

8017

Diag. Cht. No. 1002.

<small>FORM C&GS-504</small>	
<small>U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION COAST AND GEODETIC SURVEY</small>	
<h2>DESCRIPTIVE REPORT</h2>	
<i>Type of Survey</i> <u>Hydrographic</u>	
<i>Field No.</i> <u>HY - 20152</u> <i>Office No.</i> <u>H-8017</u>	
LOCALITY	
<i>State</i> <u>Florida</u>	
<i>General locality</i> <u>Straits of Florida</u>	
<i>Locality</i> <u>South of Key West</u>	
<u>1952, 1953 & 1954</u>	
CHIEF OF PARTY J. C. Sammons 1952 L. S. Hubbard 1953 & 1954	
LIBRARY & ARCHIVES	
<i>DATE</i> <u>May 5, 1961</u>	

8017

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-8017

Field No. Hy-20152

State FLORIDA

General locality STRAITS OF FLORIDA

Locality SOUTH OF KEY WEST
~~BETWEEN FLORIDA KEYS AND CUBA~~

Scale 1:200,000 Date of survey 31 July to 4 Aug. 1952 ✓
7 Nov. to 10 Nov. 1953
8 June to 18 Oct. 1954

Instructions dated 20 Mar. 1952, 9 Mar. 1953 & 27 Mar. 1954

Vessel SHIP HYDROGRAPHER

Chief of party JACK C. SAMMONS - 1952 ✓
L.S. HUBBARD - 1953-54

Surveyed by W.J. CHOVAN, G.E. MORRIS, M.T. PAULSON, R.M. STONE, ✓
J.D. HODGES, C.S. FROST, G.W. THOMPSON, R.A. EARLE, & OTHERS

Soundings taken by ~~SHIP HYDROGRAPHER~~, graphic recorder, ~~SHIP HYDROGRAPHER~~

Fathograms scaled by PERSONNEL OF SHIP HYDROGRAPHER ✓

Fathograms checked by " " NORFOLK PROCESSING OFFICE ✓

Protracted by A.G. ATWILL NORFOLK PROCESSING OFFICE } See below

Soundings penciled by A.G. ATWILL " " "

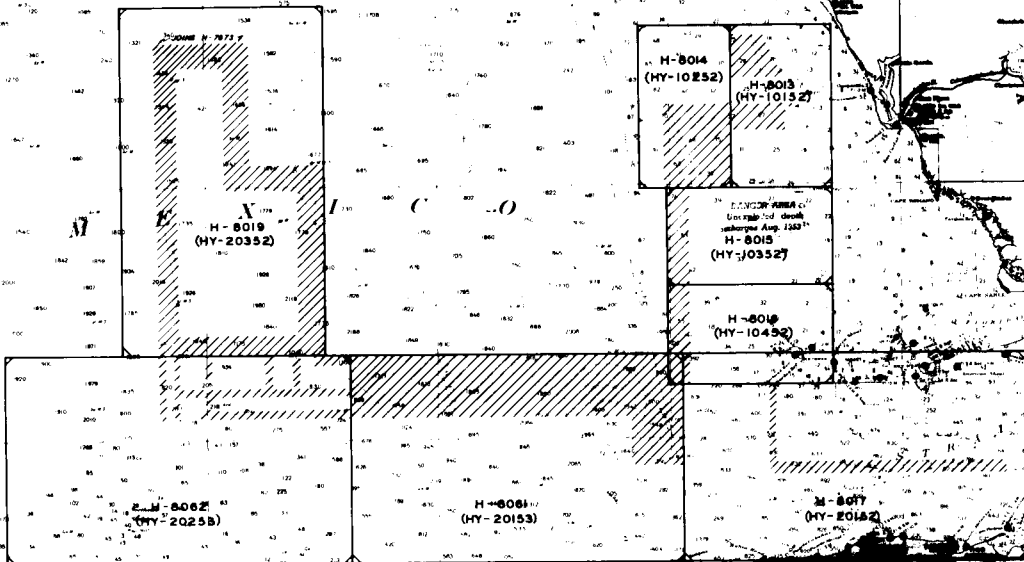
Soundings in fathoms ~~1000~~ at MLW ~~1000~~

REMARKS: OFFSHORE SURVEY - CONTROLLED BY EPI

This survey was originally smooth plotted by manual methods in 1961. The original data was logged for machine plotting by Gerber Digital Plotter in 1966, and the machine smooth plot was completed in 1968. The original manual smooth sheet will be destroyed after the review is signed.

