

8114

Diag. Cht. No. 1000-3 and 1202-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ST-1453 Office No. H-8114

LOCALITY

State Maine

General locality Gulf of Maine

Locality Frenchman Bay Entrance

1953-57

CHIEF OF PARTY

J.S.Morton, CDR., USC&GS (1953)

J.C.Ellerbe, CDR., USC&GS (1955-56)

N.E.Taylor, LC.CDR., USC&GS (1957)

LIBRARY & ARCHIVES

DATE August 19, 1954

USCOM-DC 5087

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-8114

Field No. ST-1453

State Maine

General locality Gulf of Maine

Locality Frenchman Bay Entrance

Scale 1:10,000 Date of survey 9/29/53 to 10/9/57

Instructions dated 2/4/53; 8/1/55; 10/9/56 & Letter dated 8/23/57
Ship STIRRI (1953); Ships WAINWRIGHT & HILGARD (1955,
Vessel 1956 & 1957) CARD

Chief of party J.S.Morton(1953); J.C.Ellerbe(1955-56) & N.E.Taylor(1957)

Surveyed by J.S.Morton, J.C.Ellerbe, D.A.Jones, J.E.Guth & C.E.Fuller

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

Fathograms scaled by Ship's personnel

Fathograms checked by Ship's Personnel & ^{folk} Norfolk Processing Office

Protracted by W.W.Feazel(1953 work), A.K.Shugeld(1955-57 work)

Soundings penciled by D.P.^{Harnden} Harnden(1953 work), A.K.Shugeld(1955-57 work)

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

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

A. PROJECT:

Project GS-265 (1953), Supplemental Instructions dated 4 February 1953, and Director's letter dated 6 February 1953. ✓

B. SURVEY LIMITS AND DATES:

This survey was conducted in Frenchman Bay from approximate latitude 44° 15' to approximate latitude 44° 18.5' and longitude 68° 07' to longitude 68° 11'. Satisfactory junction was made with H-7153 (1:20,000 - 1946) to the south. Time did not permit completion of this sheet and no other junctions were made. Hydrography was begun 29 September 1953, and discontinued 1 October 1953, and progress was considered satisfactory. But junction made. See Review Par. 5.

AND

C. VESSEL EQUIPMENT:

The Coast Survey ship STIRNI was used in this survey while basing at Southwest Harbor, Maine. An 808 fathometer, number 145-SP, was used over the entire area. All soundings were recorded in fathoms and tenths, but are shown on the boat sheet in feet. ✓

D. TIDE AND CURRENT STATIONS:

Predicted tides at Southwest Harbor, Maine, were used to reduce all soundings on the boat sheet. A portable automatic gage was in operation at Southwest Harbor during this survey and tide records from this gage were used for the correction of soundings without time or height difference. ✓

No current stations were occupied.

E. SMOOTH SHEET:

The smooth sheet ^{was} will be plotted by the Norfolk Processing Office. ✓

F. CONTROL STATIONS:

Shoran control was used for all hydrography accomplished this season on this sheet. Shoran stations OTTER (1953), and RAN (1953) were located photogrammetrically to within 0.5 mm on 1:10,000 scale planimetric manuscripts T-11350 (RS-463) and RS-459. These stations provided adequate control for the hydrography. Two photo-hydro stations Ace and Bud (located within 0.5 mm) and four triangulation stations were used to provide 3-point sextant fixes to calibrate the shoran. The control station listing follows: ✓

BAKER ISLAND LIGHTHOUSE, 1861, (SCM), r. 1934 (KGC)

EGG ROCK LIGHTHOUSE, 1902, r. 1934 (KGC)

GREAT HEAD OBSERVATORY, 1934 (KGC)

WINTER HARBOR LIGHTHOUSE, 1861, r. 1934 (KGC)

Ace, T-11350, 1953 (photogrammetric)

Bud, T-11350, 1953 (photogrammetric)

G. SHORELINE AND TOPOGRAPHY:

Shoreline and topography were furnished by planimetric manuscripts T-11350 (RS-463)⁴⁵, 1953 and T-11351 (RS-462)⁴⁵ 1953. Ledge symbol shown in blue is approximate LWL as determined from photographs taken at Low Water. Shoreline was transferred to the boat sheet by means of projector images of film positive copies of the manuscript. *Additional shoreline from T-11349 (1952-53) and T-8587 (1944-45)*

Since the survey was discontinued prior to completion, other subjects under this heading are not discussed.

H. SOUNDINGS:

All soundings were taken with 808 portable depth recorder number 145-SP. Velocity corrections were determined from a combination of bar checks and serial temperatures. ✓

I. CONTROL OF HYDROGRAPHY:

Shoran was used for control throughout the survey. Shoran corrections were determined by comparing positions determined from sextant fixes, plotted on a metal mounted topo sheet against simultaneous shoran fixes. The calibration was checked 6 times, and the final correction was a mean. ✓

J. ADEQUACY OF SURVEY:

This survey is not complete, and therefore is not considered adequate for charting purposes.

