

9264

Diag. Cht. No. 902.

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT
(HYDROGRAPHIC)

Type of Survey . HYDROGRAPHIC
Field No. MI-10-1-72
Office No. H-9264

LOCALITY

State PUERTO RICO
General Locality OFF PLAYA DE PONCE
Locality VICINITY OF ISLA CAJA DE MUERTOS

19 72

CHIEF OF PARTY

E. K. McCAFFREY

LIBRARY & ARCHIVES

DATE 3/5/75

9264

HYDROGRAPHIC TITLE SHEET

H-9264

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.

MI-10-1-72

State Puerto Rico

General locality South Coast ~~Off Ponce Harbor~~ Playa de Ponce

Locality Vicinity of Isla Caja de Muertos Southeast Approaches to Ponce Harbor

Scale 1:10,000 Date of survey Feb. 12, 1972 - Mar. 9, 1972 JD 042 069 629 Jan

Instructions dated January 5, 1972 Project No. OPR-423-MI-72

Vessel NOAA Ship MT MITCHELL's Launches MI-5 and MI-6

Chief of party Edwin K. McCaffrey, CAPT, NOAA, Commanding Officer

Surveyed by Ship's Personnel

Soundings taken by echo sounder, hand lead, ~~etc~~

Graphic record scaled by Ship's Personnel

Graphic record checked by M.F. Kolesar, LTJG, NOAA (Launch Officer)

Protracted by _____ Automated plot by AMC-Calcomp Plotter 610

Soundings penciled by _____

Soundings in ~~FATHOMS~~ feet at MLW ~~XXXX~~

REMARKS: Launch MI-6 - HYDRO-PLOT System consisting of a Digital Corporation PDP-8/E Computer, Houston Instruments COMLOT Plotter.

Ross Echo Sounder Recorder Model 5000, Transceiver Model 4000 and Digitizer Model 6000.

Launch MI-5 - HYDRO-LOG System consisting of the equipment listed above with the exception of the plotter.

*Applied to stds 3-18-75
CAB*

RWW 1/31/74

Descriptive Report

To Accompany

Hydrographic Survey MI-10-1-72

Registry Number H-9264

OPR-423-MI-72

South Coast of Puerto Rico

1972 Field Season

Scale 1:10,000

NOAA Ship MT MITCHELL (MSS-22)

Edwin K. McCaffrey
CAPT, NOAA
Commanding Officer

A. PROJECT

The survey was accomplished as part of Project OPR-423-MI-72 in accordance with the Project Instructions dated January 5, 1972.

B. AREA SURVEYED

The survey work was accomplished by the automated launches MI-5 and MI-6 of the Ship MT MITCHELL, between February 12, 1972 and March 19, 1972.

The survey work consists of 264.6 linear nautical miles of sounding lines covering an area of 14.2 square nautical miles. The limits of the survey enclose an eight sided figure. The limits of the survey are enclosed by lines connecting the following points, starting from the southeast corner of the area and proceeding clockwise:

Lat. 17°51'30"N. Long. 66°29'00"W.
Lat. 17°51'30"N. Long. 66°34'30"W.
Lat. 17°51'45"N. Long. 66°34'30"W.

Lat. 17°53'⁴45"N. Long. 66°37'00"W.
Lat. 17°55'45"N. Long. 66°37'00"W.
Lat. 17°55'45"N. Long. 66°32'45"W.
Lat. 17°52'30"N. Long. 66°32'45"W.
Lat. 17°52'30"N. Long. 66°29'00"W.

The survey work junctions with ^{contemporary} ~~prior~~ surveys H-9034 (1:20,000) 1969 on the western limits and with H-9186 (1:10,000) 1971 on the northern limit. The survey junctions with contemporary surveys H-9265 (1:10,000)^{BZ} on the eastern edge and H-9266 (1:20,000)^{BZ} on the southern edge.