10/2

SHEET LAYOUT
SHIP HYDROGRAPHER
PROJECT CS-328
AREA B
SEASON 1953
L. S. HUBBARD, COMDG



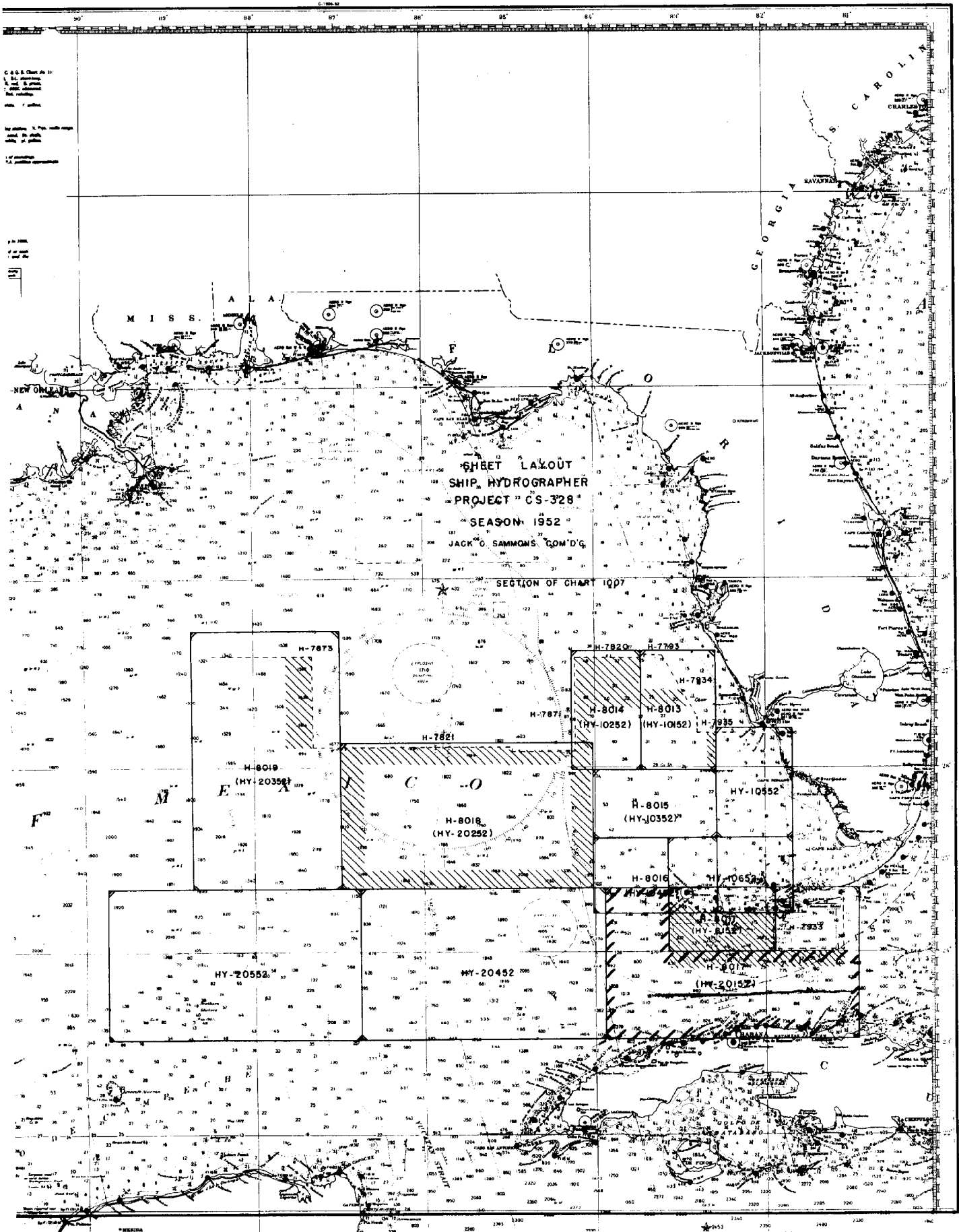
SECTION OF CHART 1007

SULA DE YUCATAN

CARIBBEAN

YUCATAN DEEP

SEA



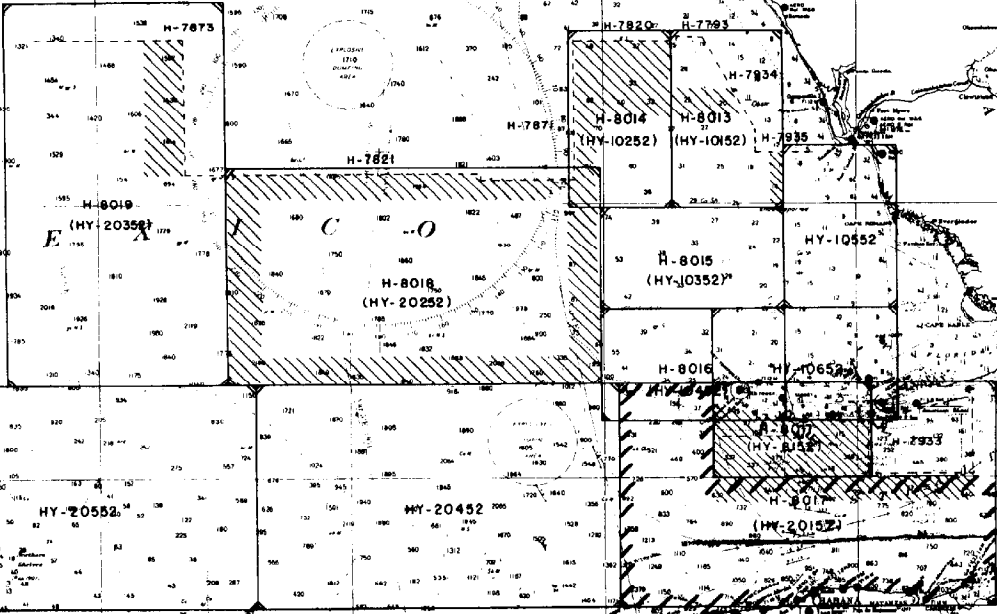
CAGE Chart No. 11
1:50,000
Scale
1952

For details, see page 1007
Scale 1:50,000

1:50,000
Scale

SHEET LAYOUT
SHIP HYDROGRAPHER
PROJECT CS-328
SEASON 1952
JACK O. SAMMONS COM'D'G

SECTION OF CHART 1007



REVIEW

TO ACCOMPANY HYDROGRAPHIC SURVEY

H-8017 Field No. HY-20152
STRAITS OF FLORIDA 1952 - 1953 - 1954
Scale 1:200,000 SHIP HYDROGRAPHER

Chief of Party: Jack C. Sammons, 1952
L. S. Hubbard, 1953 & 1954

A. PROJECT:

Project CS-328 instructions dated 20 March 1952, supplemental instructions dated 9 March 1953 and 27 March 1954.

B. SURVEY LIMITS AND DATES:

This survey is between the Florida Keys and Cuba. The northern limit of this sheet is the $24^{\circ} 00' N$ parallel west to long. $83^{\circ} 06' W$ where it jogs north to lat. $24^{\circ} 25'$. The western limit is longitude $83^{\circ} 51' W$. The southern limit of the area worked is lat. $23^{\circ} 34' N$. There is one line run east and west at lat. $23^{\circ} 14'$ from longitude $81^{\circ} 05' W$ to longitude $82^{\circ} 24' W$.
Eastern limit is Long. $81^{\circ} 06'$

H-8630, H-7933

This sheet joins surveys H-8011, and H-8016 to the north and H-8061 on the west. H-8733 on the east. H-8570 joins and overlaps over the major portion of sheet.

This sheet is approximately 45% completed. Area completed by H-8570 (1960)

Work for the respective seasons is:

31 July - 4 August 1952
7 November - 10 November 1953
8 June - 18 October 1954

C. VESSELS AND EQUIPMENT:

The Ship HYDROGRAPHER was used solely in this survey using 808 type fathometers number 132 and 153, and NMC II fathometer number 68.

The turning radius of the ship is 80 - 120 meters.

D. TIDE AND CURRENT:

The standard tide gage at Key West, Florida was used for tides.

No current stations were observed within the limits of this sheet.

Observed tides were used for the 1952 and 1954 seasons while predicted tides were used for 1953. Also see Tide Note.

E. SMOOTH SHEET:

The ^{original} smooth sheet ~~is being~~ ^{was} made and plotted by the Norfolk Processing Office. Final smooth plot by Gerber Digital Plotter - PMC Seattle

F. CONTROL STATIONS:

Hydrography was controlled by EPI stations EPIE, EPIF, and EPIG, & EPI-H

Station EPIE was located at Reference Mark #3 for triangulation station KEY 1935 on Grassy Key, latitude 24° 45' (1441 m.) longitude 80° 57' (1055 m.).

Station EPIF was located by triangulation methods from topographic stations located by air photographic plot at latitude 27° 50' (487 m.) longitude 82° 49' (615 m.).

Station EPIG was located at Key West, Florida at triangulation station EPIG, 1954 by L. S. Hubbard on the U. S. Naval Station.

G. SHORELINE AND TOPOGRAPHY: Δ EPI H ϕ 25° 45' 54.39"
 λ 80° 07' 59.94"

None - offshore work.

H. SOUNDINGS:

The soundings were taken by fathometers - see Item "C". All necessary notes (velocity template to be used and the algebraic sum of the correctors to be applied) have been made on the fathograms.

Velocity
Template
NOT used on
final plotted
Soundings.
See Review

Velocity Correction Reports and Fathometer Correction Reports have been sent to the Norfolk and Washington Offices.

I. CONTROL OF HYDROGRAPHY:

Control for the entire sheet was by EPI.

J.S. Not applicable until completed.

T. ADDITIONAL DEVELOPMENT:

As per paragraph 10 of Supplemental Instructions of 9 March 1953 the submarine valley at latitude 24° 01' longitude 81° 51' was developed on this sheet on "G" day 8 November 1953.

Definite
Submarine
Valley shown
to be non-
existent in
this vicinity.

Soundings to the southward do indicate a minor valley configuration, however.

This report has been prepared by an officer who was not aboard this ship at the time of the survey and is to be considered only as a review or aid in further work on this sheet.