*Survey completed in 1955, 1956 and 1957
See reports covering these dates enclosed
after this report.*

U. STATISTICS:

Totals for Sheet

No. Pos. - 411, Stat. mi. of Sdg. - 148.9, Area, sq.stat.mi. - not completed

V. TIDE NOTE:

The portable automatic tide gage located in Southwest Harbor, lat. 44° 16.49', long. 68° 18.89' furnished tidal data used in reducing soundings for that portion of the sheet completed this season. Mean low water falls at 3.5 ft. on the Southwest Harbor tide staff. No correction for time or height was applied to the Southwest Harbor readings. Hourly heights were scaled by ship personnel, and the plane of reference was furnished by the Washington Office. ✓

W. ABSTRACT OF VELOCITY CORRECTIONS:

FATH. 145-SP		
From	To	Corr.
0 Fm.	11.5 Fm.	0.0 Fm.
11.5	44	-0.2
44	94	-0.4
94	144	-0.6
144	—	-0.8

Phase corrections are as follows:

Fathometer No.	A to B	A to C	A to D
145-SP	+1.2 fms.	+2.2 fms.	+2.8 fms.

Velocity corrections and phase corrections were combined under the echo correction column of the sounding volume.

X. ABSTRACT OF SHORAN CORRECTIONS:

Day letter	Otter	Ran
A - C	-.018	-.009

Respectfully submitted,

J. S. Morton
J. S. Morton

Approved and forwarded,

J. S. Morton
J. S. Morton

STATISTICS

To Accompany

HYDROGRAPHIC SURVEY H-~~8114~~ (Field No. St-1453) Work of 1953

<u>VOL. NO.</u>	<u>DAY LTR.</u>	<u>DATE</u>	<u>H.L. SDGS</u>	<u>POS.</u>	<u>SDGS. STAT. MI.</u>
1 ✓	A ✓	8-29-53 ✓	0	63 ✓	22.9
1 ✓	B ✓	9-30-53 ✓	0	147 ✓	52.7
1&2 ✓	C ✓	10- 1-53	0	201 ✓	73.3
TOTALS			0	411	148.9

Square Statute Miles Area Covered ----- 11.0

DESCRIPTIVE REPORT

PROJECT 1265 and 15010

HYDROGRAPHIC SHEET NO. 8114 (ST 1453) *work of 1955-56*

COAST OF MAINE

SCALE: 1:10,000

John C. Ellerbe - Chief of Party

1955 - 1956

NOTE Field work done on this sheet by the Ship STIRNI in 1953 has been processed and smooth plotted by the Norfolk District Office.

This Report covers the additional work done by the Ships WAINWRIGHT and HILGARD in 1955 and 1956.

Report on work done in 1957 enclosed after this report.

A. PROJECT

Revised Instructions dated 5 August 1955 and Supplemental Instructions dated 9 October 1956.

B. SURVEY LIMITS AND DATES

Sheet covers Latitude $44^{\circ} 14.5'$ to $44^{\circ} 22.5'$ and Longitude $68^{\circ} 05.5'$ to $68^{\circ} 12.0'$. Field work began on 22 September 1955 and was completed on 11 September 1956.

C. VESSELS AND EQUIPMENT

In 1955 the Ship HILGARD did all the hydrography on this sheet using the following fathometers. On A day, Fathometer number 138SPX was used and on B, C, and D days an unnumbered Fathometer was used. ✓

In 1956 the Ships WAINWRIGHT and HILGARD and Launch CS-181 did hydrography on this sheet. The WAINWRIGHT used Fathometer number 58S, the HILGARD used fathometer number 139SP and Launch CS-181 used an unnumbered fathometer. ✓

D. TIDE STATIONS

In 1955 a portable automatic tide gage at Bass Harbor, Maine was used for the reduction of soundings. ✓

In 1956 a standard automatic tide gage at Bar Harbor, Maine was used for the reduction of soundings. ✓

E. SMOOTH SHEET

was
To be prepared by the Norfolk Processing Office.

Work done in
1953, 1955, 1956,
and 1957 all
included on same
smooth sheet.

F. CONTROL STATIONS

All control stations were located by conventional methods. See Attachment No. 3. ✓

G. SOUNDINGS

All soundings were obtained by conventional methods using an 808 fathometer.

H. CONTROL OF HYDROGRAPHY

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

J. ADEQUACY OF SURVEY

This survey is considered adequate and no further field work is necessary.

K. CROSSLINES

Of the area surveyed about 15% was crosslines, with discrepancies of approximately 1 $\frac{1}{2}$ % being apparent, and seldom exceeding 2%.

L. COMPARISON WITH PRIOR SURVEYS AND CHART

Agreement was good throughout with no important differences being detected.

M. DANGERS AND SHOALS

No unknown dangers or shoals were found.

N. AIDS TO NAVIGATION

See Attachment No. 4.

P. FATHOMETER CORRECTIONS

In 1955 bar checks were taken on the HILGARD to a depth of 60 feet, but no lead line comparisons were taken at a deeper depth on this sheet. However, earlier in the season comparisons were taken, giving a 0 correction and this correction is assumed for this survey. An initial of 0.6 fm. was used.

In 1956 bar checks and comparisons were taken on the WAINWRIGHT, HILGARD, and the Launch CS-181, using an initial correction of 2.0 feet, 2.0 ft., and 0.0 ft. respectively. See Attachment No. 5 for a "Tabulation of Corrections".