C. SOUNDING VESSELS

Hydrography on this boatsheet was accomplished with launches MI-5 and MI-6 of the Ship MT MITCHELL. Launch MI-5 was equipped with a PDP-8/E computer and used the HYDRO-LOG system. Launch MI-6 was equipped with a PDP-8/E computer, COM-PLOT DP3-5 Roll Plotter and used the HYDRO-PLOT system.

D. SOUNDING EQUIPMENT

Soundings obtained were recorded in feet by the Ross Echo Sounders. The soundings were digitized to the nearest one tenth of a foot by a Ross Digitizer.

Launch MI-5

Ross "5000" Recorder, Serial Number 1049
Ross "4000" Transciever, Serial Number 1049
Ross "6000" Digitizer, Serial Number 1049

Launch MI-6

Ross "5000" Recorder, Serial Number 201745
Ross "4000" Transciever, Serial Number 201745
Ross "6000" Digitizer, Serial Number 201745

Velocity corrections were determined from measurements obtained with bar checks, TDC casts and Nansen casts taken in the area. An abstract of velocity corrections is included in this report. Graphs are included in the report "Corrections to Echo Soundings" for OPR-423-MI-72.

Settlement and Squat correctors were obtained from data

gathered on February 9, 1972. Interpolation was used to determine correctors for speeds other than those shown in the Settlement and Squat Abstract.

The draft of the transducer was applied to soundings plotted on line. The drafts used were:

Launch MI-5	2.0 feet
Launch MI-6	2.6 feet

The vessel draft appears in the corrector word on the hyperbolic master tape.

Settlement and Squat correctors and deviations from original draft appear on the hyperbolic corrector tapes.

The fathograms were scanned by trained personnel and were checked by the officer in charge. The fathogram scanning is deemed adequate for this survey.

E. SMOOTH SHEET

The smooth sheet for the project will be produced by the Atlantic Marine Center, Norfolk, Virginia.

The following tapes with respective printouts were furnished to the Marine Center:

1. Hyperbolic Master Tape: Produced on line by the HYDRO-PLOT or HYDRO-LOG System in accordance with Page AM 100.19 (Revised 2-7-72) of the HYDRO-PLOT, HYDRO-LOG Systems Manual
2. Hyperbolic Corrector Tape: Data on this tape is in accordance with Page AM 100.20 of the above listed manual
3. TC/TI Tape
4. ASCII Signal Tape
5. Parameter Tape
6. Velocity Tape

F. CONTROL

Hi-Fix, operating at a frequency of 1618.650 KHz, in hyperbolic mode was used for position control during all opera-

tions. The Hi-Fix shore stations were located as follows:

ALLEN 1972 (Master Station)

Latitude 18°00'36.536"N. ✓
Longitude 66°29'44.871"W.

HOMER 1972 (Slave 1)

Latitude 17°57'53.152"N. ✓
Longitude 66°36'58.297"W.

ISABEL 1972 (Slave 2)

Latitude 17°57'25.578"N. ✓
Longitude 66°24'39.803"W.

The shore stations are all non-recoverable third-order traverse stations. ✓

The Hi-Fix was calibrated at the beginning and end of each working day and at frequent intervals during the day to insure that no pattern shift occurred. An abstract of final averaged and/or interpolated lane correctors is included in this report. ✓

Calibrations were obtained by observing a three point sextant fix with check angle using shore based hydrographic signals or landmarks and simultaneously recording Hi-Fix receiver dial values. The true Hi-Fix lane values were then computed from the visual fix using Program AM 560 "H/R Calibration". See "Report on Calibration of Hi-Fix" OPR-423-MI-72. The original calibration work sheets were also forwarded. ✓

G. SHORELINE

There is no shoreline within the limits of this survey. ✓

H. CROSSLINES

The crosslines compared well with the system of regular sounding lines, except in areas of highly irregular bottom, consisting of reefs and coral heads. The system of crosslines consisted of 16% of the total ~~area~~ surveyed. ✓
lines

I. JUNCTIONS *See Review*

~~Prior~~ Survey H-9034 (Scale 1:20,000, 1969) junctions with the northwest corner of the ~~sheet~~ ^{H-728 (1971)}. The comparison is not good. The area is of such jagged profile however that no effective comparison can be made. Agreement with average depths is good. Disagreement on slopes is probably due to difference in survey scale and width of transducer beam.

