

8986

ORIGINAL

Diag. Cht. No. 901-2.

Form 504 U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No.	WH-10-3-68
Office No.	H-8986
LOCALITY	
State	Commonwealth of Puerto Rico
General locality	South Coast of P.R.
Locality	La-Paguera area - Cabo Rojo to Punta Jorobado
19 68	
CHIEF OF PARTY CDR Wayne L. Mobley, USESSA	
LIBRARY & ARCHIVES	
DATE	27 FEB 1970

USCOMM-DC 5087

8986

HYDROGRAPHIC TITLE SHEET

H-8986

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

FIELD NO.

WH-10-3-68

State Commonwealth of Puerto Rico

General locality South Coast of P. R.

Locality LaParguera area - Cabo Rojo to Punta Jorobado

Scale 1:10,000 Date of survey 3/30 thru 4/16/68

Instructions dated 24 January 1968 (Revised) Project No. OPR-423

Vessel USC&GS Ship WHITING

Chief of party CDR Wayne L. Mobley, USESSA

Surveyed by LT J. G. Carlen, ENS C. A. Hardt, ENS C. W. Tignor, ENS R. S. Patwell

Soundings taken by echo sounder, hand lead, pole Ross Digital Depth Sounder

Graphic record scaled by Data Acquisition System

Graphic record checked by LTjg P. M. Hall, ENS K. C. Markve, CST W. A. Hill

Protracted by N/A Automated plot by Gerber Digital Plotter Pacific Marine Center

Soundings penciled by N/A

Soundings in ~~fathoms~~ feet at MLW ~~±1.1~~

REMARKS: _____

DESCRIPTIVE REPORT

To Accompany
HYDROGRAPHIC SURVEY

H-8986

WH-10-3-68

- - - -

1:10,000 Scale

PUERTO RICO - 1968

USC&GS SHIP WHITING

CDR Wayne L. Mobley, USESSA, Commanding

- - - -

A. PROJECT:

This survey was conducted on Project OPR-423 under the authority of Revised Instructions dated 24 January 1968.

B. AREA SURVEYED:

The area surveyed is off the south coast of Puerto Rico between longitude $67^{\circ}02'30''\text{W}$ and $67^{\circ}07'30''\text{W}$, and from latitude $17^{\circ}55'\text{N}$ south to the 15 fathom depth curve, approximately at latitude $17^{\circ}52'\text{N}$. Survey was accomplished in eight days during the period 30 March 1968 through 16 April 1968.

Junctions are all with contemporary surveys, as follows:

North: WH-10-1-68 (H-8984) and WH-10-2-68 (H-8985)
South: WH-20-1-68 (H-8989)
East: WH-10-4-68 (H-8987)
West: WH-10-5-68 (H-8988)

C. SOUNDING VESSEL:

This survey was accomplished entirely by the WHITING and was plotted in black.

D. SOUNDING EQUIPMENT:

The fathometer used on this survey is the Ross Digital Depth Sounder, S/N USC&GS 601. Corrections were obtained by leadline comparisons and serial temperature observations.

E. SMOOTH SHEET:

The smooth sheet will be plotted by the Pacific Marine Center. The size of the boat sheet is reduced from standard size to accommodate the WHITING computer-plotter system, having an effective plotting area of 31.4 by 34 inches. The boat sheet was constructed and plotted by the system, and the point of any position is the middle of the left edge of the right-hand digit of the plotted sounding (i.e.)

F. CONTROL:

The control used for this survey was hyperbolic mode Hi-Fix. By using the appropriate navigation program in the computer it was possible to conduct this survey using a system of straight, parallel sounding lines. Among other things, this program accepts Hi-Fix position input and the coordinates of two points on a desired line. It computes the straight line in terms of the hyperbolic arcs, and indicates the ships relation to the line through the use of a left/right steering needle on the bridge.

The Hi-Fix stations were located by traverse methods using electronic distance measuring equipment. Positions are:

MASTER	Lat. 17°58'15.89"N	- Long. 67°02'44.41"W
SLAVE II	Lat. 17°56'25.71"N	- Long. 66°57'20.33"W
SLAVE I	Lat. 17°56'07.50"N	- Long. 67°11'32.85"W

G. SHORELINE:

There is no shoreline on this survey.

H. CROSSLINES:

Crosslines were run to the extent of about 8%. Agreement is good considering the coral bottom and the irregularities caused by the coral heads.