Q. LIST OF ATTACHMENTS

1. Statistics
2. Tide Note
3. List of Signals
4. Aids to Navigation
5. Fathometer Corrections

Submitted:

Jack E. Guth
Jack E. Guth
Lieutenant, C&GS

Approved and Forwarded:

John C. Ellerbe
John C. Ellerbe
Commander, C&GS
Chief of Party
per Don A. Jones

STATISTICS

WORK of 1955-56

<u>Volume Number</u>	<u>Day Letter</u>	<u>Date</u>	<u>Number of Positions</u>	<u>Statute Miles</u>
1955				
1✓	A✓	9-22-55✓	39✓ (HILGARD)	5.9
1✓	B✓	9-23-55✓	58✓ (HILGARD)	11.9
1✓	C✓	9-26-55✓	149✓ (HILGARD)	35.7
2✓	D✓	9-27-55✓	102✓ (HILGARD)	24.9
TOTALS			348	78.4

1956				
17✓	E✓	9-10-56✓	80✓ (HILGARD)	^{15.9} 12.2
17✓	F✓	9-11-56✓	155✓ (HILGARD)	^{29.0} 25.5
TOTALS			235	^{44.9} 37.7

1-2 3-4✓	a✓	9-11-56	220✓ (Inch 181)	22.6
35✓	E✓	8-13-56✓	165✓ (WAIN'T)	32.8
3-4 5-6✓	F✓	9-4-56✓	166✓ (WAIN'T)	32.5
46✓	G✓	9-5-56✓	137✓ (WAIN'T)	25.7
46✓	H✓	9-6-56✓	1✓ (WAIN'T)	
46✓	J✓	9-11-56✓	25✓ (WAIN'T)	4.2
TOTALS			494	95.2

8✓	b✓	10-9-57	100 (Inch 181)	8.0
		9-30-57		

Grand Totals 1397 pos. 241.1 stat. M.
Grand Total $\frac{411}{1808}$

TIDE NOTE

In 1955 a portable automatic tide gage was installed and maintained by personnel of the Ships WAINWRIGHT & HILGARD, at Bass Harbor, Maine, Latitude $44^{\circ} 14.4'$, Longitude $68^{\circ} 21.2'$. The height Mean Low Water above the zero of the tide staff was 2.6 feet. Hourly heights were scaled from the marigrams by party personnel.

In 1956 hourly heights were received through the Washington Office from the Standard Automatic Tide Gage at Bar Harbor, Maine, Latitude $44^{\circ} 23.5'$, Longitude $68^{\circ} 12.3'$.

Since the Bass Harbor portable automatic Tide Gage was used in 1955 and the Bar Harbor Standard Automatic Gage was used in 1956, some small discrepancies in depths may be apparent between the two seasons work.

FATHOMETER CORRECTIONS

1956

WAINWRIGHT - Fathometer No. 58S - Initial set at 2.0 feet

<u>Date</u>	<u>Depth</u>	<u>Correction</u>
13 Aug.	A scale (fathoms)	
	0.0 - 10.3 (fms.)	-0.2 (feet)
	10.4 - 13.5	-0.4
	13.6 - 17.1	-0.6
	17.2 - 20.8	-0.8
	20.9 - on	-1.0

4 Sept.	A scale (fathoms)	
thru	0.0 - 8.8 (fathms.)	0.6 (feet)
6 Sept.	8.9 - 10.6	0.4
	10.7 - 12.5	0.2
	12.6 - 14.1	0.0
	14.2 - 15.8	-0.2
	15.9 - 17.6	-0.4
	17.7 - 19.6	-0.6
	19.7 - 22.5	-0.8
	22.3 - on	-1.0

11 Sept.	A scale (fathoms)	
	0.0 - 5.0 (fms.)	0.0 (feet)
	5.1 - 8.3	-0.2
	8.4 - 12.0	-0.4
	12.1 - 16.6	-0.6
	16.7 - 20.6	-0.8
	20.7 - on	-1.0

HILGARD - Fathometer No. 139SP - Initial setting at 2.0 feet

10 Sept.	A scale (fathoms)	
thru	13.8 - 18.7 (fms.)	1.0 (feet)
11 Sept.	18.8 - 23.0	1.5
	23.1 - 27.5	2.0
	27.6 - on	2.5

HIRED LAUNCH - Fathometer No. unnumbered - Initial set at 0.0'

11 Sept.	A scale (fathoms)	ALL	0.0 (feet)
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27 JAN 10 1958
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SUPPLEMENTAL DESCRIPTIVE REPORT

HYDROGRAPHIC SURVEY

Field No. ST-1453

Office No. H-8114 *add. work*

work of 1957

Coast of Maine

Frenchman Bay

In accordance with letter dated 23 August 1957 ref. 22/MEK S-1-WA&HI additional hydrography was done in the vicinity of Egg Rock and along the coast of Mt. Desert Island on 9 October 1957 by personnel of the Ships WAINWRIGHT & HILGARD using Launch 181 and fathometer 138 SPX. This work was plotted on the boatsheet using b (green) letter day.

The standard tide gage at Bar Harbor was the tide station used for tide reducers which were furnished from the Washington Office.

Control stations used were recovered 1956 stations with the exception of station GAB which was located by 3 sextant cuts noted on page 31 of volume 2. Visual sextant fixes were used to control all hydrography.