~~Prior~~ Survey H-9186 (Scale 1:10,000, 1971) junctions with the northern boundary of the sheet. The soundings obtained during this survey compare well with H-9186. ^{M1-10-1-71}

J. COMPARISON WITH PRIOR SURVEYS *See Review*

The least depths found on this survey are shown on the accompanying plotter sheets in bold black print. These soundings have been reduced for velocity corrections but not for tides.

The accompanying mylar sheet displays the junction soundings mentioned above and the pre-survey review items as well as representative soundings from charts covering the area. This mylar can be laid over the plotter sheets for comparison purposes.

Developments were run using both a north-south and east-west line pattern when deemed necessary. A system of 50 meter lines was run over most pre-survey review items. Where the existence of an item was considered doubtful the 50 meter spacing was run but data not recorded.

Development #1 was a reported 68 foot shoal at Latitude 17°54'55.5"N. Longitude 66°36'54.0"W. The least depth found in the area was 72 feet. The charted 68 foot sounding should not be retained. *Development on present survey adequate to supersede 68 foot prior survey depth. Chart present survey depths.*

Development #2 was an elongated 65 foot shoal centered at Latitude 17°54'44.0"N. Longitude 66°36'54.0"W. No shoal in this exact location was found, but the development did reveal two least depths within 150 meters of the pre-survey review item. There is a 67 foot sounding ^{west} of the item and a 63⁵⁷ foot sounding ^{east} of the item. The charted 65 foot shoal to the east should be deleted and the ~~63~~ ^{present survey depths} foot charted instead.

Development #3 is a 51 foot shoal at Latitude 17°54'30"²N. Longitude 66°36'45"W. The least depth found here was ~~51~~⁵¹ feet. This was located 120 meters southeast of the item. The bottom is irregular and the 51 foot sounding should be retained. *should be charted.*

Development #4 was a 53 foot sounding at Latitude 17°54'21"²N. Longitude 66°36'48"W. A depth of 56 feet was found 50 meters southeast of the item. However in the same general area a depth of 51 feet was found at Latitude 17°54'20"N. Longitude 66°36'40"W. The 51 foot sounding should be charted as the bottom is quite irregular. *53 ft depth confirmed by H-9264 (1972). Chart present survey depths.*

The entire area centered about developments #1 through #4 should be recharted using contemporary surveys. *concur.*

Developments #5 and #6 are 58 foot shoals in the vicinity of Latitude 17°55'30"N. Longitude 66°35'00"W. No evidence of the shoals was found. A series of 50 meter lines was run over the area to search for the shoals. These shoals were also investigated on MI-10-1-71 (H-9186) and were not found. It is recommended that ~~these~~ items be deleted from the charts. *concur.*

Development #7 is a 103 foot shoal at Latitude 17°54'40"³⁸N. Longitude 66°34'45"W. ~~At least depths of 100 feet was found~~ *in the vicinity* of at Latitude 17°54'45"N. Longitude 66°34'43"W. It is recommended that the 103 foot depth be deleted and the 100 foot shoal be charted in its place. ✓

Development #8 is a 48 foot shoal located at Latitude 17°55'20"N. Longitude 66°34'01"W. The least depth found was 50 feet. ✓ It is recommended that the 48 foot sounding be retained. *concur. 48 ft depth brought fwd from H-2736 (1905-06) to present survey.*

Development #9 was a 42 foot shoal located at Latitude 17°55'12"N. Longitude 66°33'40"⁵W. This item was not found but due to bottom features should be retained. There is an extensive shoal located 100 meters north of the item. The least depth found was 49 feet. ✓ *The 42 ft depth above falls in present survey depths of 51 to 82 ft. The 42 ft. depth is doubtful; therefore present survey depths should be charted.*

Development #10 was a 100 foot shoal at Latitude 17°53'43"N. Longitude 66°33'48"W. No evidence was found of the shoal. It is recommended that the sounding be retained. ✓ *disregarded. Adequate development in area by present survey reveals depths of 132 to 135 ft.*

Development #11 was a 42 foot sounding at Latitude 17°51'56"^{2, 00}N. Longitude 66°32'50"W. No sounding in this area was found to be this shoal. ~~The item should be retained.~~ ✓ *Depths to 42 ft. found in vicinity by present survey. Chart present survey depths.*

(6 3/4 fms.)

