8557

Diag. Cht. No. 1201

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey HYDROGRAPHIC

Field No. WA-HI-20-1-60

Office No. H-8557

LOCALITY

State MAINE

General Locality OFF MACHIAS BAY

Locality LIBBY ISLANDS TO LITTLE RIVER

19 60

CHIEF OF PARTY
D.G. RUSHFORD

LIBRARY & ARCHIVES

DATE Feb. 23, 1962

☆ U.S. GOV. PRINTING OFFICE: 1976—669-441

8557

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-8557

Field No. Wa-H1-20-1-60
H- 8557 (1960)

State MAINE

General locality ~~COAST OF MAINE~~ Off Machias Bay

Locality ~~EAST OF PETIT MANAN~~ Libby Islands to Little River

Scale 1:20,000 Date of survey 7/11/60 8/25/60

Instructions dated 19 Dec. 1958 Project No. CS- 408

Vessel WAINWRIGHT & HILGARD

Chief of party DEWEY G. RUSHFORD

Surveyed by D.G. RUSHFORD, JOHN T. MALDARI, D.I.WOLSK & P.T. REDDEN

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

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by SHIP PERSONNEL

Protracted by ALPHA G. ATWILL & W.L. JONNS (NORFOLK OFFICE)

Soundings penciled by W.L. JONNS

Soundings in fathoms ~~feet~~ at MLW ~~MLLW~~

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

WLW

D E S C R I P T I V E R E P O R T

HYDROGRAPHIC SHEETS WA-HI 20-3-59
WAHI 20-1-60

A. PROJECT:

Instructions dated 19 December 1958 and revised instructions dated 18 February 1959, 5 January 1959, and 24 Feb. 1960.

B. SURVEY LIMITS AND DATES:

These sheets cover an area from longitude 67° 10'W to longitude 67° 32'W. The outer limits were established by visibility, usually between eight (8) to nine (9) miles from the signals. The inshore limit was followed as described in the instructions. These sheets make a junction with WAHI-2259, H-8510 on its western limit and overlaps survey sheet H-1693, 1886 scale 1:40,000 on its eastern limit.

Field work on ~~2359~~ H-8556 began on 8/19/59 and ended on 8/25/60. ~~Sheet 2160~~ H-8557, field work began on 7/11/60 and ended on 8/25/60.

C. VESSELS AND EQUIPMENT:

The Ship WAINWRIGHT was used for the major portion of ~~Sheet 2359~~ H-8556, and the mid portion of approximately one half of ~~sheet 2160~~ H-8557. The Ship HILGARD was used only occasionally on ~~sheet 2359~~ H-8556 and used on the eastern quarter and western quarter of ~~sheet 2160~~ H-8557.

(1) Echo sounding equipment used:

Ship	808 Fathometer No.	Letter Day	Sheet No.
WAINWRIGHT	58-S	A thru X	2359
WAINWRIGHT	58-S	A thru L	2160 - H-8557
HILGARD	139SP	D	2359
HILGARD	57-33	E	2359
HILGARD	138-SPX	F	2359
HILGARD	58-S	G	2359
HILGARD	138-SPX	J(26J to P	2160
HILGARD	57-33	C thru H	2160
HILGARD	57-33	J (Pos 1-25)	2160
HILGARD	139SP	B (42B to end)	2160
HILGARD	138SPX	A&B(pos 1-41B)	2160

H-8557

D. TIDE AND CURRENT STATIONS:

Portable automatic tide gages were installed on a platform at Steele Harbor Island (latitude 44° 29.45, longitude 67° 32.51) and Stone Island (latitude 44° 36.08, longitude 67° 22.14). At Cutler, Maine (latitude 44° 39.38, longitude 67° 12.25) the gage was installed at a fishing wharf.

Tide reducers for the sheets were obtained as follows:

SHEET 2359

Ship	Steel Hbr.	Stone Island	Cutler	From Washington
WAINWRIGHT	A thru L	W	-	M thru V * X **
HILGARD	F (1 to 70) G	F (73 to end)	-	D *
HILGARD	-	H (1 - 197) B & E L,P,F(1-6P)	F (6-end) A,C,D ** G H (197-end) J,K,M,N	
WAINWRIGHT		L (1-4) & K G (1-90)	A to F H,J, & L (5-163)	G(90-169) ***

Steele Harbor Island gage (latitude 44°29.45, longitude 67° 32.5) was used for the western half of sheet 20-3-59.

Stone Island gage (latitude 44° 36.08, longitude 67° 22.14) was used for the eastern half of 20-3-59 and western quarter of sheet 20-1-60.

Plotted on Smooth Sheet.

Cutler, Little River gage (latitude 44° 39.38, longitude 67° 12.25) was used for the eastern three-quarters of sheet 20-1-60.

A 100 hour current survey was conducted at Smith Reef, latitude 44° 30.0'N, longitude 67° 21.1'W. The survey was begun on 14 September 1959 and ended on 18 September 1959.

E. SMOOTH SHEET:

The smooth sheet, Projection for 2359 was ~~projected~~ constructed by personnel of the Ships WAINWRIGHT and HILGARD at the Norfolk District Office. Smooth sheet for 20-1-60 was ~~projected~~ constructed in the Washington Office. Both sheets were transfered to the Norfolk District Office.

