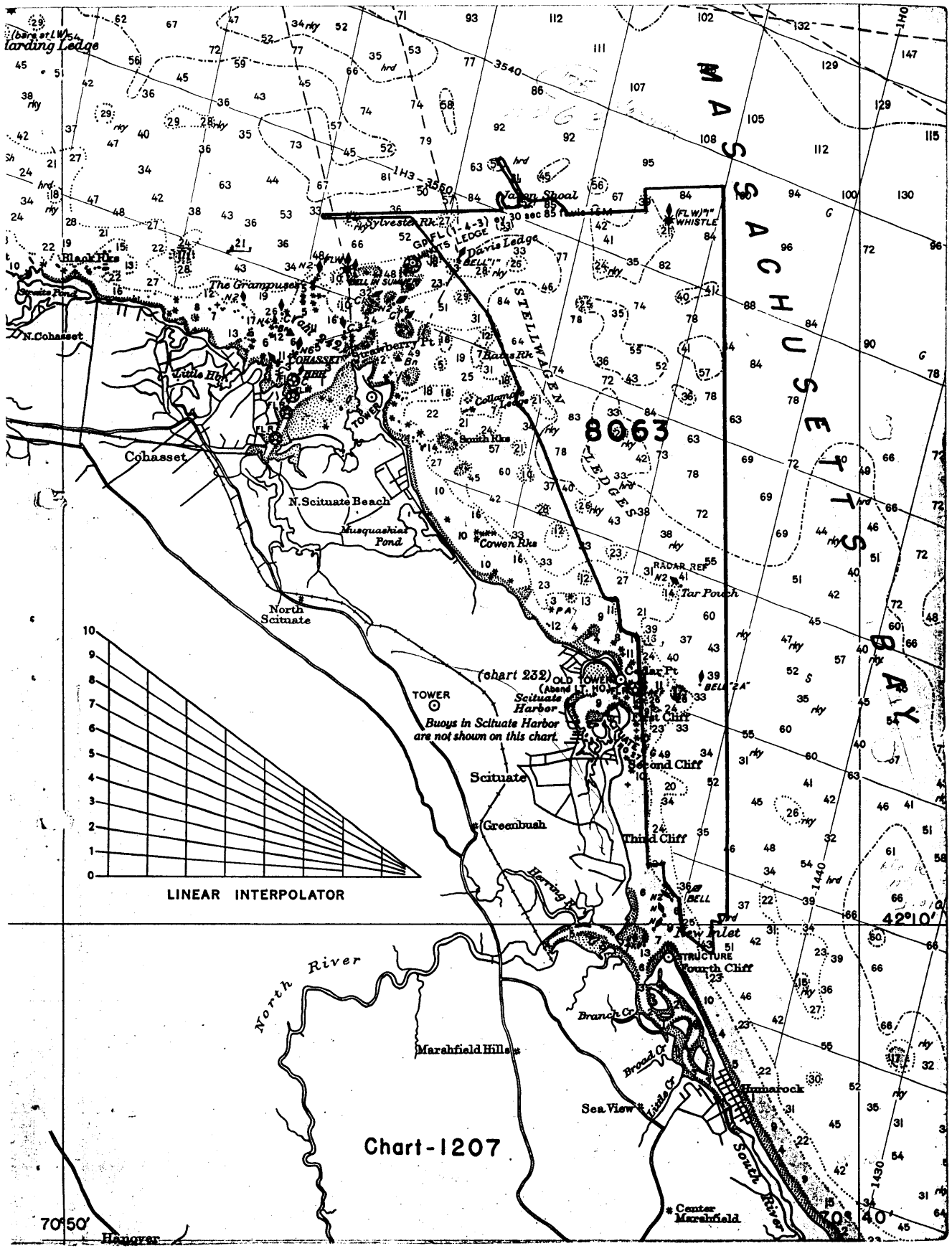
Examined and Approved:

H. R. Edmonston
Chief, Nautical Chart Branch

E. R. McCarthy
Chief, Division of Charts

J. C. Bull
Chief, Hydrography Branch

Earl O. Heaton
Chief, Division of Coastal Surveys



MASSACHUSETTS BAY
8063
Cohasset
N. Cohasset
N. Scituate Beach
Musquashiat Pond
North Scituate
Scituate
Greenbush
Scituate Harbor
Buoys in Scituate Harbor are not shown on this chart.
(chart 232)
TOWER
Cowen Rks
Smith Rks
Collamore Ledge
Davis Ledge
Sylvester Rk
Jason Shoal
STELLWAGEN LEDGES
Tar Pouch
Cedar Pt
First Cliff
Second Cliff
Third Cliff
Fourth Cliff
New Inlet
STRUCTURE
Hunnarock
Sea View
Marshfield Hills
Center Marshfield
North River
South River
Herring R
Branch Cr
Broad Cr
Little Cr
Black Rks
Straits Pond
Little Hbr
The Grampuses
Strawberry Pt
Bates Rk
RADAR REF
42°10'
70°50'
70°40'
LINEAR INTERPOLATOR
Chart-1207

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8063

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
28/Apr/54	244	C.R. Wittmann	Before ~~After~~ Verification and Review
~~1/23/57~~	~~244~~	~~[illegible]~~	~~Before~~ After Verification and Review
	(see preceding page)		
6/16/58	1106	WE	~~Before~~ After Verification and Review no corr'n to this scale - completely app'd.
6/17/58	1107	WE	~~Before~~ After Verification and Review
9/4/59	1207	A.J.H.	~~Before~~ After Verification and Review Completely applied.
			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

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.

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8063

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2/15/54	244	Chas R. Wittmann	After preliminary review. ~~Before~~ ~~After~~ Verification and Review Survey considered to supersede older surveys in area
2 Apr 54	232	Forrest H Bell	After prelim V&R Before ~~After~~ Verification and Review Partial - Soundings & Curves.
18 Apr '55	246	F.M. Albert	~~Before~~ After Prelim. Verification and Review ~~Complete~~ partial application. HPS
18 Apr '55	244	F.M.A.	~~Before~~ After Revised a few sdgs. Prelim. Verification and Review "
1-7-57	71	C.R. Wittmann	~~Before~~ After Verification and Review
~~1/23/57~~ Postponed -	~~246~~	~~S.F. McGann~~ GMS - JW	~~Before~~ After ~~Verification and Review~~ ~~Completely applied~~
3/22/57	244	WE	~~Before~~ After Verification and Review
1-31-58	246	R.K. DeLawder	~~Before~~ After Verification and Review complete FMA
9-4-59	1207	A.J. Hoffman	Completed application. (See History) ~~Before~~ After Verification and Review Application started by HWB.
			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.