Development #12 was a 40 1/2 foot depth located at Latitude 17°51'46"N. Longitude 66°32'34"W. No sounding in the area was found to be this shoal. The item should be retained. *11 ft. depths were brought fwd. from H-2736 (1905-06) to supplement the present survey. Chart depths as shown on present survey.*

Development #13 was a 37 foot sounding at Latitude 17°52'24"N. Longitude 66°29'23"W. This feature was verified by a 37 foot sounding 100 meters ^{100m} west of the charted sounding. The 37 foot sounding should be retained. *Charted from present survey.*

Development #14 was a 66 foot shoal located at Latitude 17°51'34"N. Longitude 66°29'19"W. A least depth of 67 feet was found 60 meters northwest of the item. The 66 foot sounding should be retained. *66 ft depth found by present survey 100m SE of charted depth. Chart present survey depths.*

Regarding developments Numbers 10, 11, and 12, the very irregular bottom characteristics justify retention of the soundings indicated even though the specific sounding was not found. *See additional remarks on numbered items mentioned above.*

K. COMPARISON WITH CHARTS *See Review.*

Charts 926, 927 and 902 cover the area surveyed. The charted soundings are in general agreement with this survey. Some isolated soundings, however, were found to vary from this survey by up to 6 feet. It is recommended that the charts be updated with these survey results as soon as possible.

L. ADEQUACY OF SURVEY *See Review.*

This survey is complete and adequate to supersede previous surveys of the area.

M. AIDS TO NAVIGATION

No aids to navigation are within the limits of this survey.

N. STATISTICS

Nautical miles of regular sounding lines	----	223.0
Nautical miles of crosslines	-----	41.6
Total nautical miles of sounding lines	-----	264.6
Square nautical miles surveyed	-----	14.2
Percentage crosslines	-----	16%
Bottom samples	-----	39
Position numbers used	-----	1711
Position numbers rejected	-----	35

O. MISCELLANEOUS

All times used were Greenwich Mean Time.

A "holiday" exists at Latitude 17°55'12"N. Longitude 66°34'03"W. This is not a holiday created by an unsurveyed area. A line was run and adequate digitized soundings were obtained in the area. These soundings adequately completed the survey area and compare well with the adjacent soundings. The bottom has a uniform, regular slope in average depths of 110 to 112 feet. No hazards to navigation exist in the area. There is no graphic record to cover the area as a malfunction in the echo sounder caused the paper drive motor to stop. *Concur.*

Two Fischer & Porter (punched tape) tide gages were used to determine tidal fluctuations during the survey. One gage (Serial Number A2112M4) was installed at Muelle de Ponce, Ponce, P.R. while the other gage (Serial Number A1694M10) was installed at a pier owned by the Aquarium Restaurant and Beach Club, Santa Isabel, P.R. The tide staffs were leveled in by ship's personnel. Due to the limited tidal range of approximately one foot, soundings were not reduced for tides in plotting the boatsheet.

Bottom samples were obtained using a clamshell type sampler, attached to a 10 pound sounding lead. The samples were mailed to Dr. J.W. Pierce, Division of Sedimentology, Smithsonian Institute as required in the project instructions. Copies of C&GS Form 733M "Log Sheet M" were completed and forwarded along with the samples. A copy of the log sheets are included in this report. The log sheet also shows the position number assigned to each sample. The depths associated with the bottom samples were obtained using the echo sounder on the launch being used. Depths were sufficiently deep to prevent the use of a leadline for sounding.

The boatsheet comprises three COMLOT Plotter sheets. These plotter sheets are referred to as A of A, B, C, B of A, B, C, and C of A, B, C. The records are annotated accordingly.