H-8557 (1960)

**

*Steele Hbr. TG; Stone I. TG; ***Cutler TG

F. CONTROL STATIONS:

All control was located by conventional methods. The signals employed are listed in Attachment No. 1.

G. SHORELINE AND TOPOGRAPHY:

Shoreline was transfered to sheets from blue line manuscripts. Due to the fact that this is an off-shore survey, only the mean high water line was inked and no topography was included.

H. SOUNDINGS:

All soundings, in fathoms, were obtained by conventional methods with 808 fathometers on A and B scale. Velocity corrections were obtained, up to ten fathoms, from bar checks. Phase corrections were obtained by comparisons between scales and included in a single corrector in the column along with squat, settlement and initial correction. Velocity corrections below 10 fathoms were obtained from temperature and salinity data.

I. CONTROL OF HYDROGRAPHY:

Control was visual using the three point fix with signals on shore. Near the off-shore limit visibility was poor, thereby producing frequent weak fixes.

J. ADEQUACY OF SURVEY:

This survey was considered adequate and no additional field work is necessary. The junction with prior survey WAHI-2259 to the westward is adequate; overlap with prior survey H-1693, 1886, scale 1:40,000 to the east is good.

K. CROSSLINES:

Crosslines are generally in good agreement with longitudinal sounding lines.

L. COMPARISON WITH PRIOR SURVEYS:

Previous surveys covering this area are H-4032* 1918, H-1576 1883, H-1693 1886.

Poor agreement with prior surveys was noted.

The following is a list of the discrepancies found:

Name	Latitude	Longitude	Previous Depth	Present Depth	All in fms.
SE Ledge	44° 28.85'	67° 27.0'	7.5	15.0	SHEET 20-3-59
" "	44° 28.82'	67° 27.47'	9.8	7.1	
" "	44° 28.88'	67° 27.12	9.3	8.1	
None	44° 33'	67° 21'	22.0	30.0	
"	44° 32'	67° 21'	22.5	30.0	
"	44° 27'	67° 21'	28.0	44.0	
"	44° 29'	67° 22'	30.0	40.0	
"	44° 30'	67° 24'	30.0	37.0	
"	44° 29.2'	67° 26.0'	27.25	39.0	
"	44° 30.4'	67° 25.5	38.0	50.0	
"	44° 26.80'	67° 26.7'	25.5	18.0	
"	44° 26.7'	67° 27.0'	30.0	18.0	
"	44° 28.45'	67° 28.1'	25.0	9.7	
"	44° 26.4'	67° 29.0	44.0	53.0	
"	44° 26.85'	67° 29.0	44.0	63.0	
"	44° 30.85'	67° 28.9	15.0	6.9	
"	44° 30.99'	67° 29.1'	15.0	9.0	
"	44° 33.8'	67° 20.68' 9'	Not shown	~~10.8~~ 13.1	SHEET 20-1-60
"	44° 33.9'	67° 20.45	Not shown	10.8.2	
"	~~44° 27.0'~~	~~67° 21.0'~~	~~28.0~~	~~44.0~~	
"	44° 28.8'.27	67° 20.8'.05'	Not shown	~~32.00~~ 27.8	
"	44° ~~28.0~~'27.95	67° 18.8'.25'	32.75	~~47.0~~ 33	
"	44° 31.8'20'	67° 16.8'.60'	38.0	~~48.0~~29 ~~38 fath. depth sl. ightly SW of 48~~	
"	44° 29.~~35~~.20'	67° 15.0'	Not shown	~~26.0~~ ~~19.2~~ 19.6	
"	44° 29.~~56~~'62'	67° 14.~~6~~'.76'	Not shown	~~19.0~~ 18.0	
"	44° 29.7'	67° 14.25'	Not shown	8.0	
"	44° 28.8'.2'	67° 15.5'	Not shown	17.8.2	
"	44° 31.8'.08'	67° 13.0'	35.75	~~14.0~~ 13.6	
"	44° 30.~~88~~'68'	67° 13.8'.48	Not shown	13.8.2	
"	44° 35.8'.25'	67° ~~12.0~~'11.95'	44.5	~~50.0~~ 43.0	
"	44° ~~36.0~~'35.9'	67° ~~12.0~~'11.9'	44.75	~~50.0~~ 45.0	
"	44° 31.5	67° 11.4'.38'	Not shown	9.2	
"	44° 31.~~68~~'.7'	67° ~~11.0~~'.95	Not shown	9.8.6	
"	44° 31.65'	67° 10.8'.8'	Not shown	10.4	
"	44° ~~32.95~~'00'	67° 10.~~95~~'.9'	Not shown	~~6.0~~ 5.8	
"	44° 31.~~93~~'.89'	67° 10.05'	Not shown	9.2	
"	44° 31.~~8~~'.88'	67° 10.1'.05'	Not shown	9.8.2	

*combined hydrographic survey and wire drag

M. COMPARISON WITH CHART:

In general good agreement with the charted depths and the present survey were noted. However, many shoal areas and discrepancies were found in the uncharted regions of the chart. These are listed below:

Latitude	Longitude	Charted Depths in vicinity ft.	Depth found in recent survey ft.
44° 31.7'	67° 10.1'	127'	57.6'
44° 31.~~93~~89'	67° 10.05'	~~112~~ 55	55.2
44° 31.95'	67° 10.95'	~~112~~ 33	33~~36.0~~ * Cleared W.O. depth
~~44° 31.65'~~	~~67° 10.90'~~	~~127~~	~~62.4~~
44° 31.5	67° 11.~~4~~'.36'	~~118~~ 55	~~55.2~~ ~~54.4~~ 55.2
44° 30.~~88~~9'	67° 13.0'	~~160~~ 84	~~78.0~~ 84
44° 31.~~0~~'.07'	67° 13.0'	~~160~~ 81	~~84.0~~ 81.6
44° 29.~~7~~'.78'	67° 14.25'	~~144~~ 48	~~48.0~~ 50.4
44° 29.~~55~~'.58'	6 7° 14.~~6~~'.55'	~~144~~ 115	~~114.0~~ 115.2
~~44°~~ 29.35'.6'	67° ~~15.0~~' 14.75'	~~216~~ 108	~~156.0~~ 108
44° 28.~~8~~'.2'	67° 15.~~55~~'.52'	~~216 — 396~~	~~119.0~~ 103.2
44° 33.~~8~~'.9'	67° 20.~~65~~'.44'	~~90 — 121~~ 61	~~65.0~~ 61.2
44° 32.~~0~~'.05'	67° 21.0'	~~135 — 154~~ 162	~~182.0~~ 139.2
44° ~~2~~8.0'	67° 18.0'	~~196~~ 255	~~282.0~~ 289.8
44° 31.0'	67° 29.1'	122	54.0 } Falls outside survey limits
44° 26.85'	67° 29.0'	288	301.8 }
44° 28.45'	67° 28.1'	65	58.2 }
44° 30.4'	67° 25.5'	159 - 225	240.0 }

N. DANGER & SHOALS:

The following are newly found shoals that should be noted:

Latitude	Longitude	Previous Depth	Found Depth - ft.
44° 31.95'	67° 10.95'	approx. 112	*36 (smooth)
44° 30.88'	67° 13.0'	160	38
44° 31.0'	67° 13.0'	160	84
44° 31.5'	67° 11.4'	118	53
44° 29.7'	67° 14.25'	144	48
44° 29.55'	67° 14.6'	144	114
44° 29.35'	67° 15.0'	216	156
44° 28.8'	67° 15.55'	216 - 396	119
44° 33.8'	67° 20.65'	90 - 121	65
44° 31.0'	67° 29.0'	122	54
44° 28.4'	67° 28.2'	65	58
44° 31.65'	67° 10.9'	112 to 127	62.4
44° 31.5'	67° 11.4'	112	55.2

Disregard see para. M, above

* Reported to bureau, chart letter dated 13 December 1960, Wire dragged to 34'.

O. COAST PILOT INFORMATION:

With reference to U. S. Coast Pilot 1, Atlantic Coast, Eastport to Cape Cod, Sixth Edition (1960) - On page 54, col. 2 between lines 19 and 20 add "An unnamed shoal with a least depth of 36.0' is located approximately 3.8 miles NW of Machias Seal Island Lighthouse (44° 31.9'N, 67° 10.9'W). A clear depth of 34' by wire drag was obtained."

On page 26, col. 1, line 17, add - "The 26 radio towers on the reservation are of various heights but all are quite conspicuous." This report was submitted to the Director in a letter dated 13 December 1960.

P. AIDS TO NAVIGATION:

No fixed aids to Navigation were located as all in the vicinity had been done so previously.

Floating Aids to Navigation located:

Name	Latitude	Longitude	Depth	Position Number	Date
* Black&White "MP" Whistle	44° 26.12'	67° 29.4'	45.8 fms	97G Sh 2359 WAINWRIGHT	9/18/59

* on adjoining sheet H-8556 (WA-HI-20-3-59)
See also page 13.

Q. SILTED AREAS:

No extreme silted areas were in evidence.

Respectfully submitted:

John T. Maldari

John T. Maldari, Ensign, C&GS

Approved and Forwarded:

D. G. Rushford

D. G. Rushford, LCDR, C&GS
Commanding WAINWRIGHT & HILGARD

ATTACHMENT NO. 1

LIST OF SIGNALS

See N.P.O. Signal List

TRIANGULATION:

Name	Source
TON	Keaton, 1946
RUM	Crumple, 1862
MOO	Moose Peak Light House, 1862
STONE	Stone Island Ledge Beacon, 1913
H-8557 LIB	Libby Islands Light House, 1862
H-8557 RIV	Little River Light House tower, 1883
H-8557 HUE	Hues, 1883, 1913
H-8557 SAND	Sandy Point, 1863, 1913
* CAT	(See position computation - 3rd Order triangulation included)
* FOX	" " " " " " "

* * Used for hydro only; unmarked stations. GPL Attach #4

MARKED TOPOGRAPHIC:

HIGH	T-8650 N/2 1946
FREE	T-8650 N/2 1946

TOPOGRAPHIC:

ARK	T-8646 S/2
RUE	See Vol. 2 (Obs. of horizontal directions) Pg. 8 T-8646 S/2
THE	Area of T-8799 - PH 5906 Sheet IV
H-8557 LAN	Area of T-8800 - PH 5906 Sheet V
H-8557 ONE	" " " " " " "
H-8557 ZIG	" " " " " " "
H-8557 COT	" " " " " " "
H-8557 * TOW	" " " " " " "
H-8557 * APE	" " " " " " "
H-8557 RAD	Area of T-8796 - PH 5906 Sheet II
H-8557 ORA	Area of T-8797 - PH 5906 Sheet III
H-8557 * JOE	" " " " " " "
H-8557 * HIL	" " " " " " "
H-8557 EAR	" " " " " " "
H-8557 CAR	" " " " " " "

PHOTO HYDRO:

H-8557 NUT	Area of T-8800 - PH 5906 Sheet V
H-8557 SAY	Area of T-8797 - PH 5906 Sheet III
H-8557 BEL	" " " " " " " HILGARD F day Sheet 20-1-60 Vol. No. 4, Page #23
H-8557 VAL	ECFP Manuscript T-8797 Bramwell T-8797(5)

ATTACHMENT NO. 2

S T A T I S T I C S

SHEET 20-3-59 H-8556

Volume Number	Day Letter	Date	Number of Positions	Nautical Miles
HILGARD	A,B,C	Rejected	141	(Improper fathometer speed)
3	D	6/27/60	141	43.0
3	E	7/19/60	3	(bottom samples)
3	F	8/16/60	136	29.9
4	G	8/25/60	6	1.5
WAINWRIGHT				
1	A	8/19/59	69	14.6
1 & 2	B	8/20/59	207	77.3
2	C	8/26/59	97	33.6
3	D	8/27/59	23	6.4
3	E	9/16/59	95	24.4
3 & 4	F	9/17/59	43	15.5
4	G	9/18/59	174	44.0
5	H	9/23/59	57	17.3
6	J	6/13/60	60	18.2
6	K	6/14/60	175	52.4
7	L	6/22/60	180	60.0
8	M	7/1/60	172	46.2
8 & 9	N	7/6/60	155	43.0
9	P	7/7/60	125	28.8
10	Q	7/14/60	26	6.8
10	R	7/15/60	185	55.5
11	S	7/21/60	153	42.0
11	T	7/22/60	101	29.0
12	U	8/4/60	183	34.0
12	V	8/5/60	150	29.3
13	W	8/18/60	30	5.3
13	X	8/24/60	145	30.2

SHEET 20-1-60 H-8557

1 WAIN'T	A	7/11/60	36	7.4
2	B	7/25/60	206	57.5
2 & 3	C	7/26/60	163	43.0
3	D	8/1/60	112	27.5
3 & 4	E	8/9/60	205	46.3
4	F	8/10/60	230	65.2
5	G	8/16/60	211	52.0
5 & 6	H	8/17/60	169	40.6
7	J	8/18/60	68	12.3
7	K	8/19/60	244	50.7
8	L	8/24/60	163	36.3

Attachment #2 Continued

STATISTICS

Volume Number	Day Letter	Date	Number of Positions	Nautical Miles
HILGARD	Sheet 20-1-60 continued			
1	A	7/14/60	94	27.5
1	B	7/15/60	167	47.9
2	C	7/19/60	22	4.4
2	D	7/22/60	200	47.5
3	E	7/26/60	184	47.5
3 & 4	F	8/4/60	167	49.0
4 & 5	G	8/5/60	214	58.8
5	H	8/9/60	239	57.2
6	J	8/10/60	227	64.8
6	K	8/11/60	21	4.2
7	L	8/12/60	23	5.5
7	M	8/17/60	108	21.9
7	N	8/24/60	143	30.3
8	P	8/25/60	151	28.5
			3767	933.8

ATTACHMENT NO. 3

VELOCITY CORRECTIONS

Fathometer 58-S

From (fms.)	To (fms.)	Corr. (fms)
0	1.6	+0.2
1.8	6.0	0.0
6.2	21.0	-0.2
21.2	35.4	-0.4
35.6	50.2	-0.6
50.4	64.8	-0.8

Fathometer 57-33

From (fms)	To (fms.)	Corr.(fms)
0	2.6	+0.2
2.8	10.0	0.0
10.2	21.0	-0.2
21.2	35.4	-0.4
35.6	50.2	-0.6
50.4	64.8	-0.8

Fathometer 138 SPX

0	1.2	+0.2
1.4	5.0	0.0
5.2	21.0	-0.2
21.2	35.4	-0.4
35.6	50.2	-0.6
50.4	64.8	-0.8

Fathometer 139-SP

0	0.6	+0.2
0.8	6.0	0.0
6.2	21.0	-0.2
21.2	35.4	-0.4
35.6	50.2	-0.6
50.4	64.8	-0.8

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS

H-8557 (1960)

TRIANGULATION STATIONS

HUE HUES, 1883-1913
LIB LIBBY ISLANDS L.H. (OLD), 1862
RIV LITTLE RIVER L.H., TR., 1883
SAND SANDY POINT, 1863-1913

TOPOGRAPHIC STATIONS SOURCE - FIELD COMPUTATIONS

APE HIL JOE TOW

SOURCE T-8796

RAD

SOURCE T-8797

BEL CAR EAR ORA SAY VAL

SOURCE T-8800

COT LAN NUT ONE ZIG

ATTACHMENT NO. 4

GEOGRAPHIC POSITIONS OF HYDROGRAPHIC SIGNALS

The following is a list of Geographic positions of hydrographic signals computed by this party.