Respectfully Submitted,



J. Morgan Ogilvie
Ensign, USC&G Survey

Approved & Forwarded:

Walter J. Chovan
Comdr., USC&GS
Commanding Officer
Ship HYDROGRAPHER

1954'

-4-

STATISTICS

For Hydrographic Survey H-8017 (HY-20152)

<u>Letter Day</u>	<u>Date</u>	<u>Vol. No.</u>	<u>No. Pos.</u>	<u>Stat. Mi.</u>
K	6-8-5 ⁴ ₈	III	34	69.2
L	6-28	III	44	85.1
M	7-14	III	15	32.3
N	7-22	III	17	45.6
P	7-25	III	21	59.0
Q	7-28	III	23	63.0
R	7-29	III	38	110.4
S	8-23	III	15	40.4
T	8-24	III	19	58.1
U	8-29	III	34	73.6
V	9-10	III	34	85.0
W	9-12	III	19	54.0
X	9-13	III	30	76.7
Y	9-25	III	60	158.5
Z	9-26	III	67	165.0
AA	10-16	III	45	94.1
BA	10-17	III, IV	103	257.4
CA	10-18	IV	<u>40</u>	<u>74.8</u>
1954 TOTALS			658	1603.1
1953 and 1954 TOTALS			951	2273.1

Number of square stat. miles: 876

20 B. T. and 2 B. S.

TIDE NOTE

A standard tide gage was maintained at Key West, Florida latitude $24^{\circ} 33.2$ N, longitude $81^{\circ} 45.8$ W.

Mean low water on the gage for 1952 was 6.0 feet on the staff, while in 1954 it was 4.3 feet on the staff as per Director's letters of 15 August 1952 and 9 August 1954 respectively.

There is a minus (-) 1 hour time correction with no height correction to be applied to tides for the whole sheet.

Tides for the project area were determined by using the observed tides at Key West in 1952 and 1954 with the above corrections and predicted tides (sent from the office) for 1953.

STATISTICS

For Hydrographic Survey H-8017 (HY-20152)

Date	Day Letter	Volume Number	Number of Positions	Statute Miles of Soundings
1952				
31 July	A	1	63	174.8
1 Aug.	B	1	97	252.5
2 Aug.	C	1	96	260.2
3 Aug.	D	1	93	236.9
4 Aug.	E	1	70	172.5
		1	419	1096.9

Number of Temperature and Salinity Observations in the Area -----two*

(*Refer to "Computation of Velocity Corrections Report----1952")

Total Area Surveyed 1366 Square Statute Miles.

See Cross-reference
sheet in this report
showing relationship
between original dates
and position numbers and
the automated records.

✓
1952

EPI CORRECTORS

Ship HYDROGRAPHER - Season 1952

<u>Dates</u>	<u>EPIF</u>	<u>EPIE</u>
25 June to 1 July (Sheet 8152 only)	-----	-4.1
17 July to 21 July (Sheet 8152 only)	-7.8	-5.7
21 July to 23 July	-6.9	-5.2
30 July to 4 August	+2.7	+1.8
4 Aug. to 5 Aug. 2356 to 0225	+2.7	+1.8
0226 to 0450	+2.7	+1.6
0451 to 0715	+2.7	+1.4
0716 to 0940	+2.8	+1.2
0941 to 1205	+2.8	+1.0
1206 to 1430	+2.8	+0.8
5 August to 7 August	+2.8	+0.8
13 August to 2140	-3.3	-3.7
14 August to 0510	-2.8	-0.8
14 August after 1230 to 24 November (end of hydrography)	-3.3	-3.7

1952

VELOCITY CORRECTION

TEMPLATES

SURVEYS: H-8011 (HY-8152); H-8017 (HY-20152); H-8018 (HY-20252);
H-8013 (HY-10152); H-8014 (HY-10252); H-8015 (HY-10352);
H-8016 (HY-10452); & H-8019 (HY-20352).

AREA A.

SURVEY: H-8011 (HY-8152).

PERIOD: 26 April through 12 June 1952

DEPTH FATHOMS		TEMPLATE
From	To	Meters per second
00.0	84.0 - - - - -	1530
84.5	172 - - - - -	1515
173	431 - - - - -	1500
432	and deeper - - -	1485

PERIOD: 22 June through 22 July 1952

DEPTH FATHOMS		TEMPLATE
From	To	Meters per second
00.0	37.0 - - - - -	1545
37.2	84.0 - - - - -	1530
84.5	172 - - - - -	1515
173	431 - - - - -	1500
432	and deeper - - -	1485

*Templates not
used to reduce
automated data.
See Velocity
Corrections
enclosed.*

SURVEY: H-8017 (HY-20152)

PERIOD: 29 July through 4 August 1952

DEPTH FATHOMS		TEMPLATE
From	To	Meters per second
00.0	48.0 - - - - -	1545
48.2	153 - - - - -	1530
154	267 - - - - -	1515
268	and deeper - - -	1500

1952
✓FATHOMETER INSTRUMENTAL CORRECTORSPERIOD "A"

(25 April to 5 August)

Surveys: H-8011 (HY-8152) H-8013 (HY-10152)
 H-8015 (HY-10352) H-8016 (HY-10452)
 H-8017 (HY-20152)

Fathometer, 808-J, No. 132-SG:

Scale (phase)	A	B	C	D
Correctors to 0.2 fathoms:	-0.2	+0.2	+0.2	-0.2
Correctors to 0.5 fathoms:	---	---	0.0	0.0

Fathometer, 808-J, No. 131-SG:

Scale (phase)	A	B	C	D
Correctors to 0.2 fathoms:	-0.2	+0.4	0.0	-1.2
Correctors to 0.5 fathoms:	---	---	0.0	-1.0

Fathometer, NMC-2:

(Refer: Fathometer Comparisons)

Correctors to 0.5 fathoms	-1.0
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Comp: EBJ
 Ck'd: RTK

copy ✓ JKR

Draft Correctors - 1952
 Correctors in ± 0.2 fms. & ± 0.5 fms.

✓ 1952

<u>Trip No.</u>	<u>Time & Date</u>		<u>± 0.2</u>	<u>± 0.5</u>
1	1930-26 April 2001-26 April	to 2000-26 April to 1530-28 April	0.0 -0.2	0.0 0.0
2	0900- 7 May 0001- 8 May	to 2400- 7 May to 1900-12 May	0.0 -0.2	0.0 0.0
3	1100-24 May 1201-27 May	to 1200-27 May to 1500- 1 June	0.0 -0.2	0.0 0.0
4	0500- 9 June 0401-10 June	to 0400-10 June to 1600-13 June	0.0 -0.2	0.0 0.0
5	1200-24 June 0001-30 June	to 2400-29 June to 1230- 3 July	0.0 -0.2	0.0 0.0
6	0850-17 July	to 1610-23 July	-0.2	0.0
7	1600-29 July 0001- 3 August	to 2400- 2 August to 0800- 7 August	0.0 -0.2	0.0 0.0
8	1600-13 August 0001-17 August 0001-21 August	to 2400-16 August to 2400-20 August to 1600-22 August	0.0 -0.2 -0.2	0.0 0.0 -0.5
9	0800-28 August .0001- 5 September	to 2400- 4 September to 1545- 5 September	0.0 -0.2	0.0 0.0
10	0800-16 September 0801-22 September	to 0800-22 September to 1545-25 September	0.0 -0.2	0.0 0.0
11	0800- 1 October 0001- 6 October	to 2400- 5 October to 1050- 9 October	0.0 -0.2	0.0 0.0
12	0745-16 October 0001-23 October	to 2400-22 October to 0925-24 October	0.0 -0.2	0.0 0.0
13	0800- 5 November 0801-10 November	to 0800-10 November to 0940-13 November	0.0 -0.2	0.0 0.0
14	0750-18 November 0001-21 November 0801-24 November	to 2400-20 November to 0800-24 November to 0915-25 November	0.0 -0.2 -0.2	0.0 0.0 -0.5

Comp: RPK
 Ck'd: EEJ

1953

STATISTICS

For Hydrographic Survey No. H-8017 (HY-20152)

Date	Day Letter	Volume Number	Number of Positions	Statute Miles of Sounding
1953				
7 November	F	II	52	138.0
8 November	G	II	77	128.8
9 November	H	II	97	236.9
10 November	J	II	67	166.3
			<u>293</u>	<u>670.0</u>

Number of temperature and salinity observations in this area: 5 *

Total Area surveyed: 870 square statute miles

*Refer to "Computation of Velocity Corrections"

Clk'd: PH

Also see cross-reference
sheet attached to this
report.

copy V: PH

ABSTRACT OF DRAFT CORRECTORS -- 1953
(Correctors in ± 0.2 fms. and ± 0.5 fms.)