The automated launch officers used a Hydrographic Operations Log to record daily operational data. The logs are forward-

ed as part of the record.

The calibration work sheets (Hi-Fix) and the work sheets used for the determination of velocity corrections were forwarded in a general shipment of associated records.

P. RECOMMENDATIONS


It is recommended that Charts 926, 927 and 902 be updated as a significant number of representative soundings from those charts do not compare favorably with this survey.

Q. REFERENCE TO REPORTS

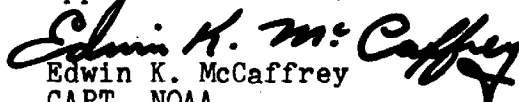
The 1972 Field Season reports, listed below, should be referred to for a complete evaluation of this survey.

Report on Calibration of Hi-Fix
Report on Corrections to Echo Soundings
Report on MT MITCHELL HYDRO-PLOT/HYDRO-LOG System
Descriptive Report, MT MITCHELL, MI-10-1-71 H-9186
of 1971 Field Season

Respectfully Submitted:


Michael F. Kolesar
LTJG, NOAA

Approved and Forwarded:


Edwin K. McCaffrey
CAPT, NOAA
Commanding Officer

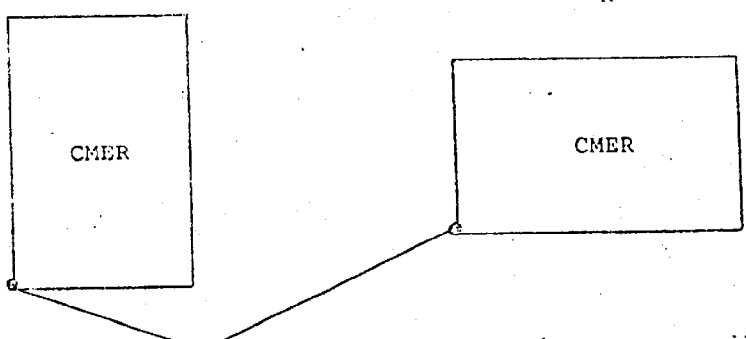
2-18-71
M. W. Johnson
Nov. 12, 1974

ATLANTIC MARINE CENTER

PROJECTION PARAMETERS

POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

- 1. Project No. OPR-423-MI-72
- 2. Reg. No. H-9264
- 3. Field No. MI-10-1-72
- 4. Requested By Verification Branch
- 5. Ship or Office AMC
- 6. Date Required ASAP
- 7. Polyconic Modified Transverse Mercator
- 8. Central Meridian of Projection 66 ° 33 ' 00 "
- 9. Survey Scale: 1: 10,000
- 10. Size of Sheet (check one):
36 x 54 36 x 60 Other Specify _____
- 11. Sheet Orientation (check one):
NYX = 1 NYX = 0
N N



- 12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)
Latitude 17 ° 51 ' 12 "
Longitude 66 ° 37 ' 24 "
- 13. G.P.'s of triangulation and/or signals attached
- 14. Material Desired: Tracing Paper Mylar
Smooth Sheet Other Specify _____
- 15. Remarks: _____

4-6-71

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

- 1. Project # OPR-423 2. Reg. # H-9264 3. Field # MI-10-1-72
- 4. Type of Control Hi-Fix (Hi-Fix, Raydist, EPI, etc.)
- 5. Frequency 1618.650 KHz (for conversion of electronic lanes to meters)
- 6. Mode of Operation (check one):

Range-Range Range-Visual

Range One (R₁) Lat. _____ ° _____ ' _____ "

Station I.D. _____ Long. _____ ° _____ ' _____ "

Range Two (R₂) Lat. _____ ° _____ ' _____ "

Station I.D. _____ Long. _____ ° _____ ' _____ "

Hyperbolic (3-station) Hyper-Visual

Slave One Lat. 17 ° 57 ' 53.152 "

Station I.D. HOMER Long. 66 ° 36 ' 58.297 "

Master Lat. 18 ° 00 ' 36.536 "

Station I.D. ALLEN Long. 66 ° 29 ' 44.871 "

Slave Two Lat. 17 ° 57 ' 25.578 "

Station I.D. ISABEL Long. 66 ° 24 ' 39.803 "

7. Location of Survey:

Range-Range Imagine an observer is standing at R₁ Station and looking directly at R₂ (check one):

Survey area is to observer's Right A=Ø

Survey area is to observer's Left A=1

Hyperbolic Looking from survey area toward Master Station:

Slave One must be to observer's Left.