Signal	Latitude	Longitude
JOE	44° 37' 09.578''	67° 14' 13.337''
HIL	44° 38' 20.377''	67° 12' 48.415''
APE	44° 36' 17.435''	67° 15' 47.053''
FOX	44° 34' 22.43''	67° 24' 26.6''
CAT	44° 29' 42.374''	67° 30' 42.966''
* Tow	44° 36 41.236	67 16 33.637

* GP/ From WASH office.

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION

H-8557

BUOY	LATITUDE	LONGITUDE	DEPTH	POS. NO.	DATE
Little R. L'td. Whistle Buoy 2LR	44-37.51	67-09.95	276'	43G(blue)	8/5/60

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8557 (Wa-Hi-20-1-60)

GENERAL

Fixes positioning hydrographic lines in off-shore areas were observed on extremely slender angles which has undoubtedly caused some position displacement. This condition is noticeable along the west side of the survey, particularly south of Lat. 44-30'. Because of this, all hydrography falling south of Lat. 44-27' is being submitted on a template. These positions and soundings may be easily transferred to the smooth sheet, however, it is recommended that the soundings on this overlay be used for immediate charting purposes only, and that the area be resounded when off-shore junctional surveys are made. It is also believed that consideration should be given to extending any off-shore survey northward to Lat 44-30', or until an adequate agreement of soundings has been obtained.

In addition to the weak fixes, accurate plotting was further complicated by the unusual wrinkles in the smooth sheet paper. The smooth plotter partially overcame this condition by the extensive use of weights during the protracting operation.

Taking into consideration the extreme bottom irregularaties in this area, and the plotting complications, soundings are in generally good agreement at crossings as discrepancies rarely amount to more than one depth unit.

DISCREPANCIES

While phase comparisons were made by Ship Hilgard, they apparently were not applied to the soundings. In order to bring soundings into agreement, a phase correction was applied to all soundings on the "B" scale when fathometers 138SPX and 57-33 were in use.

The fathogram for P-day, Ship Hilgard, is unaccountably missing. The search is continuing at this Office and it will be forwarded on recovery. NOT FOUND

The following sounding lines were not plotted on the smooth sheet as they are obviously displaced in position: (See overlays 4 and 5)

Ship Hilgard, lines 92 to 96B and 37 to 44M
Ship Wainwright, lines 20 to 23L and 57 to 58L - Soundings appear in good agreement. Partly applied in areas not adequately covered by other system of lines. GAK

More

Soundings on lines 1 to 8H and 200 to 205G, Wainwright, were not smooth plotted as they could not be reconciled with surrounding hydrography.

A shoal sounding of 5.6* fathoms was recorded by Ship Wainwright, following position 127G, while the vessel was drifting in the vicinity of the 5.8 fathom sounding at Lat. 44-32.0' and Long. 67-10.9'. It was not smooth plotted as an exact position was not furnished.

* Excessive velocity corrector used (-0.2). Should be 0.0 which makes this 5.8 — equal to Least Depth by Hilgard at pos. 79 G blue. Cleared by 5.5 fm drag. See below — and attached tracing. ✓

OVERLAYS

The wire drag strip, showing clearance over the 5.8 fathom sounding at Lat. 44-32.0' and Long. 67-10.9', is being submitted on smooth overlay number 1.

The following sounding lines are being submitted on a smooth overlay (no. 2) to avoid undue congestion on the smooth sheet:

Ship Hilgard, lines 92 to 111F and 141 to 180G.
Ship Wainwright, lines 111 to 127G.

The following sounding lines are being submitted on smooth overlay no. 3. It shows all hydrography south of Lat. 44-27'. (See remarks in first paragraph)

Ship Hilgard, lines 37 to 43D, 8 to 90D, 30 to 37H, 80 to 96H, 118 to 119H and 142 to 143H
Ship Wainwright, lines 93 to 148K

All sdgs of adequate agreement have been transferred to H-8557 smooth sheet and junctional area with H-8469 (1962) - GAR

DEPTH UNITS

Fathom depth units were used in compliance with the Director's letter, dated 7 July 1961, 211/rtb. ✓

Norfolk, Va.
Feb. 15, 1962

Respectfully submitted,

Hugh L. Profitt

Hugh L. Profitt
Cartographer

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8557

Name on Survey	A On Chart No. 303	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K BGN	
Cross Island	✓									1
Double Head Shot Is.	✓								✓	2
Libby Islands	304									3
Old Man	✓									4
Western Head	✓									5
Stone Island	✓									6
Machias Bay	✓									7
Little River	✓									8
Smith Reef	304									9
Flowers Rock	New Name Approved 1971									10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