I. JUNCTIONS:

Junctions with the surveys listed in B on the north, east, and west are good, within one or two feet. However, junction with WH-20-1-68 (H-8989) is difficult to assess. The slope of the bottom is extremely steep, 1300 feet rise in 0.9 mile run or more, and difficulties were experienced obtaining soundings here. The junction of the two surveys along this drop-off appears to be reasonable but an exact comparison is not possible.

Junction with H-8989 appears to be adequate altho numerous rejections and revisions had to be made to PDR sdgs. in depths

J. COMPARISON WITH PRIOR SURVEYS: of 50 to 60 feet - H.L.P.

There were no presurvey review items on this survey. Prior surveys are 65 years old or more, and any comparisons would be of historical interest only.

K. COMPARISON WITH THE CHART:

This survey was compared with chart 901, Scale 1:100,000; 9th edition, March 1, 1965, and agrees very well in general features.

L. ADEQUACY OF SURVEY:

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

M. AIDS TO NAVIGATION:

There were no aids to navigation on this survey.

N. STATISTICS:

Positions-----	1483
Miles of Soundings-----	262.8
Area Surveyed-----	12.6
Bottom Samples	28

O. MISCELLANEOUS:

The area covered by this survey is of typically coral bottom. There are numerous coral heads and mounds, making junctions and crosslines difficult to evaluate.

The southern boundary of this survey was chosen to be the edge of the steep drop-off which parallels the coast three to five miles offshore in this area. Due to the sheerness of the slope, soundings were lost crossing the edge, but the last good soundings on each line were kept. The 15 fathom curve approximates this.

P. RECOMMENDATIONS:


Although the data on the boat sheet is assumed to be valid, a sounding-by-sounding examination of the final plot was not made. Since the possibility exists that erroneous data could have been plotted by the computer-plotter system, the final plot is conceivably of less than boat sheet standards.

Q. REFERENCE TO REPORTS:

Reference is made to the following reports for the appropriate information:

1. Fathometer Report
2. Hi-Fix Report
3. Computer-Plotter Report.

Submitted:


LT Jeffrey G. Carlen, USESSA

HI-FIX CORRECTIONS
WH 10-3-68

DAY	POS #	PAT I	PAT II	TIME
090	0001-0246	+.15	+.08	094758-144819
091	0247-0594	+.14	+.08	093349-154739
101	0608-0806	+.14	+.08	112239-155529
	0807-0820	+.14	+.09	160009-161239
102	0821-0952	+.14	+.07	100539-122650
	0952-1005	+.13	+.09	122650-132340
104	1008-1142	+.14	+.08	101859-124519
	1147-1270	+.12	+.09	125210-153120
	1271-1285	+.15	+.08	153120-154640
107	1301-1483	+.14	+.09	093759-142721

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 11, 1969

~~North Carolina~~ Pacific Marine Center

Plane of reference approved in
~~YOUNG'S SOUNDING BOOKS~~ for

HYDROGRAPHIC SHEETS 8984-89

Locality: South coast of Puerto Rico

Chief of Party: W. L. Mobley, 1968

Plane of reference is mean low water

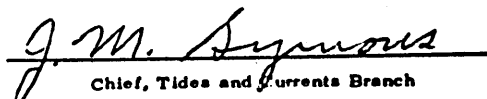
Tide Station Used (Form C&GS-681):

Magueyes Island

Height of Mean High Water above Plane of Reference is as follows:

0.6 foot

Remarks


Chief, Tides and Currents Branch

Puerto Rico 68

Reviewer - remove after
review and insert in cabinet

EDAT - REEUT TAPR BECAUSE
OF MANY FORMAT ERRORS DUE
TO EXCESSIVE LEADING AND FOLLOWING
ZEROS, ETC. WE COULD NOT
LOAD ORIGINAL TAPR CORRECTLY.

TIDE TAPE PRINTOUT

USC&GS SHIP WHITING

FIELD NO. WH-10-1-68
WH-10-2-68
WH-10-3-68
WH-10-4-68
WH-10-5-68
WH-20-1-68

REG. NO. H-8984
H-8985
H-8986
H-8987
H-8988
H-8989

TIME MERIDIAN 60th

TIDE STATION Mayaguez Island

TIDE DATA FOR 1968

CORR. IN FT.