Slave Two must be to observer's Right.

- 8. This form is submitted as an aid in preparing a boat sheet.
- This form applies to all data on this survey.
- This form applies to part of the data on this survey.

Vessel EDP #	From Time Day	To Time Day	Position Numbers (inclusive)
_____	_____	_____	_____ to _____
_____	_____	_____	_____ to _____
_____	_____	_____	_____ to _____

9. Remarks: _____

Actual Times of Hydrography

Launch MI-6

<u>Date</u> <u>(1972)</u>	<u>Julian</u> <u>Day</u>	<u>Start Time</u> <u>(GMT)</u>	<u>End Time</u> <u>(GMT)</u>
Feb. 11	042	140600	154500
Feb. 12	043	113900	175213
Feb. 13	044	123800	175500
Feb. 22	053	122556	164216
Feb. 28	059	120334	123401
Feb. 29	060	111526	171903
Mar. 1	061	131801	170952
Mar. 2	062	112418	172045
Mar. 6	066	141745	174209
Mar. 7	067	115149	161414
Mar. 8	068	115420	153548
Mar. 9	069	112148	172955

Actual Times of Hydrography

Launch MI-5

<u>Date</u> <u>(1972)</u>	<u>Julian</u> <u>Day</u>	<u>Start Time</u> <u>(GMT)</u>	<u>End Time</u> <u>(GMT)</u>
Feb. 17	048	141114	173017
Feb. 18	049	112632	172007
Feb. 25	056	115805	180404

Descriptive Tide Note

OPR-423-MI-72

South Coast, Puerto Rico

All of the tide gages were located in 60°W. (+4) Time Zone.

The Control Tide Gage for this project was the standard automatic tide gage at Magueyes Island, Puerto Rico (Latitude 17°58.3'N. Longitude 67°02.8'W.). This gage operated using +4 (60°W.) time. The installation was inspected at the beginning and end of the field season.

Three Fischer & Porter (ADR) tide gages (portable) were installed by MT MITCHELL personnel to provide tides information for the project. These gages were located as follows:

<u>Station</u>	<u>Dates of Operation</u>	<u>Latitude</u>	<u>Longitude</u>
Muelle de Ponce	2-2-72 - 5-25-72	17°58.2'N.	66°37.2'W.
Santa Isabel	2-8-72 - 5-25-72	17°57.3'N.	66°24.4'W.
Arroyo	2-9-72 - 5- 7-72	17°57.8'N.	66°03.9'W.

In accordance with Instructions - Project OPR-423-MI-72 dated January 5, 1972, all portable gages operated using Greenwich Mean Time.

The Fischer & Porter tide gage records data in binary format on punched paper tape. The punched tapes were forwarded, at the end of each month, to Tides Section, National Ocean Survey, Rockville, Maryland for final disposition.

Hourly heights were not scaled in the field due to the method of recording data. Hourly heights, for the project, are to be furnished by the Tides Section.

Tidal Zoning

Tides for this project are to be zoned by the automated

zoning method.

Data from gages to be used in tidal zoning for each boat-sheet are as follows:

<u>Boatsheet</u>	<u>Registry No.</u>	<u>Zone Data From Gages At:</u>
MI-10-1-72	H-9264 (1972)	Muelle de Ponce Santa Isabel
MI-10-2-72	H-9265 (1972)	Muelle de Ponce Santa Isabel
MI-10-3-72	H-9267 (1972)	Santa Isabel
MI-20-1-72	H-9266 (1972)	Muelle de Ponce Santa Isabel
MI-100-1-72	H-9278 (1972)	Muelle de Ponce Santa Isabel Arroyo

NOTE: The Muelle de Ponce tide gage was inoperative during the period T:1800 April 14 to T:1300 April 21. This affects no sounding operations as the only units operating were skiffs, on Sheet MI-10-3-72 H-9267, using the Santa Isabel gage exclusively. The ship operating on Sheet MI-100-1-72 H-9278 will use the Santa Isabel and Arroyo tide gages during this period.