C. Harrington 2-8-78

George M. Bass
Geographic Names
3/20/62

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8557

Records accompanying survey: Smooth sheets 1;

boat sheets 2; sounding vols. 16; wire drag vols. 2;

Descriptive Reports 1; graphic recorder envelopes 7;

special reports, etc. 1 Cahier-Misc. Data ~~and 5 Overlay tracings~~

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

Number of positions on sheet		3572
Number of positions checked		Approx. 10%
Number of positions revised		2
Number of soundings revised (refers to depth only)		6
Number of soundings erroneously spaced		5
Number of signals erroneously plotted or transferred		0
Topographic details	Time	5
Junctions	Time	12
Verification of soundings from graphic record	Time	24
Special adjustments	Time	0

Verification by Jorge A. Rozemczak Total time 784 Date July 2365

Reviewed by Edmund G. Brunson Time ~~75~~ 93 Date 7-23-74

Insp. by K. Myers 42 hrs 2/15/75

D. R. Engle 13 hrs 3/5/78

US COMM C&GS DC

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8557 FIELD NO. WA-HI-20-1-60

Maine, Off Machias Bay, Libby Islands to Little River

SURVEYED: July 11 - August 25, 1960

SCALE: 1:20,000 PROJECT NO.: CS-408

SOUNDINGS: 808 Depth Recorders
Sounding Pole, Lead Line

CONTROL: Sextant Fixes on
Shore Signals

Chief of Party	D. G. Rushford
Surveyed by	D. G. Rushford
	J. T. Maldari
	D. I. Wolsk
	P. T. Redden
Protracted by	A. G. Atwill, W. L. Jonns - AMC
Soundings Plotted by	W. L. Jonns - AMC
Verified and Inked by	G. A. Kozemczak
Reviewed by	E. G. Brunson
	Date: July 19, 1974
Inspected by	G. K. Myers

1. Description of the Area

The area covered by this survey is a section off the coast in the Gulf of Maine between Western Head on the north and Libby Islands in the south, and to seaward a distance of about 9 miles.

In general the bottom slopes deeply from less than 20 fathoms to deepest depths of 60 fathoms. Then, rises to depths of less than 30 fathoms along an irregular ridge offshore. Here, the bottom is dotted with many shoal ridges and mounds which rise abruptly to depths as shoal as 5 to 10 fathoms.

Predominant bottom characteristics are sand, gravel, and rocky.

2. Control and Shoreline

The origin of control is adequately covered in part F of the Descriptive Report.

The shoreline originates with reviewed photogrammetric manuscripts T-8796 (1946-49), T-8797 (1946-49), and T-8800 (1946-49).

3. Hydrography

A. Depths at crossings are generally in good agreement.

B. The usual depth curves are adequately delineated.

C. The development of the bottom configuration and the investigation of least depths were generally adequate. The wire-drag investigation in the immediate vicinity of latitude 44°31.95', longitude 67°10.95' is in agreement with present survey depths. Plot in D.R.

4. Condition of the Survey

The field work, sounding records, smooth plotting, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual.

The fathogram for P-day, Ship HILGARD, is missing from the survey records.

Though phase comparisons were made by Ship HILGARD, correctors were not applied to the soundings. A reexamination of the fathograms at time of verification revealed variable phase corrections of as much as -3.1 fathoms, which necessitated making the corrections in the office.

5. Junctions

Adequate junctions were affected with H-8556 (1959-60) on the west and with H-8667 (1962) on the southwest.

No contemporary survey junctions with the present survey on the east. However, present survey depths in that area are in general harmony with charted depths.

6. Comparison with Prior Surveys

A. H-1576 (1883) 1:40,000
H-1693 (1886) 1:40,000

The smaller scale of the prior surveys and their lack of development preclude a detailed comparison with the present survey. However it is evident that the general character of the bottom has remained the same. Many bottom characteristics have been carried forward to more adequately define the character of the bottom.

The present survey portrays the bottom configuration in much greater detail and is adequate to supersede the prior surveys in the common area.

B. H-4032 WD (1918) 1:40,000

The wire-drag survey covers a portion of the present survey. Effective drag depths do not conflict with depths on the present survey.

7. Comparison with Chart 303, 10th Edition, March 24, 1973
304, 7th Edition, October 10, 1970

A. Hydrography

The charted hydrography originates with the previously discussed surveys which require no further consideration, supplemented by information from the verified and unverified smooth sheet of the present survey.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

The only floating aid to navigation located on the present survey is in substantial agreement with its charted position and adequately marks the feature intended.

8. Compliance with Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional field work is recommended.

Examined and Approved:

Chief
Marine Surveys Division

Associate Director
Office of Marine Surveys
and Maps

H-8557

Items for Future Presurvey Reviews

The bottom is considered adequately developed on the present survey. Only minor differences were noted in the bottom since the prior surveys. These changes are attributed to differences of survey methods.