The additional development accomplished is considered adequate to complete the survey.

Attachment No. 1 lists the fathometer corrections bar checks and phase comparisons.

Respectfully Submitted

Norman E. Taylor
Norman E. Taylor, LCDR
Chief of Party

SE 1 17 0. NVP 8961

ATTACHMENT NO. 1 (1957) ST-1453 H-8114

Fathometer 138 SPX Launch 181

Velocity Corr'n
(from bar checks and T&S)

Phase Corr'n

Depth Corr.
Feet feet

XX- B -3.0 ft.
EX- 6 -6.2 ft.
D -5.3 ft.

0 - 15 -0.2
15.1 - 35 -0.0
35.1 - 50 -0.2
50.1 - 62 -0.4
62.1 - 78 -0.6
78.1 - 130 -1.0
130.1 - 182 -1.5
182.1 - 232 -2.0

Statistics

<u>Vol.</u>	<u>Day</u>	<u>Date</u>	<u>Pos.</u>	<u>Stat. Mi.</u>
2	b	9 Oct.	100	8.0

^{OF}
LIST ~~FO~~ SIGNALS

To Accompany

HYDROGRAPHIC SURVEY H-8114 (Field No. St-1453)
work of 1953

TRIANGULATION STATIONS

BAKER	BAKER ISLAND LIGHTHOUSE, 1861-1934
EGG	EGG ROCK LIGHTHOUSE, 1902-34
HEAD	GREAT HEAD OBSERVATORY, 1934-44
WINTER	WINTER HARBOR LIGHTHOUSE, 1861-1934

TOPOGRAPHIC STATIONS

OTTER, 1953	T-11350 (Shoran)
RAN, 1953	RS-459 (Shoran)
Ace	T-11350
Bud	T-11350

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
To Accompany *work of*
H-8114 ~~ADD~~ 1955-57

TRIANGULATION STATIONS

EGG EGG ROCK LIGHTHOUSE, 1902-34
HEAD GREAT HEAD OBSERVATORY, 1934-44

TOPOGRAPHIC STATIONS

SOURCE T-11349

Abe	Bix	Bob	Chi	Dim	End	Fag	Hep	Him
Leg	Moo	Nan	Ney	One	Pie	Rip	Zoo	

SOURCE T-11350

Ace	Bud	Gab	Cox	Daw	Erg	Fat	Gal	Hex	Hole
Ice	Imp	Jar	Joc	Ken	Ker	Lum			

SOURCE RS-459

Pod

HYDROGRAPHIC STATIONS

Gab Vol. 8, pg. 31

NORFOLK PROCESSING OFFICE
LIST OF
FLOATING AIDS TO NAVIGATION
H-8114 ~~ADD~~ Work of 1955-57

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
FRENCHMAN BAY					
Newport Ledge Buoy 3A	44-21.23 ✓	68-10.65 ✓	33'	147-8A	9/11/56
Schooner Head L'td. Bell Buoy 3	44-20.09 ✓	68-10.12 ✓	133'	119E	8/13/56
Egg Rock Whistle Buoy 2ER	44-20.26 ✓	68-08.62 ✓	93'	23-4F	9/ 4/56

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H- 8114 (Field No. St-1453)
Work of 1953

GENERAL

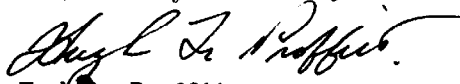
A registry number was not requested for this survey as the field work was not completed. Work completed in 1955, 1956 and 1957.

SOUNDINGS

Crossings check very well considering the soundings were recorded on the fathom scale.

Most of the shoaler areas on chart 306 were confirmed and some new ones were found, how-ever, none of these may be considered a menace to surface navigation.

Respectfully submitted,


Hugh L. Proffitt
Cartographer.

Norfolk, Va.
3 Aug. 1954

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

Work of 1955-57

HYDROGRAPHIC SURVEY H-8114~~455~~. (St-1453)

GENERAL

This report covers additional work accomplished on survey H-8114 by Ships Wainwright and Hilgard during the 1956 seasons. ✓

1955 1957

CONTROL

The origin of the topographic stations used on this survey is unknown. This Office was furnished bromoils of compilations T-11349 and T-11350 showing topographic stations which were in agreement with the stations shown on the boat sheet. Station Pod was transferred from RS-459. A corrected position was not given for this station so the original manuscript position was used. It differs from the boat sheet position by about 15 meters. These bromoils are being held at this office for use in transferring control to wire drag surveys in the area.

Brownline prints of these compilations were also furnished but they did not show the locations for most of these stations. Also, the field list of signals in the descriptive report was apparently made for an adjoining survey as it does not list the stations used on this sheet. *See list made by Norfolk Processing Office enclosed.*

Time jumps were noted occasionally at fix changes. These are shown on an accompanying plotting overlay and are noted in the volumes. The indicated signal displacement could not be fixed on any particular topo station. Some swingers and weak fixes were noted, usually in areas most distant from the control stations where strong fixes were not available. ✓

Most of these weak fixes are believed to be plotted with a fair degree of accuracy with the exception of the following positions which were not plotted at all.