TRA Correction Abstract

Sheet MI-10-1-72 H-9264

Launch MI-6

Note: Any initial error was applied during the scanning of the fathograms

<u>Jul. Day</u>	<u>Date (1972)</u>	<u>Time From</u>	<u>To</u>	<u>Draft Corr. (ft.)</u>	<u>S & S Corr. (ft.)</u>	<u>Engine Speed (P) (RPMS)</u>	<u>Speed (S) (RPMS)</u>	<u>TRA Corr. (ft.)</u>
043	2-12	131752	160936	+2.6	+0.3	2200	2200	+2.9
043	2-12	161651	175213	+2.6	+0.5	2000	2000	+3.1
044	2-13	161649	180100	+2.6	+0.3	1500	1500	+2.9
053	2-22	122556	134824	+2.6	+0.2	2300	2300	+2.8
053	2-22	135158	164216	+2.6	+0.2	2300	2300	+2.8
059	2-28	120334	121138	+2.6	+0.4	2100	2100	+3.0
059	2-28	121722	122805	+2.6	+0.5	1000	2400	+3.1
059	2-28	123001	123401	+2.6	+0.4	Stop	2200	+3.0
060	2-29	111626	121527	+2.6	+0.4	2200	2200	+3.0
060	2-29	144038	171903	+2.6	+0.2	2400	2400	+2.8
061	3- 1	131801	170952	+2.6	+0.2	2400	2400	+2.8
062	3- 2	112418	121129	+2.6	+0.2	2400	2400	+2.8
062	3- 2	121305	121723	+2.6	+0.1	3000	2600	+2.5
062	3- 2	121724	172045	+2.6	+0.2	2400	2400	+2.8
066	3- 6	141745	143306	+2.6	+0.5	2000	2000	+3.1
066	3- 6	143407	154016	+2.6	+0.3	2300	2300	+2.9
066	3- 6	160034	174209	+2.6	+0.4	2100	2100	+3.0
067	3- 7	115149	145028	+2.6	+0.2	2400	2400	+2.8
067	3- 7	153839	160734	+2.6	+0.5	2000	2000	+3.1
069	3- 8	112148	172811	+2.6	+0.4	2100	2100	+3.0

Launch MI-5

One Engine

048	2-17	141114	173017	+2.0	+0.6	2000		+2.6
049	2-18	112632	172007	+2.0	+0.6	2200		+2.6
056	2-25	115805	180404	+2.0	+0.6	2100		+2.6

Abstract of Hi-Fix Lane CorrectorsLaunch MI-6

<u>Julian Day</u>	<u>Time (GMT)</u>	<u>P1 Corr.</u>	<u>P2 Corr.</u>	
043	131752	+0.16	-0.69	
	161621	+0.16	+0.31	
044	161649	+0.20	-0.67	
	173430	+0.18	-0.69	
053	122556	-0.05	-0.27	
	134736	-0.17	-0.31	
059	120334	-0.82	-0.35	
060	111626	+0.20	-0.35	
	144038	+0.27	-0.33	
	160701	+0.33	-0.27	
061	131801	+0.12	-0.39	
062	112418	-0.04	-0.32	
	152138	-0.05	-0.29	
	164825	-0.05	-0.27	
	165137	-0.05	-0.21	
	165621	-0.05	-0.15	
	170222	-0.05	-0.09	
	170903	-0.05	-0.03	
	171527	-0.05	+0.03	
	066	141745	-0.08	+0.21
		160034	-0.12	+0.26
067	115149	-0.05	+0.24	
	131622	-0.15	+0.25	
	153839	-0.15	+0.22	
068	160734	-0.12	+0.28	
	115420	-0.11	+0.26	
069	112148	-0.07	+0.22	
	124301	-0.10	+0.26	
	144925	-0.13	+0.30	
	153016	-0.14	+0.30	