1953

Trip No.	Time and Date		± 0.2	± 0.5
1	0000 - 20 April	to 1200 - 22 April	-0.2	0.0
	1201 - 22 April	to 2400 - 24 April	-0.2	-0.5
2	0000 - 26 April	to 1200 - 27 April	0.0	0.0
	1201 - 27 April	to 1200 - 28 April	-0.2	0.0
	1201 - 28 April	to 2400 - 1 May	-0.2	-0.5
3	0000 - 5 May	to 2400 - 9 May	0.0	0.0
	0000 - 10 May	to 0800 - 15 May	-0.2	0.0
	0800 - 15 May	to 2400 - 15 May	-0.2	-0.5
4	0000 - 18 May	to 1200 - 20 May	0.0	0.0
	1201 - 20 May	to 2400 - 29 May	-0.2	0.0
5	0000 - 9 June	to 0800 - 13 June	0.0	0.0
	0801 - 13 June	to 0800 - 18 June	-0.2	0.0
	0801 - 18 June	to 2400 - 19 June	-0.2	-0.5
6	0000 - 23 June	to 2400 - 25 June	0.0	0.0
	0000 - 26 June	to 2400 - 2 July	-0.2	0.0
7	0000 - 13 July	to 2400 - 15 July	0.0	0.0
	0000 - 16 July	to 2400 - 17 July	-0.2	0.0
8	0000 - 21 July	to 0400 - 22 July	0.0	0.0
	0401 - 22 July	to 2400 - 26 July	-0.2	0.0
	0000 - 27 July	to 2400 - 31 July	-0.2	-0.5
9	0000 - 6 August	to 1200 - 9 August	0.0	0.0
	1201 - 9 August	to 0400 - 12 August	-0.2	0.0
	0401 - 12 August	to 2400 - 14 August	-0.2	-0.5
10	0000 - 20 August	to 0800 - 26 August	0.0	0.0
	0801 - 26 August	to 2400 - 28 August	-0.2	0.0
11	0000 - 3 September	to 2400 - 7 September	0.0	0.0
	0000 - 8 September	to 2400 - 12 September	-0.2	0.0
12	0000 - 21 September	to 2400 - 27 September	0.0	0.0
13	0000 - 6 October	to 2400 - 10 October	0.0	0.0
14	0000 - 12 October	to 2400 - 15 October	0.0	0.0
	0000 - 16 October	to 2400 - 16 October	-0.2	0.0
15	0000 - 21 October	to 1800 - 28 October	0.0	0.0
	1801 - 28 October	to 2400 - 29 October	-0.2	0.0
16	0000 - 4 November	to 1200 - 9 November	0.0	0.0
	1201 - 9 November	to 2400 - 12 November	-0.2	0.0
17	0000 - 19 November	to 1200 - 21 November	0.0	0.0
	1201 - 21 November	to 2400 - 25 November	-0.2	0.0

Comp by: RMS
Ck'd by: FH

✓
1953

EPI CORRECTIONS
(in microseconds)

Ship HYDROGRAPHER - - Season of 1953

Period "B"- - Gulf of Mexico

SURVEYS:	H-8013, (HY-10152)	H-8017, (HY-20152)
	H-8014, (HY-10252)	H-8019, (HY-20352)
	H-8015, (HY-10352)	H-8061, (HY-20153)
	H-8016, (HY-10452)	H-8062, (HY-20253)

DATE	SURVEYS	EPI CORRECTOR			
		EPIE		EPIF	
		Regular Set #31	Spare Set #11	Regular Set #32	Spare Set #10
13 July through 25 November 1953	All Surveys	(-5.1)	(-3.7)	(-4.8)	(-3.8)

Comp by: IRR
Ck'd by: RMS

VELOCITY CORRECTION TEMPLATES

1953

AREA B

Gulf of Mexico

SURVEYS: H-8013, (HY-10152) H-8016, (HY-10452) H-8061, (HY-20153)
 H-8014, (HY-10252) H-8017, (HY-20152) H-8062, (HY-20253)
 H-8015, (HY-10352) H-8019, (HY-20352)

PERIOD: 13 July through 25 September 1953

DEPTH FATHOMS		TEMPLATE
From	To	Meters per second
00.0	28.6	1545
28.8	94.0	1530
94.2	210	1515
211	and deeper	1500

PERIOD: 6 October through 25 November 1953

DEPTH FATHOMS		TEMPLATE
From	To	Meters per second
00.0	111.5	1530
112	210	1515
211	and deeper	1500

*Templates not used
to reduce
automated data.
See Velocity
Corrections
enclosed.*

Comp by: RMS
 Ck'd by: GWT

1953

FATHOMETER INSTRUMENTAL CORRECTORSPERIOD "B"

(13 July to 25 November, 1953)

SURVEYS:	H-8013, (HY-10152)	H-8017, (HY-20152)
	H-8014, (HY-10252)	H-8019, (HY-20352)
	H-8015, (HY-10352)	H-8061, (HY-20153)
	H-8016, (HY-10452)	H-8062, (HY-20253)

Fathometer, 808-J, No. 132-SG:

Scale (phase)	A	B	C	D
Correctors to 0.2 fathoms:	-0.2	-0.8	-1.4	-1.4
Correctors to 0.5 fathoms:	---	---	-1.5	-1.5

Fathometer, 808-J, No. 153-SPX:

Scale (phase)	A	B	C	D
Correctors to 0.2 fathoms:	-0.2	+0.8	+1.0	+0.6
Correctors to 0.5 fathoms:	---	---	+1.0	+0.5

Fathometer, NMC-2:

Correctors to 0.5 fathoms:	-1.5
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Comp by: RMS
 Ck'd by: PH

1954

INSTRUMENTAL CORRECTIONS

1954

SHIP HYDROGRAPHER

L. S. Hubbard, Comdg.

808 Fathometers

No. 132					No. 153				
Scale	0.1	0.2	0.5	1.0 fm. corr.	Scale	0.1	0.2	0.5	1.0 fm. corr.
A	0.2	0.2			A	-0.2	-0.2		
B	-0.6	-0.6	-0.5		B	1.1	1.0	1.0	
C	-1.1	-1.2	-1.0		C	1.7	1.6	1.5	
D		-1.2	-1.5	-1.0	D		0.8	0.5	1.0

NMC Fathometer

Scale	0.2	0.5	1.0	2.0	4.0 fm. corr.
0-400, 400-800	-1.2	-1.5	-1.0	-2.0	
Deep			-3.0	-4.0	-4.0

Edo Fathometer

Scale	0.2	0.5	1.0	2.0	4.0 fm. corr.
0-600, 600-1200	-4.6	-4.5	-5.0	-4.0	
1200-1800			-22.0		
Deep			-30.0		-20.0
					-40.0

*Revised from comparison
along sdg. lines.*

5-19-66

1954

EPI CORRECTORS

(in microseconds)

STRAITS OF FLORIDA

Surveys: H-8104, (HY-10254)
H-8105, (HY-10354)
H-8112, (HY-10154)
H-8017, (HY-20152)