Position Index		Bottom Change Index	Use Index	Resurvey Cycle
Lat.	Long.			
442	0672	1	1	50 years
442	0673	1	1	50 years
443	0672	2	1	50 years
443	0673	2	1	50 years

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~ April 4, 1962

Division of Charts: R. H. Carstens

Plane of reference approved in
18 volumes of sounding records for

HYDROGRAPHIC SHEET 8557

Locality East of Petit Manan, Maine

Chief of Party: D. G. Rushford (1960)
Plane of reference is mean low water reading
2.4 ft. on tide staff at Steele Harbor Island
21.7 ft. below B. M. NO 1 (1959)
4.5 ft. on tide staff at Stone Island
25.0 ft. below B.M. 1 (1960)
4.7 ft. on tide staff at Cutler
24.3 ft. below B.M. NO 2 (1948)

Height of mean high water above plane of reference is:

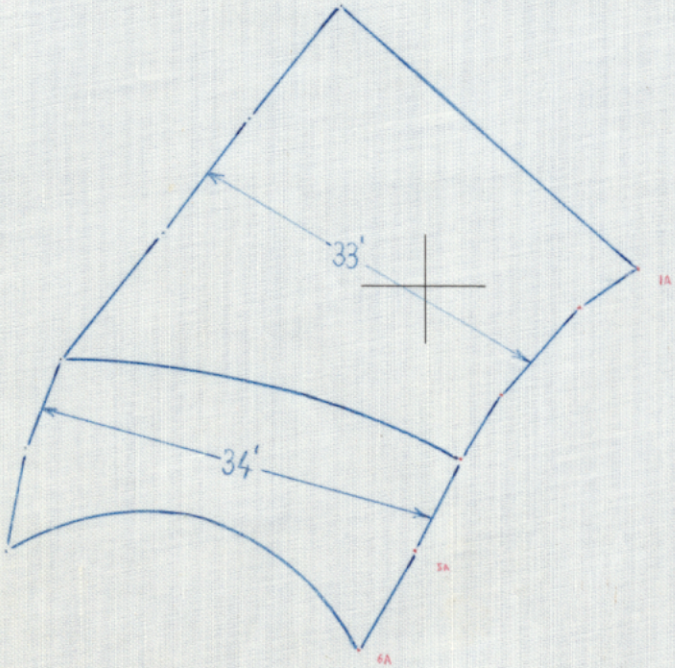
Steele Harbor Island	11.6 ft.
Stone Island	12.4 ft.
Cutler	13.4 ft.

Condition of records satisfactory except as noted below:

J. M. Symons
Chief, Tides and Currents Branch
~~Chief, Division of Tides and Currents~~

U. S. GOVERNMENT PRINTING OFFICE 877938

44°33'



32'

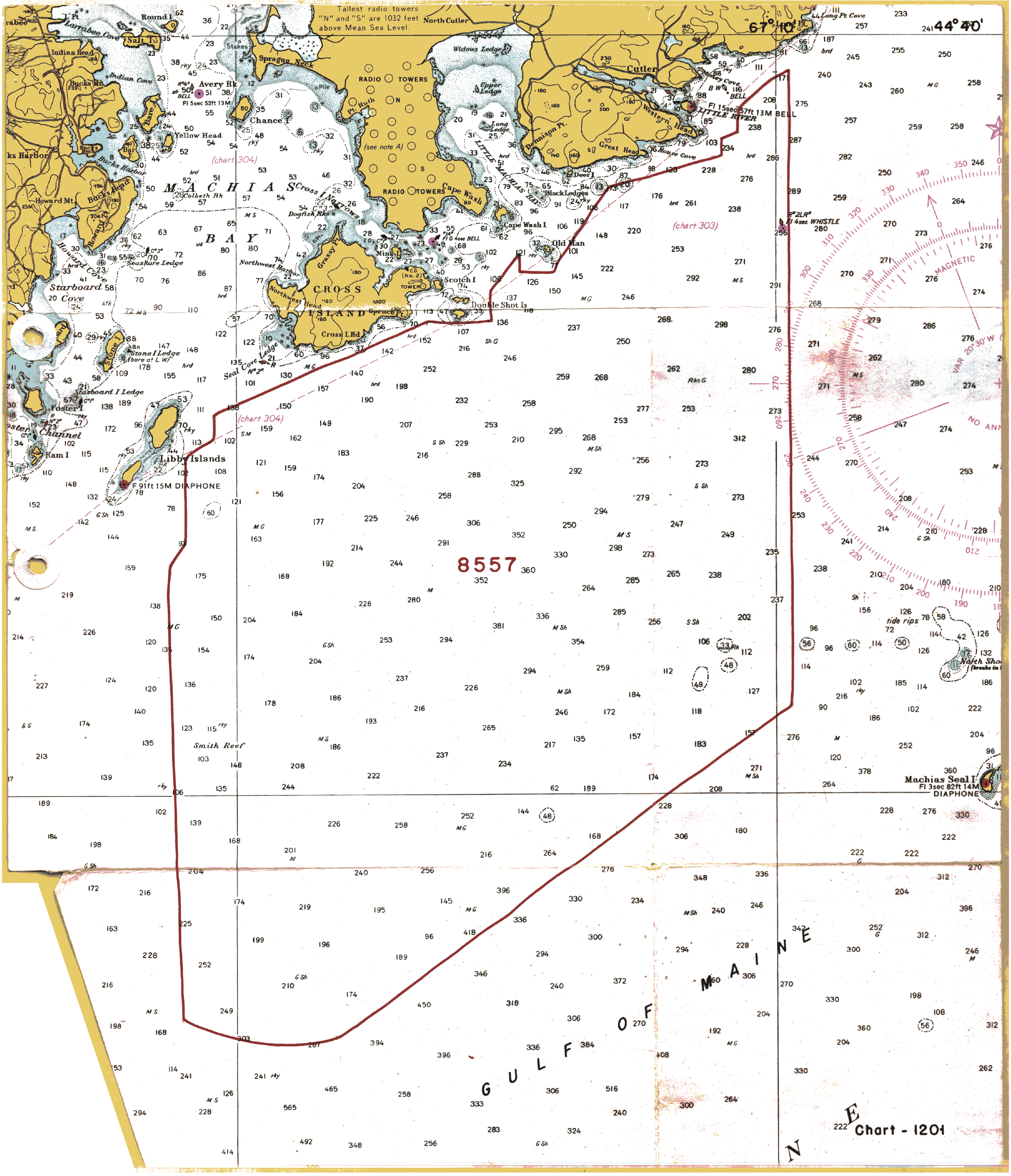
67°12'