Time Corr. ϕ

*Range Ratio *00000*

070000 01 1002 0000 072 0 000000 000000

130000 01 1004 ✓

140000 01 1002 ✓

180000 01 0000 ✓

090000 01 1002 0000 073 0 000000 000000

140000 01 1004 ✓

180000 01 1002 ✓

No soundings can fall between "000000" and "000000" JTW

180000 01 1002 ✓

000000 01 1002 0000 075 0 000000 000000 ✓

180000 01 1002 ✓

090000 01 1002 0000 076 0 000000 000000

120000 01 0000 ✓

180000 01 0002 ✓

070000 01 1002 0000 077 0 000000 000000

100000 01 0000 ✓

180000 01 0002 ✓

*

⁹070000 01 1002 0000 078 0 000000 000000

100000 01 0000 ✓

130000 01 0002 ✓

180000 01 0004 ✓

** Corrected New
Tape cut.*

090000 01 1002 0000 079 0 000000 000000

120000 01 0000 ✓

120000 01 0002 ✓

130000 01 0004 ✓

180000 01 0006 ✓

*

⁹070000 01 1002 0000 080 0 000000 000000

100000 01 0000 ✓

** Corrected*

120000 01 0002 ✓

130000 01 0004 ✓

180000 01 0006 ✓

090000 01 1002 0000 081 0 000000 000000

110000 01 0000 ✓

120000 01 0002 ✓

150000 01 0004 ✓

180000 01 0006 ✓

000000 01 1002 0000 087 0 000000 000000 ✓

180000 01 1002 ✓

000000 01 0000 0000 088 0 000000 000000 ✓

180000 01 0000 ✓

000000 01 0000 0000 089 0 000000 000000 ✓

180000 01 0000 ✓

090000 01 0000 0000 090 0 000000 000000

163500 01 0002 ✓

180000 01 0000 ✓

140000 01 0002✓

180000 01 0000✓

070000 01 1002 0000 092 0 000000 000000

100000 01 0000✓

120000 01 0002✓

150000 01 0004✓

190000 01 0002✓

090000 01 1002 0000 093 0 000000 000000

110000 01 0000✓

130000 01 0002✓

180000 01 0004✓

080000 01 1002 0000 094 0 000000 000000

110000 01 0000✓

123500 01 0002✓

180000 01 0004✓

**corrected, new Tape cut*

020000 01 1002 0000 095 0 000000 000000

110000 01 0000✓

140000 01 0000✓

170000 01 0004

180000 01 0002

TIDE TAPE PRINTOUT

USC&GS SHIP WHITING

FIELD NO.

REG. NO. *H8984*
48985

WH-10-1-68
WH-10-2-68
WH-10-3-68
WH-10-4-68
WH-10-5-68
WH-20-1-68

TIME MERIDIAN

045^R

H-8986
H-8987
H-8988
H-8989

TIDE STATION *MAQUEYOS Island*

TIDE DATA FOR 1968

CORR. IN FT.