<u>Date</u>	<u>EPI Corrector</u>			
	G		H	
	<u>Regular</u> <u>Set #31</u>	<u>Spare</u> <u>Set #11</u>	<u>Regular</u> <u>Set #32</u>	<u>Spare</u> <u>Set #10</u>
5 May - 28 June	-5.5	-5.0	-5.9	-4.4

Comp: GEM
Chkd: JDH

EPI CORRECTORS

(in microseconds)

GULF OF MEXICO

Surveys: H-8013; (HY-10152) H-8017; (HY-20152)
 H-8015; (HY-10352) H-8062; (HY-20253)
 H-8016; (HY-10452)

<u>Date</u>	<u>EPI Corrector</u>			
	F		G	
	<u>Regular</u> <u>Set #32</u>	<u>Spare</u> <u>Set #10</u>	<u>Regular</u> <u>Set #31</u>	<u>Spare</u> <u>Set #11</u>
10 July - 19 Oct.	-3.3	-4.5	-6.1	-9.7
23 Oct. - 11 Nov.	-6.7		-6.0	
16 Nov. - 19 Nov.	-7.9		-4.0	

Comp: GEM
 Chkd: JDH

VELOCITY TEMPLATE ABSTRACT

1954

Ship HYDROGRAPHER

Project CS-328

Sheets H-8017, H-8015, H-8104, H-8112, H-8013, H-8015, H-8016, H-8018,
H-8061

No. 1		No. 2		Gulf of Mexico Mean	
Depths fm	Template m/s	Depths fm	Template m/s	Depths fm	Template m/s
0-55	1545	0-75	1545	0-101	1545
55-155	1530	75-220	1530	101-280	1530
155-325	1515	220-400	1515	280-530	1515
325 & over	1500	400 & over	1500	530-2000	1500
				2000 & over	1515

Sheets H-8017, H-8105, H-8013, H-8015, H-8016, H-8018, H-8061
Gulf of Mexico Mean

Sheet H-8104 A thru M day, 5 May thru 17 May - No. 1
N thru T day, 21 May thru 26 May - No. 2
U thru end, 8 June thru end, Gulf of Mexico Mean

Sheet H-8112 A thru C day, 5 May thru 17 May - No. 1
D day, 21 May - No. 2
E day thru end, 16 June thru end - Gulf of Mexico Mean

*See printout
for correctors used
g.c.*

*Templates not used
to reduce
automated data.
See Velocity
Correctors
enclosed.*

DRAFT CORRECTIONS

1954

Ship HYDROGRAPHER		L. S. Hubbard, Comdg.	
From	To	0.1 fm. corr.	0.2 fm. corr.
5 May	0936 10 May	0.0	0.0
0936 10 May	17 May	-0.1	-0.2
21 May	1912 25 May	0.0	0.0
1912 25 May	29 May	-0.1	-0.2
7 June	1424 12 June	0.0	0.0
1424 12 June	17 June	-0.1	-0.2
21 June	0448 22 June	0.1	0.0
0448 22 June	0000 27 June	0.0	0.0
0000 27 June	30 June	-0.1	-0.2
9 July	16 July	0.0	0.0
21 July	0000 26 July	0.0	0.0
0000 26 July	31 July	-0.1	-0.2
5 August	0000 7 August	0.1	0.0
0000 7 August	0330 12 August	0.0	0.0
0330 12 August	15 August	-0.1	-0.2
21 August	0000 26 August	0.0	0.0
0000 26 August	30 August	-0.1	-0.2
9 Sept.	1320 13 Sept.	0.0	0.0
1320 13 Sept.	16 Sept.	-0.1	-0.2
21 Sept.	1312 27 Sept.	0.0	0.0
1312 27 Sept.	30 Sept.	-0.1	-0.2
6 October	0000 7 October	0.1	0.0
0000 7 October	9 October	0.0	0.0
15 October	2136 17 October	0.0	0.0
2136 17 October	20 October	-0.1	-0.2
23 October	0448 26 October	0.0	0.0
0448 26 October	30 October	-0.1	-0.2
6 Nov.	1200 10 Nov.	0.0	0.0
1200 10 Nov.	12 Nov.	-0.1	-0.2
16 Nov.	0400 20 Nov.	-0.1	-0.2
0400 20 Nov.	21 Nov.	-0.2	-0.2

1954 /

DRAFT CORRECTORS

1954

Ship HYDROGRAPHER

L. S. Hubbard, Comdg.

<u>From</u>	<u>To</u>	<u>0.5 fm. corrector</u>
5 May	0712 30 July	0.0
0712 30 July	31 July	-0.5
5 August	1424 29 August	0.0
1424 29 August	30 August	-0.5
9 September	1000 29 October	0.0
1000 29 October	30 October	-0.5
6 November	0500 19 November	0.0
0500 19 November	21 November	-0.5

Draft correction zero for 1.0, 2.0, and 4.0 fathom correctors for all days.

C324
Chambers

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

AIR MAIL

Director, Pacific Marine Center
Coast and Geodetic Survey, ESSA
1801 Fairview Avenue, East
Seattle, Washington 98102

May 18, 1966

C32

Chief, Marine Chart Division

Velocity correctors for 1952-1954 Hydrographic Surveys -
Straits of Florida

The Office of Hydrography and Oceanography has orally approved (telephone conversation: R. Starr/E. Thomas) the Straits of Florida Velocity Correction Tables I and II as adequate for use to correct data in the area shown on attachment.

Table I should be used north of the Gulf Stream axis and Table II south of the axis. These tables are based on a calibration velocity of 800 fms./sec. and must be converted for use of the 808 fathometers which are calibrated for a velocity of sound of 820 fms./sec. The printout of each survey should contain the converted table used.

Tables I and II are enclosed.

*Velocity Tables
are from
historical
data.*

(Signed) Lorne G. Taylor

Lorne G. Taylor

Enclosures: 3

H-8017
↙

VELOCITY CORRECTIONS

800 fm./sec.
NMC-2 EDO

Table 1

Corrections to Depth

+ 0.1 fm.	5.0 fm.	+ 4.0 fm.	86.0 fm.
+ 0.2	7.0	+ 4.2	91.0
+ 0.3	9.0	+ 4.4	96.0
+ 0.4	10.0	+ 4.6	101.0
+ 0.5	12.0	+ 5.0	117.0
+ 0.6	16.0	+ 5.5	130.0
+ 0.8	20.0	+ 6.0	143.0
+ 1.0	24.0	+ 6.5	156.0
+ 1.2	27.0	+ 7.0	183.0
+ 1.4	31.0	+ 8.0	219.0
+ 1.6	35.0	+ 9.0	272.0
+ 1.8	39.0	+10.0	345.0
+ 2.0	43.0	+11.0	433.0
+ 2.2	47.0	+12.0	509.0
+ 2.4	51.0	+13.0	569.0
+ 2.6	55.0	+14.0	636.0
+ 2.8	59.0	+15.0	736.0
+ 3.0	64.0	+17.0	850.0
+ 3.2	68.0	+19.0	950.0
+ 3.4	72.0	+21.0	1003.0
+ 3.6	77.0	+23.0	1165.0
+ 3.8	82.0	+25.0	1275.0
		+27.0	1378.0
		+29.0	1481.0
		+31.0	1580.0
		+33.0	1680.0

Received
12/21/65
ST

TO: Ernie Thomas

FROM: Bob Starr

SUBJ: Extension of Straits of Florida
Sound Velocity Table I

Jim Chambers asked for this and said
to send it on to you.