11'

44°31'

67°10'

To accompany H-8557
Line 1 to 6A
No hangs or groundings



Tallest radio towers "N" and "S" are 1032 feet above Mean Sea Level.
67°10'
44°40'
North Cutler
Cutler
Sprague Neck
Avery Rk
Chance I
Yellow Head
Bucks Harbor
Howard Mt
Bucks Head
Howard Cove
Starboard Cove
Stone I
Stone I Ledge
Starboard I Ledge
Foster I
Foster Channel
Ram I
Libby Islands
F 91ft 15M DIAPHONE
Seashore Ledge
Northwest Harbor
Northwest Head
Grassy Pt
CROSS ISLAND
Cross I.Hd
Spruce Pt
Cross I Narrows
Dogfish Rks
Mink I
Scotch I
Double Shot Is
Cape Wash
Cape Wash I
Old Man
Black Ledges
Deer I
Dennison Pt
Great Head
Western Head
House Cove
Money Cove
LITTLE RIVER
Fl 15sec 57ft 13M BELL
Fl 4sec WHISTLE
Widows Ledge
Upper Ledge
Long Ledge
Pt. Ruth
RADIO TOWERS
(see note A)
Long Pt Cove
Indian Head
Indian Cove
Bucks Mt
Larrabee Cove
Salt I
Round I
Stakes
Pile
Bare I
Bar I
Bucks Neck
Bucks Harbor
Howard Pt
Colbeth Rk
Seal Cove Ledge
Smith Reef
Machias Seal I
Fl 3sec 82ft 14M
DIAPHONE
tide rips
North Sho
(breaks in
MACHIAS BAY
(chart 304)
(chart 303)
8557
GULF OF MAINE
MAGNETIC
VAR 20°30'W
NO ANN
Chart - 1201

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8557

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3-22-62	303 drg #10	[illegible]	Before ~~After~~ Verification and Review Partly appd
3-22-62	1000	[illegible]	Before ~~After~~ Verification and Review [illegible] No Corr thru cht 303
4-18-62	303 drg #10	John W Knoop	Before ~~After~~ Verification and Review Partly Applied
5-5-62	304	Helen [illegible]	Before ~~After~~ Verification and Review Partially Applied thru chart 303
10-12-62	1201	G.R. Johnson	Before ~~After~~ Verification and Review Partly Applied.
(sdgs app thru cht 304 are boat sheet sdgs)			thru charts 303 drg #10 & 304 #11.
10-15-62	1106	G.R. Johnson	Before ~~After~~ Verification and Review Partly Applied through cht 1201 drg #17
10-15-62	70	G.R. Johnson	Before ~~After~~ Verification and Review Partly Applied through cht 1106 drg #17
11-10-65	303	G.R. Johnson	~~Before~~ After Verification and before Review Partly Applied.
11-16-65	304	G.R. Johnson	~~Before~~ After Verification and before Review Partly Applied. Application thru cht 303, drg #11 in overlap area.
12-8-65	1201 Reconstr	G.R. Johnson	~~Before~~ After Verification and before Review Partly Applied thru cht 303, drg #11 & 304, drg #14.
8-12-76	304	D.C. Arcos	After Verification, Review and Inspection. Fully Applied
8-18-76	303	D.C. Arcos	After Verification, Review and Inspection Fully Applied
8-23-76	1106	D.C. Arcos	After Verification, Review and Inspection Fully Applied. thru charts 303 & 304.

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-8557 - 1960

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2/27/62	304	JWDailey	Examined - No Correction Before [redacted] Verification and Review
3-23-62	1000	[signature]	Before After Verification and Review No Corr thru 304
2-7-90	13003	Ed Martin	A ~~Before~~ After Verification and Review Adequately Applyd drg 61, no further processing required
2-12-90	13006	Russell P Kennedy	A ~~Before~~ After Verification and Review Adequately applied drg 47 No Further Proc
			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

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.