Time Corr. ϕ

*Range Ratio * 00*

100000 01 1002 0000 100 0 000000 000000

140000 01 0000

180000 01 0002

020000 01 0000 0000 101 0 000000 000000

110000 01 1002

130000 01 0000

090000 01 1002 0000 102 0 000000 000000

180000 01 0000

000000 01 0000 0000 103 0 000000 000000

180000 01 0000 ✓

100000 01 0000 0000 104 0 000000 000000

180000 01 0002 ✓

090000 01 0000 0000 105 0 000000 000000

110000 01 0002 ✓

150000 01 0004 ✓

180000 01 0002 ✓

070000 01 1002 0000 106 0 000000 000000

100000 01 0000 ✓

180000 01 0002 ✓

080000 01 1002 0000 107 0 000000 000000

100000 01 0000 ✓

120000 01 0002 ✓

130000 01 0004

150000 01 0006

180000 01 0004

030000 01 1004 0000 108 0 000000 000000

050000 01 1006/

070000 01 1004/

090000 01 1002/

103500 01 0000 /

120000 01 0002/

133000 01 0004 /

160000 01 0006/

200000 01 0004 /

220000 01 0002/

230000 01 0000/

080000 01 1002/0000 115 0 000000 000000

190000 01 0000/

000000 01 0000 0000 116 0 000000 000000

18

240000 01 0000 /

Corrected

100000 01 0000/0000 117 0 000000 000000

170000 01 0002/

180000 01 0000/

000000 01 0000 0000 118 0 000000 000000

110000 01 0002/

150000 01 0004/

170000 01 0002/

180000 01 0000/

010000 01 1004 0000 119 0 000000 000000

060000 01 1002 /

100000 01 0000 /

120000 01 0002 /

160000 01 0004 /

180000 01 0002 /

190000 01 0000 /

210000 01 1002 /

240000 01 1004 /

032200 01 1004 0000 120 0 000000 000000

050000 01 1002 /

100000 01 0000 /

110000 01 0002 /

180000 01 0004 /

190000 01 0002 /

203200 01 0000 /

220000 01 1002 /

240000 01 1004 /

020000 01 1004 0000 121 0 000000 000000

050000 01 1002 /

100000 01 0000 /

120000 01 0002 /

170000 01 0004 /

190000 01 0002 /

200000 01 0000 /

213500 01 1002 /

230000 01 1004

100000 01 1002 0000 126 0 000000 000000

150000 01 0000

190000 01 0002

070000 01 1004 0000 128 0 000000 000000

110000 01 1002

130000 01 0000

160000 01 0002

180000 01 0000

090000 01 1002 0000 129 0 000000 000000

180000 01 0000 0000

Plane of Reference Approved

Datum Vertical Section

Date 1-29-69

090000 01 1002 0000 129 0 000000 000000

180000 01 0000 0000

090000 01 1002 0000 129 0 000000 000000

180000 01 0000 0000

190000 01 0004 0000

200000 01 0002 0000

210000 01 0002 0000

220000 01 1002 0000

240000 01 1004 0000

090000 01 1004 0000 121 0 000000 000000

180000 01 1002 0000

190000 01 0002 0000

190000 01 0002 0000

170000 01 0004 0000

090000 01 1002 0000

PRINTED BY THE STANDARD ELECTRIC COMPANY, N. Y. N. Y.

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120.

Red

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EOF

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EOF

2

H-8986

ATLANTIC MARINE CENTER

PROJECTION PARAMETERS

POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

1. Project No. OPR 423 4. Requested By Verification Br.
 2. Reg. No. H-8986 5. Ship or Office AMC
 3. Field No. WH-10-3-68 6. Date Required ASAP

7. Polyconic Modified Transverse Mercator

8. Central Meridian of Projection 67° 05' 00"

9. Survey Scale: 1: 30,000

10. Size of Sheet (check one):

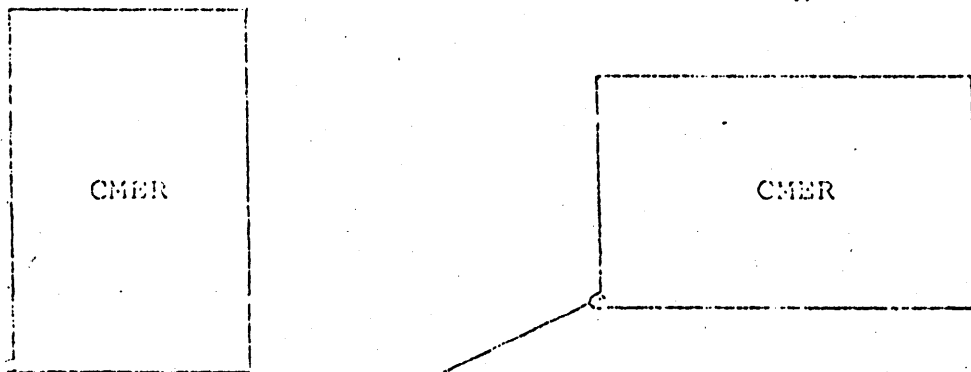
36 x 54 36 x 60 Other Specify _____

11. Sheet Orientation (check one):

NYX = 1 NYX = β

N

N



12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)

Latitude 17° 51' 15"

Longitude 67° 07' 45"

13. G.P.'s of triangulation and/or signals attached

14. Material Desired: Tracing Paper Mylar

Smooth Sheet Other Specify Smooth overlay

15. Remarks: ISLA Mooney Master 17° 58' 15.890" 67° 02' 44.410" Slave II Punta Jombal
17° 56' 25.710" 66° 57' 20.330" Slave I 17° 56' 07.500"
~~67° 11' 32.850"~~ Hi-Fix frequency 1799.6 kc Cabo Rajo

25 June 1969

APPROVAL SHEET

H 8986 - WH 10-03-68

Daily supervision of the automated plot and survey records were made. Soundings were contoured (or grouped) during survey operations. Discrepancies that were located were annotated on the printouts. The survey was converted and all digital records have been sent to PMC for preliminary plotting after which they will be sent to AMC for verification.