Depth (fm)	Corr. (fm.)
1003.0	+ 21.0
1165.0	+ 23.0
1275.0	+ 25.0
1378.0	+ 27.0
1481.0	+ 29.0
1580.0	+ 31.0
1680.0	+ 33.0

Bob

VELOCITY CORRECTIONS

800 fm./sec.
NMC-2 EDO

Table 2

Corrections to Depth

+	0.1 fm.	5.0 fm.	+	4.3 fm.	91.0 fm.
+	0.2	7.0	+	4.5	95.0
+	0.3	9.0	+	4.7	100.0
+	0.4	11.0	+	4.9	105.0
+	0.5	14.0	+	5.0	112.0
+	0.7	18.0	+	5.5	123.0
+	0.9	22.0	+	6.0	135.0
+	1.1	26.0	+	6.5	148.0
+	1.3	30.0	+	7.0	160.0
+	1.5	34.0	+	8.0	195.0
+	1.7	38.0	+	9.0	222.0
+	1.9	42.0	+	10.0	254.0
+	2.1	46.0	+	11.0	289.0
+	2.3	50.0	+	12.0	327.0
+	2.5	54.0	+	13.0	367.0
+	2.7	58.0	+	14.0	408.0
+	2.9	62.0	+	15.0	462.0
+	3.1	66.0	+	16.0	542.0
+	3.3	70.0	+	17.0	615.0
+	3.5	74.0	+	18.0	722.0
+	3.7	78.0	+	20.0	835.0
+	3.9	83.0	+	22.0	933.0
+	4.1	87.0	+	24.0	1018.0

Table above submitted by Starr, Oceanographic Analysis Branch,
is extended to greater depths from field corrections in
sounding volumes, H-8061 (1953-54)

+26.0 fm.	1035 fm	+38.0 fm	1435 fm	+50.0 fm	1750 fm
+28.0	1115	+40.0	1495	+52.0	1840
+30.0	1195	+42.0	1545	+56.0	Deepest
+32.0	1250	+44.0	1605		
+34.0	1315	+46.0	1655		
+36.0	1380	+48.0	1705		

VELOCITY CORRECTIONS

820 fm./sec.
808 Fmtr.

Table 4

Gulf Stream Axis-----Cuba and the Bahamas

Correction	to	Depth
0.0 fm.		2.5 fm.
+ 0.1		7.5
+ 0.2		11.0
+ 0.3		14.0
+ 0.4		21.0
+ 0.6		29.0
+ 0.8		36.0
+ 1.0		44.0
+ 1.2		51.0
+ 1.4		59.0
+ 1.6		67.0
+ 1.8		75.0
+ 2.0		83.0
+ 2.2		92.0
+ 2.4		101.0
+ 2.5		120.0
+ 3.0		152.0
+ 3.5		Deeper than 152.0 fms.

VELOCITY CORRECTIONS

820 fm./sec.
808 Fmtr.

Table 3

Gulf Stream Axis -- Florida Keys

Correction	to	Depth
0.0 fm.		2.5 fm.
/ 0.1		7.0
/ 0.2		11.0
/ 0.3		14.0
/ 0.4		21.0
/ 0.6		28.0
/ 0.8		36.0
/ 1.0		45.0
/ 1.2		55.0
/ 1.4		65.0
/ 1.6		76.0
/ 1.8		89.0
/ 2.0		119.0
/ 2.5		180.0

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8017 (Hy-20152)

GENERAL

This survey is considered complete according to the Director's letter to Ship Hydrographer, dated 22 March 1961, 211/mmy. ✓

SOUNDINGS

All fathograms were check scanned by personnel of this Office. The soundings were reduced with appropriate velocity templates, as indicated on the fathograms, and were recorded in the volumes in red pencil directly under corresponding field readings. ^{See} Review ✓

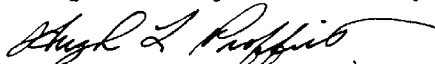
Soundings at the few crossings are in good agreement considering the water depths and bottom irregularities. The fathogram for "F" day was badly torn as a result of the paper binding in the machine. However, depths on this day, while possibly questionable, are in apparent agreement with adjacent sounding lines. ✓

OVERLAYS

Because of the sparcity of cross lines on this survey, the smooth plotter prepared an overlay showing numerous intermediate depth curves. It was used to obtain a better picture of the configuration of the bottom and to check on possible displacement of positions and soundings. In addition, the bearings to Maya Point Light, Seboruca Light, and Easterly Radio Tower were plotted on this overlay. The bearings were recorded in the EPI abstract for "L" day. ✓

Norfolk, Va.
2 May 1961

Respectfully submitted,


Hugh L. Proffitt
Cartographer

APPROVAL SHEET

This should be considered more for additional information rather than an approval sheet.

The field work accomplished on this survey was under the immediate supervision of Captain Jack C. Sammons in 1952 and Captain Leonard S. Hubbard in 1953 and 1954.

The field work on this sheet is about 45% completed. The EPI control for the eastern half of the sheet in 1954 was EPIG at Key West and EPIH at Miami, Florida. The western half was controlled by EPIG at Key West and EPIF at Largo, Florida.

Survey
Completed
on H-4570
(1960)

The topography and triangulation of the northern part of Cuba was furnished by the Washington Office and transferred to this sheet. Gyro bearings were taken to identified triangulation stations while on EPI controlled sounding lines.

Since no field work was being done on this sheet in 1955 the boat sheet together with all the pertinent field records were sent to the Norfolk Processing Office for safe keeping.



Walter J. Chovan
CDR, C&GS
Commanding, Ship HYDROGRAPHER

RH -

TIDE NOTE FOR HYDROGRAPHIC SHEET

31 May 1961

~~Division of Coastal Surveys~~

Division of Charts: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 8017

Locality Gulf of Mexico, Straits of Florida--Key West to Havana

J. C. Sammons (1952)
Chief of Party: L. S. Hubbard (1953 & 1954)
Plane of reference is mean low water
ft. on tide staff at
ft. below B. M.

Height of mean high water above plane of reference at the working grounds
is: 1.3 ft.

Condition of records satisfactory except as noted below:

Burt W. Wilson

Chief, Tides and Currents Branch

~~Chief, Division of Tides and Currents~~

GEOGRAPHIC NAMES
Survey No. H-8017

Name on Survey	Source										No.
	A	B	C	D	E	F	G	H	K		
<i>Straits of Florida</i>	✓										1
											2
											3
											4
											5
											6
											7
											8
											9
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											25
											26
											27

George M. Bee
Geographic names section
5/24/61

CROSS REFERENCING OF POSITION NUMBERS

H-8017

ORIGINAL RECORDS

AUTOMATED RECORDS

(Sound Volumes)

<u>Day</u>	<u>Date</u>	<u>Positions</u>		<u>Day</u>	<u>Year</u>	<u>Positions</u>
A	07-31-52	1-63	.....	213	52	1-63
B	08-01-52	1-97	.....	214	52	64-159
C	08-02-52	1-96	.....	215	52	160-254
D	08-03-52	1-93	.....	216	52	255-346
E	08-04-52	1-70	.....	217	52	347-417
F	11-07-53	1-52	.....	311	53	418-468
G	11-08-53	1-77	.....	312	53	469-547
H	11-09-53	1-97	.....	313	53	548-650
J	11-10-53	1-67	.....	314	53	651-717
K	06-08-54	1-34	.....	159	54	718-751
L	06-28-54	1-46	.....	179	54	752-782
M	07-14-54	1-15	.....	195	54	796-811
N	07-22-54	1-17	.....	203	54	812-828
P	07-25-54	1-21	.....	206	54	829-849
Q	07-28-54	1-23	.....	209	54	850-872
R	07-29-54	1-38	.....	210	54	873-912
S	08-23-54	1-15	.....	235	54	913-927
T	08-24-54	1-19	.....	236	54	928-947
U	08-29-54	1-34	.....	241	54	948-981
V	09-10-54	1-34	.....	253	54	982-1015

Day	Date	Positions	Day	Year	Positions
W	09-12-54	1-19	255	54	1016-1034
X	09-13-54	1-30	256	54	1035-1065
Y	09-25-54	1-60	268	54	1066-1125
Z	09-26-54	1-67	269	54	1126-1193
AA	10-16-54	1-45	289	54	1194-1237
BA	10-17-54	1-103	290	54	1238
CA	10-18-54	1-40	291	54	1239-1379

The total number of positions for a certain day as recorded in the original records and the automated records may differ by a few numbers. Positions not plotted and rejected positions recorded in the original records are not reflected in the totals of the automated records. Also any additional artificial fixes (turning positions, etc.) recorded in the automated records are not reflected in the totals of the original records.