149 to 150E and 116 to 120G

Plotted NP 117 to 120G

SOUNDINGS

Agreement of soundings at crossings is considered *adequate* fair. Some discrepancies may be partially attributed to weak or questionable control, the irregularities of the bottom and the difficulty of reading soundings on the fathom scale close enough so differences do not appear exaggerated when converted to the foot scale.

Norfolk, Va.
29 Jan. 1959

Respectfully submitted.

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer

GEOGRAPHIC NAMES

Survey No. H-8114

Work
of 1953

GEOGRAPHIC NAMES											
Survey No. H-8114 <i>work of 1953</i>											
Name on Survey	<div>On Chart No. 306</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div>										
	A	B	C	D	E	F	G	H	K		
<u>Maine</u>	}	for title								B.G.N.	1
<u>Gulf of Maine</u>										2	
<u>Frenchman Bay</u>										B.G.N.	3
<u>Mt. Desert I.</u>											4
<u>Otter Point</u>										B.G.N.	5
<u>Cod Ledge</u>		(see chart 306 for position)								6	
		Names approved								7	
		8-11-54. L. Heck								8	
										9	
										10	
										11	
<u>Southwest Harbor</u>		(tide station)								12	
										13	
<u>Baker Island</u>	✓									14	
										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

M 234

GEOGRAPHIC NAMES

Survey No. H-8114

Work of
1955-57
Ad. Mr.

Name on Survey	Source of Information										Number
	A On Chart No. 306	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		
Maine			(Title)						BGN	1	
Frenchman Bay			"						"	2	
✓ Mt. Desert Island										3	
✓ Great Head										4	
✓ Egg Rock										5	
			Names approved 2-17-59							6	
Tide stations off sheet:										7	
Bar Harbor										8	
Bass Harbor										9	
										10	
Turtle Island	X									11	
Thrumcap Island	X									12	
Newport Ledge	X									13	
Old Whale Ledge	X									14	
Handiren Ledge	X									15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8114 ~~Ad. Wk.~~

Records accompanying survey:

Boat sheets ¹⁰...; sounding vols. ⁸...; wire drag vols.; bomb vols.; graphic recorder rolls ⁶...; envelopes special reports, etc. ...1-Descriptive report, 1 smooth sheet....

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

Number of positions on sheet	1408
Number of positions checked	1377...
Number of positions revised	160...
Number of soundings revised (refers to depth only)	3....
Number of soundings erroneously spaced	0....
Number of signals erroneously plotted or transferred	0....
Topographic details	Time 12....
Junctions	Time 14 16 hrs.
Verification of soundings from graphic record	Time 8....
Verification by J. C. Chambers	188
Total time	172 hrs
Date	21 July 1964
Reviewed by Dale E. Westbrock	59 hrs.
Date	6 Nov. 1964

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF HYDROGRAPHY AND TOPOGRAPHY~~

16 August 1954

Division of Charts: R. H. Carstens *G.F.J.*

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET

8114 (1953)

Locality Mount Desert Island, Maine

Chief of Party: J. S. Morton in 1953

Plane of reference is mean low water, reading
3.5 ft. on tide staff at Southwest Harbor
18.3 ft. below B. M. 6 (1953)

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

Condition of records satisfactory except as noted below:

E.C. McKay

Tides Branch

Chief, Division of Tides and Currents.

LTC

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

3 March 1959

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 8114 (~~Ad. WK. 1~~) (1955-57)

Locality Frenchman Bay, Maine

Chief of Party: J. C. Ellerbe & N. E. Taylor in 1955-1957

Plane of reference is mean low water, reading

3.9 ft. on tide staff at Southwest Harbor

17.9 ft. below B.M. 2 (1879)

3.4 ft. on tide staff of 1947 at Bar Harbor

17.5 ft. below B.M. 6 (1911)

Height of mean high water above plane of reference is:

Southwest Harbor . . . 10.2 ft.
Bar Harbor 10.4 ft.

Condition of records satisfactory except as noted below:

NOTE: Tide reducers for the positions listed below have been revised in red and verified:

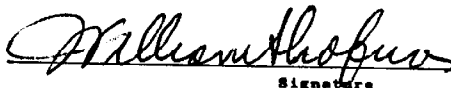
Vol.

Positions

6

155F - 166F ✓

119G - 137G ✓


Signature

Chief, Tides Branch

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8114

FIELD NO. ST-1453

Maine, Gulf of Maine, Frenchman Bay Entrance

SURVEYED: Sept.--Oct. 1953
Sept. 1955--Oct. 1957

SCALE: 1:10,000

PROJECT NO. CS-265

SOUNDINGS: 808 Depth Recorders

CONTROL: Shoran and
Sextant fixes on
Shore Signals

Chief of Party-----J. S. Morton (1953)
J. C. Ellerbe (1955-56)
N. E. Taylor (1957)
Surveyed by-----J. S. Morton
J. C. Ellerbe
D. A. Jones
J. E. Guth
C. E. Fuller
Protracted by-----W. W. Feazel
A. K. Shugeld
Soundings Plotted by-----D. P. Harnden
A. K. Shugeld
Verified and Inked by-----J. C. Chambers
Reviewed by-----D. E. Westbrook
Inspected by-----R. H. Carstens

Date: November 6, 1964

1. Description of the Area

This survey covers that portion of the area at the entrance to Frenchman Bay, Maine extending from Baker Island to Egg Rock.