I consider the data adequate for smooth plotting and charting, however, a check should be made in the verification process to determine the discrepancies that resulted from the messaging of data in the WHITING off-line processing.

Wayne L. Mobley
Wayne L. Mobley
CDR, USESSA
Commanding Ship WHITING

GEOGRAPHIC NAMES

Survey No. H-8986

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<i>Mar Caribe</i>											1
											2
											3
											4
											5
											6
											7
											8
											9
											10
											11
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											24
											25
											26
											27

PREPARED BY

James W. Reddick
CARTOGRAPHIC TECHNICIAN

APPROVED BY

A. J. Wright
CHIEF GEOGRAPHER

FORM C&GS-946
(REV. 11-65)
(PRESC. BY
HYDROGRAPHIC
MANUAL 20-2,
8-64, 7-13)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY
NAUTICAL CHART DIVISION

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8986

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & Pos. Overlay		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS		3	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	*		*			
CAHIERS	1		*			
VOLUMES						
BOXES			1			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

Hi-Fix & Fathometer Reports, 1968 Season

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				1483
POSITIONS CHECKED		150		
POSITIONS REVISED		1		
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED		-		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		-		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		NONE		
JUNCTIONS		12 hrs.		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS	360 hrs	-		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		164 hrs		
TOTALS	36 hrs	176 hrs.		

PRE-VERIFICATION BY <i>FRED BEAN AND ALAN K. SCHUGELD</i>	BEGINNING DATE <i>5 AUGUST 1969</i>	ENDING DATE <i>3 DECEMBER 1969</i>
VERIFICATION BY <i>W.W. FEZEL AND ALAN K. SCHUGELD</i>	BEGINNING DATE <i>5 AUGUST 1969</i>	ENDING DATE <i>19 DECEMBER 1969</i>
REVIEW BY	BEGINNING DATE	ENDING DATE

H-898

DESCRIPTIVE REPORT DATA RECORD		
PART I SMOOTH SHEET PREPARATION		
	PREPARED BY/OPERATOR	DATE
A. PLOTTER OPERATOR		
B. DISTORTION MARKS PLOTTED		
C. PROJECTION INTERSECTIONS PLOTTED		
D. POINTS OF ELECTRONIC CONTROL ARCS PLOTTED		
E. OVERLAYS PREPARED BY		
1. POSITION NUMBER		
2. EXCESS SOUNDINGS		
3. PRELIMINARY SMOOTH PLOT		
4. LIST OTHERS		
A.		
B.		
F. SOUNDING SELECTION BY		
G. PLOTTER INPUT	PREPARED	
H.	CHECKED	
I. DESCRIPTIVE REPORT ADDENDUMS		
PART II SMOOTH SHEET COMPLETION		
	CARTOGRAPHER	DATE
A. DISTORTION SCALE TICKS IDENTIFIED BY NOTE	W.W. FEZEL	11/3/69
B. PROJECTION INTERSECTIONS VERIFIED BY	W.W. FEZEL	11/3/69
C. PROJECTION LINES RULED BY	W.W. FEZEL	11/4/69
D. ELECTRONIC CONTROL ARCS RULED AND LOCATION VERIFIED		
E. OVERLAYS COMPLETED BY		
1. POSITION NUMBER LEADERS ADDED	W.W. FEZEL	11/5/69
2. EXCESS SOUNDING OVERLAY COMPARED	FRED BEAN	8/7/69
3. PRELIMINARY SMOOTH PLOTS COMPARED	FRED BEAN	8/15/69
4. OTHERS UTILIZED		
A.		
B.		
F. DESCRIPTIVE REPORT ADDENDUM	ALLAN K. SCHUGELD	12/19/69
G. CONTROL STATIONS VERIFIED	NONE	
H. POSITIONS MANUALLY PLOTTED	FRED BEAN	8/5/69
I. MANUAL PLOT VERIFIED	ALLAN K. SCHUGELD	11/17/69
J. SHORELINE APPLIED	NONE	
K. BOTTOM CHARACTERISTICS ADDED	W.W. FEZEL	11/5/69
L. NOTES AND DEPTH CURVES ADDED	ALLAN K. SCHUGELD	12/18/69

FORM C&GS-946A
(REV. 11-65)
(PRES. BY HYDROGRAPHIC
MANUAL, 8-94)

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H 8986

INSTRUCTIONS - This form serves to identify items of a check list in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed in the Descriptive Report until the survey is reviewed.