SEE NEXT PAGE

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8017...

Records accompanying survey: Smooth sheets ..1...;

boat sheets ..1...; sounding vols. ..4...; wire drag vols.;

Descriptive Reports ..1...; graphic recorder envelopes ..1²...;

special reports, etc. 1-Overlay, Depth Curves and 1 Cahier,....

EPI Abstracts 1952, 1953, and 1954.

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

Number of positions on sheet

Number of positions checked

Number of positions revised

Number of soundings revised (refers to depth only)

Number of soundings erroneously spaced

Number of signals erroneously plotted or transferred

Topographic details Time

Junctions Time

Verification of soundings from graphic record Time

Special adjustments Time

D. E. Westbrook

31 hrs. ← MAKING JUNCTION WITH H-8570

Verification by Total time Date

Reviewed by Time Date

HYDROGRAPHIC SURVEY STATISTICS
 HYDROGRAPHIC SURVEY NO. 8017

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

*See old Form 946
 in this report*

RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET				BOAT SHEETS			
DESCRIPTIVE REPORT				OVERLAYS			
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS	
ENVELOPES							
CAHIERS							
VOLUMES							
BOXES							
T-SHEET PRINTS (List)							
SPECIAL REPORTS (List)							

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				1379 4043
POSITIONS CHECKED		1643	2	
POSITIONS REVISED		10	0	
DEPTH SOUNDINGS REVISED		0	65	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0	0	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0	0	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS <i>with H-8570</i>	31	(16)	16	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		8	16	
SPECIAL ADJUSTMENTS <i>Added deep sdgs. in valleys</i>		0	8	
ALL OTHER WORK		218	51	
TOTALS	31	337	91	
PRE-VERIFICATION BY <i>DLW</i>	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>J. B. Hambus</i>	BEGINNING DATE		ENDING DATE	
<i>Donna Rimesburg</i>	3-5-66		8-22-68	
REVIEW BY <i>Dale E. Westbrook</i>	BEGINNING DATE		ENDING DATE	
	2/7/69		3/19/69	

INFORMATION FOR FUTURE PRE-SURVEY REVIEWS

Any future survey of this area should include detailed development of the several important valleys and knolls within the limits of both this survey and H-8570. Lines running along the axes of the valleys would be of prime importance.

Dale E. Westbrook

And

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY
MARINE CHART DIVISION
HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8017

FIELD NO. HY-20152

Florida, Straits of Florida, South of Key West

SURVEYED: July through August 1952, November 1953, and
June through October 1954

SCALE: 1:200,000

PROJECT NO.: CS-328

SOUNDINGS: NMC II and 808
Depth Recorders

CONTROL: Electronic Position
Indicator

Chief of Party..... J. C. Sammons (1952)
..... L. S. Hubbard (1953-54)
Surveyed by..... W. J. Chovan
..... G. E. Morris
..... M. T. Paulson
..... R. M. Stone
..... J. D. Hodges
..... C. S. Frost
..... G. W. Thompson
..... R. A. Earle
Protracted by..... Gerber Digital Plotter
Soundings Plotted by..... Gerber Digital Plotter
Verified by..... J. C. Chambers (Rockville)
..... D. J. Romesburg
Reviewed by..... D. E. Westbrook
..... Date: March 19, 1969
Inspected by..... R. H. Carstens

1. Description of the Area

This survey is located in the approximate center of the Straits of Florida between the Florida Keys and Cuba. The bottom contains numerous important irregularities, some of which have been tentatively named and described by Jordan and Stewart (1961) in a study titled, Submarine Topography of the Western Straits of Florida, published in the Geological Society of America Bulletin.

The present survey shows the lower portion of Tortugas Valley in lat. $23^{\circ}50'$, long. $83^{\circ}04'$; the lower portion of the Agassiz Valleys in lat. $23^{\circ}52'$, long. $82^{\circ}45'$; and Mitchell Escarpment in lat. $23^{\circ}54'$, long. $82^{\circ}09'$.

Not described by Jordan and Stewart, however, are: the valley in lat. $24^{\circ}10'$, long. $83^{\circ}42'$, and the knoll in lat. $23^{\circ}32'7$, long. $83^{\circ}50'1$ which rises about 400 fms. from 1200 fathom depths.

The bottom in the survey area is composed mostly of mud, with some sand and broken shells.

Since survey H-8570 (1960) considerably overlaps the present survey, the complete picture of the area can be obtained only by using both surveys.

2. Control and Shoreline

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

There is no shoreline within the present survey area.

3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves were adequately delineated. Nonstandard curves were drawn to more adequately portray the several important bottom features at 600, 700, 800, and 900 fathoms.

C. The development of the bottom configuration and determination of least depths are adequate. If this survey were to be undertaken at the present time, however, more development of the submarine features previously described would be desirable for bathymetric mapping purposes.

4. Condition of the Survey

The sounding records, automated plotting, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual and the Instruction Manual--Automated Hydrographic Surveys, except that the automated

Reg. No. H-8017 (1952,53,54)

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey, the following shall be completed:

CARDS CORRECTED

DATE _____ TIME REQ'D _____ INITIALS _____

REMARKS:

smooth plot was deficient in three respects:

- A. The figure 5's did not print completely. A break in the figure indicated either a worn character on the numbering head, or the type had a piece of dirt on it.
- B. All position dots were not printed on the smooth sheet, although they are adequately shown on the position overlay.
- C. No excess sounding plot was made for this survey. This preliminary plot is very important to the adequate verification of an automated survey, and should be made in all cases.

Some trouble was experienced with this survey during processing as follows:

- A. The extensive junction and overlap with H-8570 required extensive rescanning of NMC II deep scale soundings on the present survey, because the smallest subdivision on that scale represents 25 fathoms.
- B. Soundings on BA-day and a portion of L-day were rejected as they did not agree with the other soundings on the present survey or those on H-8570. The error was apparently in the fathometer but its exact nature could not be ascertained.
- C. Because the Gerber Plotter can not slant soundings, many soundings have been excessed, primarily on east-west lines. Those soundings excessed are often the deeper of two conflicting soundings, and consequently some bottom configuration may not be completely shown on the smooth sheet. Deep soundings in the important valleys were replaced by hand, however.
- D. A few isolated discrepancies of 3-5 fathoms still remain between the present survey and H-8570. These discrepancies are believed to be the result of using velocity correction tables from historical data for soundings on the present survey, and using observed velocity corrections for soundings on H-8570. Observed velocity data was not available for the present survey.