The inshore area is typical of the rugged glaciated coast of Maine, consisting of numerous reefs and rock ledges with comparatively deep water close to the shoreline. Offshore, a sedimentary bottom exists with hard or rocky knolls and ridges creating numerous irregularities.

A major underwater feature in the area, Cod Ledge (Lat. $44^{\circ}17.3'$, Long. $68^{\circ}08.7'$), rises to 57 feet from general depths of 150-200 feet. ✓

2. Control and Shoreline

The control is adequately described in the Descriptive Report.

The shoreline originates with reviewed photogrammetric manuscripts T-8587 (1944-45), T-11349 (1952-53), T-11350 (1952-53), and T-11351 (1952-53).

3. Hydrography

- A. Depths at crossings are in good agreement.
- B. The usual depth curves were adequately delineated.

Several offshore features were emphasized by either dashed blue or solid brown depth curves in accordance with Par. 6-64 of the Hydrographic Manual.

- C. The development of the bottom configuration is considered adequate. The verification by the hydrographer of topographic and hydrographic features, such as rocks awash and shoal areas shown on the photogrammetric manuscripts, is not considered adequate.

Although not specifically disproved by the hydrographer, two shoal areas shown on T-11349 (1952-53) in Lat. $44^{\circ}21.67'$, Long. $68^{\circ}10.60'$, and Lat. $44^{\circ}21.76'$, Long. $68^{\circ}10.58'$ are not considered to exist and have not been carried forward to the present survey. This decision

has been based mainly on the conclusion that it is highly unlikely that shoal features exist in the 70-80 ft. depths shown by the survey. Support for this can be found in the field inspector's report in the Descriptive Report for T-11349 (1952-53) which states that "Though each rock awash or breaker was examined on at least two photographs under a stereoscope, they were found in many cases in the field to have been only foam".

The following features also originate with photogrammetric survey T-11349 (1952-53). Although the existence of these features is doubtful, they were not verified or disproved by the hydrographer and therefore were retained on the present survey.

1. Shoal area Lat. $44^{\circ}20.07'$ Long. $68^{\circ}10.31'$
2. Shoal area Lat. $44^{\circ}20.11'$ Long. $68^{\circ}10.32'$
3. Rock awash Lat. $44^{\circ}20.04'$ Long. $68^{\circ}10.30'$
4. Two Rocks awash) Lat. $44^{\circ}20.55'$
and shoal area) Long. $68^{\circ}10.48'$

4. Condition of the Survey

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

5. Junctions

Adequate junctions were effected with H-7199 (1947) on the north; H-7643 (1948) on the northeast; and H-8030 (1953-55) on the west.

A butt junction was effected with H-7153 (1946) on the south because of depth discrepancies of up to 5 feet in 200 feet between the two sheets. These discrepancies are considered to have been caused by weaker control on H-7153 (1946) and also the difficulty in making comparable readings on different fathometers in the areas of unconsolidated sediments believed to exist in the vicinity of

the junction. Several soundings on important features in the area superseded on H-7153 (1946) were retained on the present survey in the appropriate color.

The junction with H-8504 (1956-58) on the east will be discussed in the review of that survey.

6. Comparison with Prior Surveys

H-1215 (1:10,000) 1873

H-1216 (1:10,000) 1873

H-1372 (1:40,000) 1877

H-1424 (1:20,000) 1879

Taken together the above listed surveys comprise the prior coverage of the area of the present survey.

A comparison with prior depths reveals no significant changes in the bottom. Numerous features were found to be somewhat shoaler than shown on the prior surveys and this is probably due to the more complete delineation and development on the present survey.

The 138-ft. sounding charted in Lat. $44^{\circ}16.18'$, Long. $68^{\circ}08.70'$ originates with H-1424 (1879). This sounding is considered discredited by present depths and is probably a 10-fathom recording error. The 138-ft. sounding should be deleted from the chart.

Several soundings and bottom characteristics were carried forward from the prior surveys, however, to supplement the present survey.

With the addition of the above mentioned soundings and bottom characteristics, the present survey is adequate to supersede the prior surveys within the common area.

7. Comparison with Chart 306-6th Ed., 3/16/64

A. Hydrography

Most of the charted hydrography in the area of the present survey was applied from the smooth sheet of the present survey before verification and review. Several

soundings were retained on the chart from the previously discussed prior surveys which require no further consideration.

Prior bottom characteristics have been carried forward on Cod Ledge and other areas where no bottom characteristics are presently charted.

A substantial number of soundings have been revised during verification and review of the present survey and the chart should be corrected accordingly. A few of the more important soundings are:

<u>NOW CHARTED</u>	<u>POSITION</u>	<u>SOUNDING REVISED TO</u>
70 ft.	Lat. 44°20.94', Long. 68°08.18'	77 ft.
176 ft.	Lat. 44°19.07', Long. 68°05.95'	194 ft.
56 ft.	Lat. 44°20.73', Long. 68°08.45'	61 ft.
*138 ft.	Lat. 44°16.18', Long. 68°08.70'	Rejected

*This sounding from H-1424 is discussed in item 6.