CL - Check List Items: should be checked as having been completed during the verification processes.

R - Report Item: This column refers to those items reported to the reviewer and is used to indicate the items discussed.

Part I - DESCRIPTIVE REPORT	CL	R	Part III - JUNCTIONS (Continued)	CL	R
<p>Note: The verifier should first read the Descriptive Report for general information and problems.</p> <p>1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None</p>	✓		<p>10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of Butt junctions and areas which are SUPERSEDED.</p>	✓	
<p>2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: -- None</p>	✓		<p>Part IV - VOLUMES</p> <p>11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None</p>	✓	
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</p>	✓				
<p>Part II - SHORELINE AND SIGNALS</p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys</p> <p>a. Give earliest and latest dates of photographs</p> <p>b. Field inspection date</p> <p>c. Field Edit date</p> <p>d. Reviewed-Unreviewed</p>	✓				
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>	✓		<p>12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following:</p> <p>(a) rocks</p> <p>(b) line turns</p> <p>(c) position values of beginning and ending of lines</p> <p>(d) bar check or velocity correctors</p> <p>(e) time recording</p> <p>(f) notes or markings on fathograms</p> <p>(g) was reduction of soundings accurately done?</p> <p>(h) was scanning accurate?</p> <p>(i) were peaks at uneven intervals missed?</p> <p>(j) were stamps completed?</p> <p>(k) references to adjacent features</p>	✓	
<p>6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None</p>	✓				
<p>7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.</p>	✓				
<p>Part III - JUNCTIONS</p> <p>Note: Make a cursory comparison preliminary to inking soundings in area of overlap.</p> <p>8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None</p>	✓				
<p>9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None</p>	✓		<p>Part V - PROTRACTING</p> <p>13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None</p>	✓	
			<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>	✓	
			<p>15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None</p>	✓	

Fig. 20 (cont'd.)
Form 946 A (back of form)

Part V - PROTRACTING (Continued)		CL	R	Part VIII - AIDS TO NAVIGATION		CL	R
16. The protracting was satisfactory except as follows: Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.		✓		26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. Remarks Required: -- Conflicts of any nature listed.		✓	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.				27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification. Remarks Required: -- None		✓	
Part VI - SOUNDINGS				Part IX - BOATSHEET			
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None		✓		28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information. Remarks Required: -- None		✓	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.		✓		29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.		✓	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None		✓		Part X - GENERAL			
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None		✓		30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2). Remarks Required: -- None		✓	
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.		✓		31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None		✓	
Part VII - CURVES				32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: -- None		✓	
23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected.		✓	✓	33. The bottom characteristics are adequately shown. Remarks Required: -- None		✓	
24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following: a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed Remarks Required: -- None				Part XI - NOTES TO THE REVIEWER			
25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn). Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.		✓		34. Unresolved discrepancies and questionable soundings.		✓	✓
				35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.		✓	
				36. Supplemental information.		✓	
Verified by						Date	

WH-10-3-68

H-8986

Verifiers Report

23. H.L. Pruffitt, Supervisor

34. Julian day 91 positions 304 thru 307 sounding were not recorded on the bathogram. The digitized print-out recorded soundings but these were disproved by adjacent hydrography and a crossline. The soundings in question were removed from the smooth sheet.