5. Junctions

Adequate junctions were effected with H-8570 (1960) which both overlaps the present survey and joins it on the south; with H-8733 (1963) on the east; H-7933 (1951-54) and H-8011 (1952-53, 60) on the north; and H-8061 (1953-54) on the west.

The junctions with H-8016 (1952-54) and H-8630 (1961) both on the north, will be discussed in the reviews of those surveys.

6. Comparison With Prior Surveys

- A. H-1353 (1:600,000) 1875-77
 H-1399 (1:800,000) 1877-78
 H-1532 (1:2,400,000) 1882
H-4088a (1914) H.O. Chart 1411

These surveys contain only a few scattered soundings which fall within the present survey area. Some of these prior reconnaissance soundings are in reasonably good agreement with the present survey considering the sounding depths and the lack of good horizontal positioning on the older surveys.

The present survey is adequate to supersede the above prior surveys within the common area.

B. H-8521 (1960) POSITION PLOTTING SHEET

This survey contains two reconnaissance tracklines made by the Ship EXPLORER in 1960 which fall within the confines of the present survey.

Again, in a few instances, good sounding agreement with the present survey is noted considering the small scale of H-8521 and the lack of good horizontal control on its reconnaissance lines.

These reconnaissance soundings should not be used for charting within the area of the present survey.

7. Comparison With Chart 1351, 8th ED., January 15, 1968 Chart 1113, 9th ED., December 23, 1968

All of the soundings on Chart 1351 within the present survey area are from the boat sheet of the present survey.

The soundings on Chart 1113 within the survey area are from various sources which include old U.S. Navy, British Admiralty, and Spanish charts; the previously discussed C&GS prior surveys, which require no further consideration; more recent U.S. Navy charts and tracklines; and the boat sheet of the present survey.

Since the present survey (with H-8570) provides the first detailed, accurate delineation of the ocean bottom in this area, and since the prior soundings have but little reliability in view of the methods of sounding and positioning by which they were obtained, the present survey, when used in conjunction with H-8570, is adequate to supersede the charted soundings within the common area.

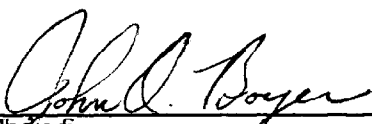
8. Compliance With Project Instructions

The present survey adequately complies with the Project Instructions.

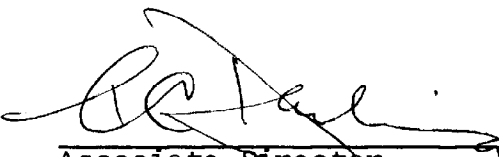
9. Additional Field Work

The present survey, taken together with H-8570, provides good basic survey coverage of the area and no additional field work is recommended.

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Hydrography and Oceanography

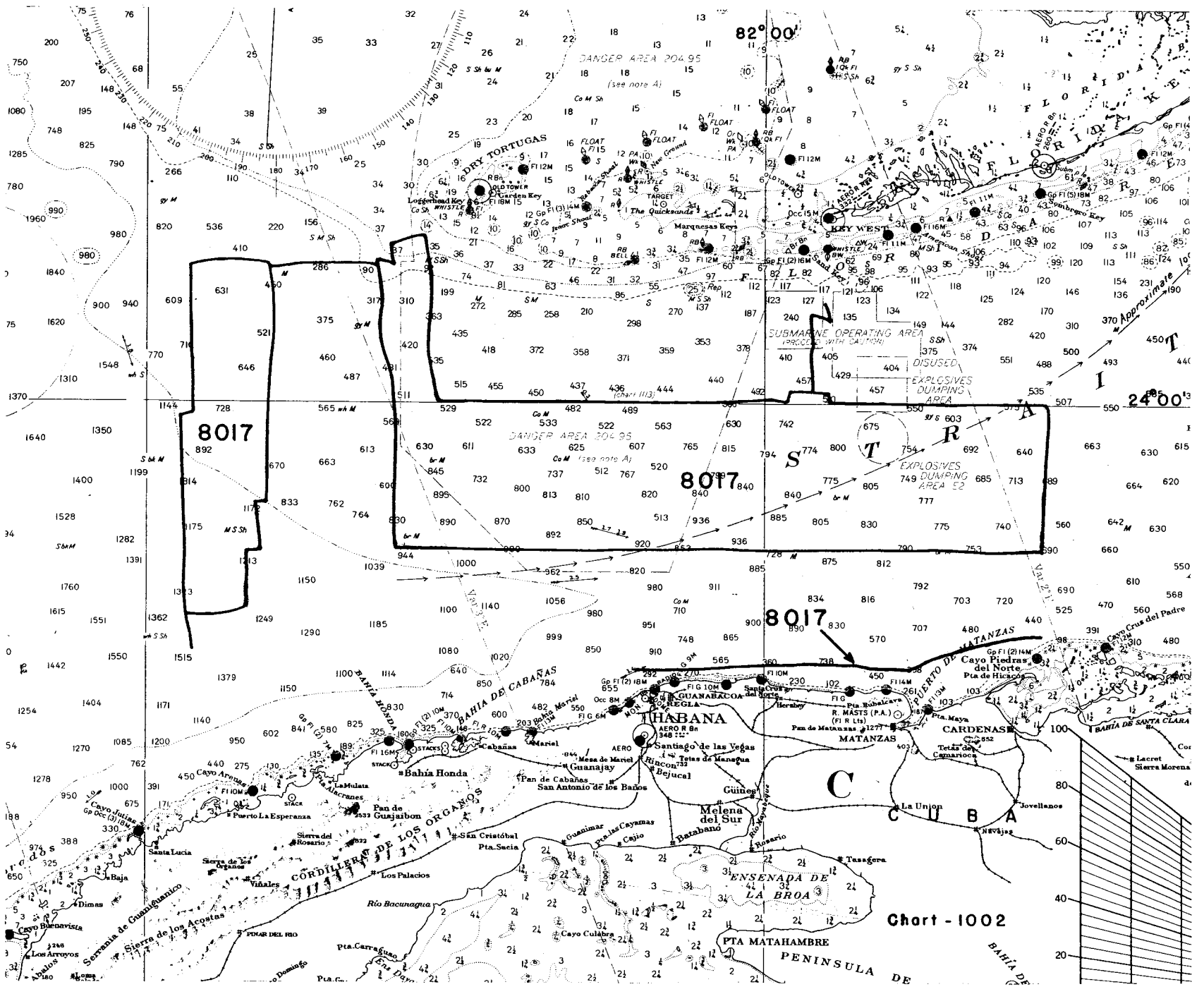


Chart - 1002

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8017

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
4 Jan 62	1003	Wichols	Before After Verification and Review Exam. for critical sdgs - no corr.
4/4/62	1351	gundwily	Before After Verification and Review Examined for critical sdgs. No corr.
5-2-62	1007	G.R. Johnson	Before After Verification and Review Examined. No Correction
1/10/63	1113	H. Quinby	Before After Verification and Review Examined No correction.
10/2/69	1002	J. Saunders	Before After Verification and Review Forward uncorr. appd to Ch. 1113
3/3/70	1351	H. Knoll	Before After Verification and Review fully.
8-24-70	1007	Eric Fry	Part appd. Before After Verification and Review Checked review for critical corrections only. No corrections
10/21/70	1113	O. Williams	Before After Verification and Review, Inspection fully appd. Revised curves & numerous sdgs.
10/22/70	1002	O. Williams	FullX Before After Verification and Review
4 9/29/71	1003	S. McKellar	Fully Before After Verification and Review Exam. for critical corrections, appd corrections (partially thru 1002 & 1113)
09/8/71	1007	S. McKellar	After verification and Review, fully applied thru chart 1002 and 1003

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.