Attention is directed to the following:

The rock awash charted in Lat. 44°21.78', Long. 68°10.60' originates with a shoal area shown on T-11349 (1952-53).

This shoal area is considered disproved by the present survey as it falls in depths of about 75 feet. The shoal area is believed to be erroneously interpreted from photographs and is probably foam. The rock awash charted in this position should therefore be deleted from the chart.

B. Aids to Navigation

The aids shown on the present survey are in substantial agreement with their charted positions and adequately mark the features intended.

8. Compliance with Instructions

The survey adequately complies with Project Instructions except that bottom samples were not obtained in the

southern portion of the area, and that several features originating with the photogrammetric manuscripts were not verified or disproved by the hydrographer.


9. Additional Field Work

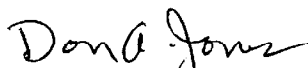
This survey is considered to be an adequate basic survey and no additional field work is immediately required.

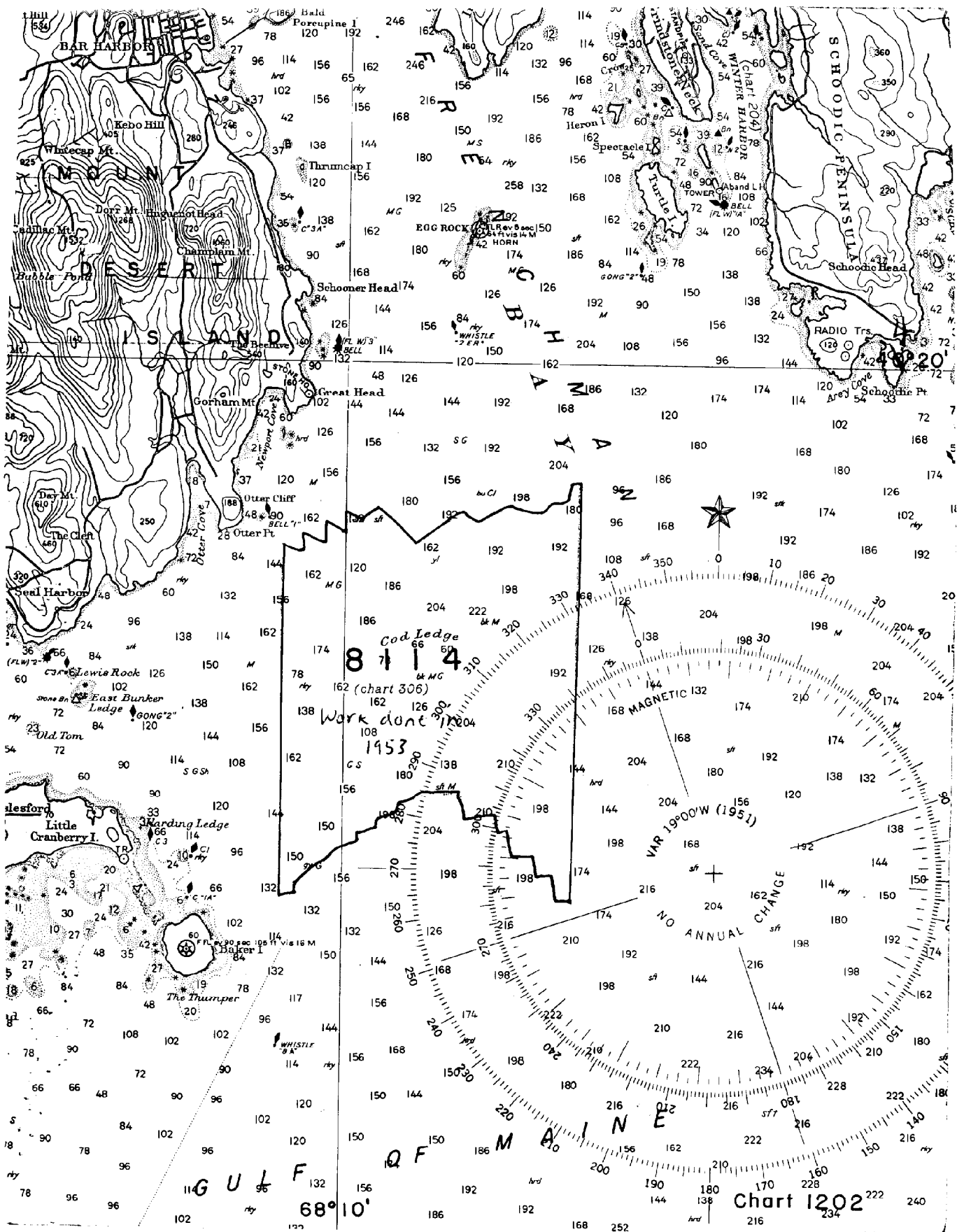
The following features should be verified or disproved at some future date:

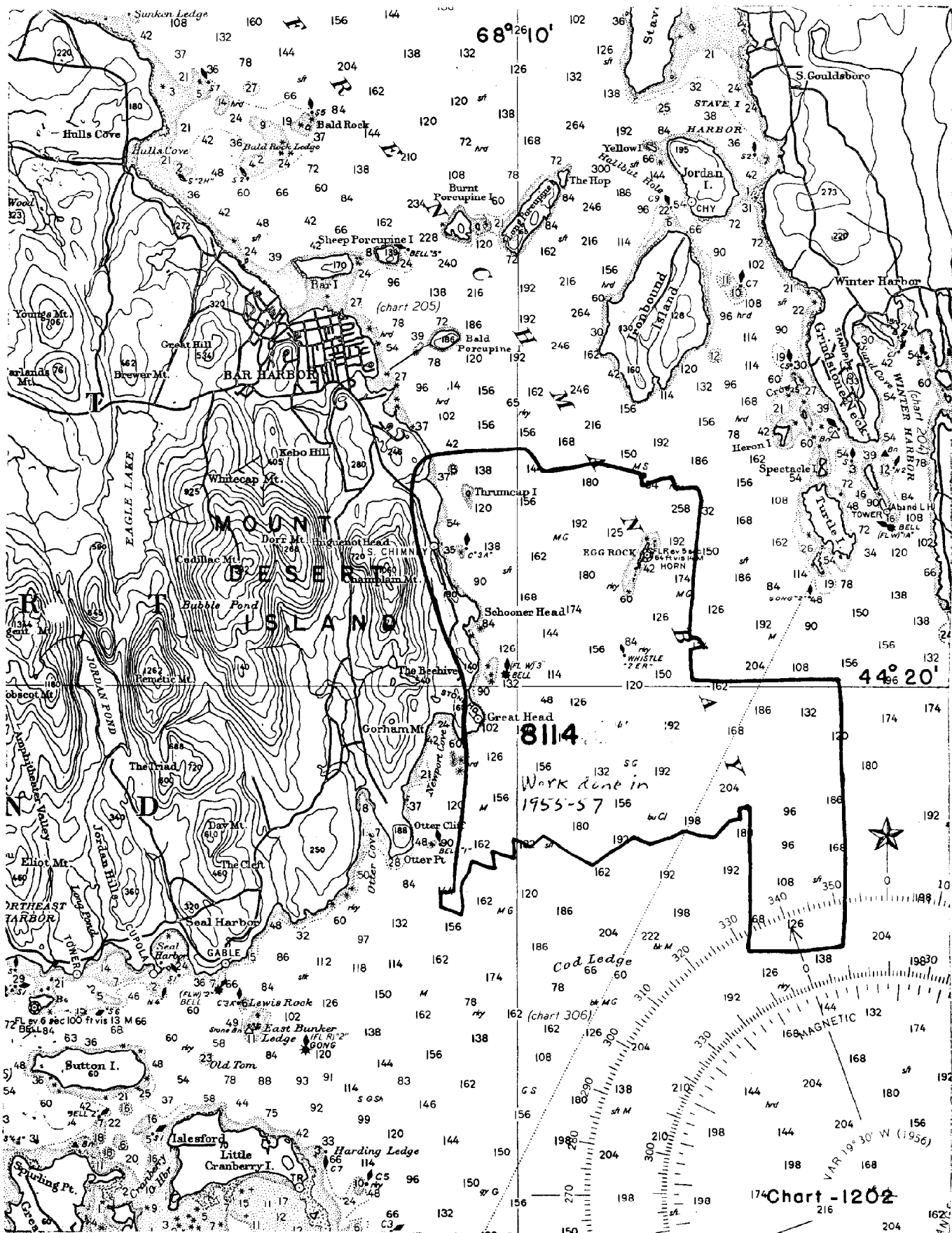
- A. Shoal area in Lat. $44^{\circ}20.07'$, Long. $68^{\circ}10.31'$
- B. Shoal area in Lat. $44^{\circ}20.11'$, Long. $68^{\circ}10.32'$
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and shoal area) Long. $68^{\circ}10.48'$.

Examined and Approved:


Chief, Marine Chart
Division


Associate Director, Office of
Hydrography and Oceanography





NAUTICAL CHARTS BRANCH

SURVEY NO. H-8114 Work of 1953

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/16/54	70	C.F. Wittmann	Before After Verification and Review <i>Examined</i>
11/9/54	1202	H.P. Stegman	<i>for critical change - none made</i>
11/9/54	1202	C.B. Samuel	Before After Verification and Review <i>Examined</i>
			<i>for critical change - none made.</i>
8-17-59	1202	T.A. Dinsmore	Before After Verification and Review <i>Partial applic.</i>
			<i>only.</i>
8-27-59	306	T.A. Dinsmore	Before After Verification and Review <i>Partly applied</i>
11-3-61	1106	R.E. Elkins	Before After Verification and Review <i>Partly applied</i>
			<i>thru chart 1202 dng 16.</i>
4/3/62	306	Recruit Helmer	<i>Reviewed on sdg.</i>
			Before After Verification and Review <i>Fully appld</i>
3-1-66	306	G. Johnson	Before After Verification and Review <i>Fully Applied</i>
5-23-72	1202	Joe Eberich	Before After Verification and Review <i>& Inspection</i>
			<i>Fully Applied through chart 306 dng #17</i>
11-30-72	1106	John Bailey	Before After Verification and Review <i>+ INSPECTION</i>
			<i>FULLY APPLIED THRU DRWG 1202 #24</i>
			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-8114 ^{Work of 1955-57} ~~Ad. wk.~~

Record of Application to Charts

[illegible]

M-2168-1

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