H-8986

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

1003 WH-10-33-68

VEHICLE: WHITING

PROJ. NO. ORR-423

YEAR 68

South Coast of Puerto Rico

CHECKED BY

DATE CHECKED

SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (FATHOMS)	WEIGHT OF SAMPLER	AP. PROX. PEN- TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS (Direction of current, character, consistency, depth, nature of bottom, etc.)	OBS. NO.
		LATITUDE	LONGITUDE								
595	4-1-68	17°31' 45.15"	67°06' 02.91"	44.0	6.5				Co.		
596		17°32' 33.04"	67°06' 36.47"	13.0	8.5				Co.		
597		17°32' 43.57"	67°06' 02.44"	12.2					Co.		
598		17°32' 30.06"	67°05' 13.33"	10					Co.		
599		17°32' 37.22"	67°04' 23.29"	9.8					Co.		
600		17°32' 44.40"	67°05' 45.31"	12.0					Co.		
601		17°32' 45.36"	67°03' 23.05"	19.0					Co.		
602		17°33' 18.53"	67°05' 06.89"	10.4					Co.		
603		17°33' 17.20"	67°05' 48.47"	12.0					Co.		
604		17°33' 09.56"	67°04' 31.00"	10.2					Co.		
605		17°33' 09.56"	67°05' 15.69"	10.4					Co.		
606		17°33' 09.27"	67°04' 02.22"	11.8					Co.		
607		17°33' 14.40"	67°05' 39.03"	11.2					Co.		

H-8986

FORM CGC-1331A
(8-23-60)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

VESSEL: *Proctor*

YEAR: *68*

CHECKED BY:

DATE CHECKED:

SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Feet/meters)	WEIGHT OF SAMPLER	AP. PEN- TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, corer jammed, corer cutter, stat. no., 172 (bottom relief, low, slope, plate, disposition, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE								
1286		17° 54' 27.54"	171° 04' 33.81"	76.0	8.5				Co		
1287		17° 54' 22.98"	171° 05' 55.78"	76.0					Co		
1288		17° 54' 26.05"	171° 05' 11.72"	59.6					Co		
1289		17° 54' 30.02"	171° 04' 22.58"	47.8					Co		
1290		17° 54' 33.09"	171° 04' 32.81"	50.8					Co		
1291		17° 54' 36.16"	171° 05' 43.04"	53.0					Co		
1292		17° 54' 39.23"	171° 05' 53.27"	34.8					Co		
1293		17° 54' 42.30"	171° 05' 03.50"	49.0					Co		
1294		17° 54' 45.37"	171° 05' 13.73"	49.0					Co		
1295		17° 54' 48.44"	171° 05' 23.96"	69.6					Co		
1296		17° 54' 51.51"	171° 05' 34.19"	57.0					Co		
1297		17° 54' 54.58"	171° 04' 44.42"	81.0					Co		
1298		17° 54' 57.65"	171° 05' 15.65"	78.4					Hard bottom No sample		
1299		17° 54' 58.82"	171° 04' 45.82"	70.8					Co		
1300		17° 54' 59.99"	171° 04' 36.05"	76.0					Co		

H- 8906

- A. Additions and corrections have been furnished the plotter
Except those indicated for
center by the verification unit, correction by Review.

Signed *Hugh L. Puffer*
Title Chief, Hydro Br., AMC

Date Feb. 9, 1970

- B. Additions and corrections have been added to the survey
Review
records and the final smooth sheet forwarded to the ~~verification~~
~~unit~~ unit.

Signed *Hugh L. Puffer*
Title Chief, Hydro Br., AMC

Date Feb. 9, 1970

- C. The smooth sheet has been inspected, is complete, and
meets the requirements of the General Instructions for
automated surveys and the Hydrographic Manual. (Note:
All exceptions are listed in the verifier's report).

Signed *Hugh L. Puffer*
Title Chief, Hydro Br., AMC

Date Feb. 9, 1970

- D. Smooth sheet and records forwarded to Rockville, Maryland
Office.

Date Feb. 10, 1970

NORFOLK HYDROGRAPHIC PROCESSING BRANCH
VERIFICATION NOTES
H-8986

GENERAL

This appears to be an excellent basic survey in an area of extremely irregular coral bottom.


SOUNDINGS

Most of the sounding was done with a digitized Ross fathometer and much additional scanning was needed to mean wave action, determine least depths on inbetween soundings, smooth depth curves, and effect junctions with adjoining surveys. This rescanning was difficult and time consuming because the compressed scale of the Ross fathogram makes it difficult to interpret and to obtain exact depths.

Due to our inexperience with this type fathogram much of the rescanning was done after the smooth sheet was plotted. This has resulted in an unusually large number of hand corrections and a corresponding number of changes on the final sounding card print-out.

ARC OVERLAY

At the time this survey was verified there was no capability for plotting the Hi-Fix hyperbolic arcs. This overlay will be forwarded when the AMC plotter becomes operational.


Hugh L. Proffitt
Chief, Hydro Br., AMC

Norfolk, Va.
Feb. 9, 1970