Launch MI-5

048	141114	-0.73	+0.21
049	112632	+0.30	-0.23
	123837	+0.16	-0.09
056	115805	+0.22	-0.34

TC/TI Tape

MI-10-1-72 H-9264

Launch MI-6

Time (GMT)	Not Used	TRA Corrector	Velocity Table	Julian Day	VESNO	Sheet Number
140600	0	0000	0099	042	222600	009264
154500	0	0000	0099	042	222600	009264
113900	0	0000	0002	043	222600	009264
235959	0	0000	0002	069	222600	009264

Launch MI-5

141114	0	0000	0001	048	222500	009264
235959	0	0000	0001	056	222500	009264

VELOCITY TABLE 01

CORRECTION TO DEPTH		CORRECTION TO DEPTH	
- .6	2.6	15.5	300.0
.4	5.3	16.0	309.0
.2	8.1	16.5	320.0
0.0	11.0	17.0	330.0
+ .2	13.8	17.5	340.0
.4	16.9	18.0	350.0
.6	19.8	18.5	360.0
.8	22.7	19.0	370.0
1.0	25.3	19.5	379.0
1.2	28.1	20.0	388.0
1.4	31.0	20.5	398.0
1.6	33.9	21.0	410.0
1.8	36.8	21.5	421.0
2.0	39.3	22.0	430.0
2.2	42.4	22.5	442.0
2.4	45.5	23.0	452.0
2.6	49.1	23.5	463.0
2.8	52.9	24.0	475.0
3.0	56.5	24.5	485.0
3.2	60.0	25.0	495.0
3.4	64.0	25.5	505.0
3.6	67.4	26.0	515.0
3.8	71.5	26.5	525.0
4.0	78.4	27.0	536.0
4.5	87.5	27.5	546.0
5.0	97.0	28.0	555.0
5.5	106.1	28.5	565.0
6.0	116.0	29.0	575.0
6.5	125.0	29.5	585.0
7.0	134.4	30.0	597.0
7.5	143.6	30.5	607.0
8.0	153.0	31.0	617.0
8.5	162.5	31.5	627.0
9.0	172.0	32.0	638.0
9.5	181.0	32.5	649.0
10.0	191.0	33.0	660.0
10.5	200.0	33.5	672.0
11.0	212.0	34.0	685.0
11.5	221.0	34.5	696.0
12.0	231.0	35.0	708.0
12.5	240.0	35.5	720.0
13.0	251.0	36.0	731.0
13.5	262.0	36.5	745.0
14.0	270.0	37.0	756.0
14.5	280.0		
15000	290.0		

VELOCITY TABLE 02

CORRECTION TO DEPTH		CORRECTION TO DEPTH	
- .8	1.2	14.0	275.0
.6	4.6	14.5	285.0
.4	7.6	15.0	294.0
.2	10.9	15.5	305.0
0.0	14.0	16.0	315.0
+ .2	17.0	16.5	324.0
.4	20.1	17.0	334.0
.6	23.4	17.5	343.0
.8	26.6	18.0	353.0
1.0	29.8	18.5	362.0
1.2	32.9	19.0	372.0
1.4	36.0	19.5	380.0
1.6	40.0	20.0	390.0
1.8	43.9	20.5	400.0
2.0	47.8	21.0	411.0
2.2	51.5	21.5	421.0
2.4	55.0	22.0	432.0
2.6	58.6	22.5	442.0
2.8	62.4	23.0	452.0
3.0	66.1	23.5	463.0
3.2	69.9	24.0	473.0
3.4	73.5	24.5	483.0
3.6	777.2	25.0	494.0
3.8	81.2	25.5	504.0
4.0	87.5	26.0	514.0
4.5	97.0	26.5	523.0
5.0	106.4	27.0	533.0
5.5	115.5	27.5	541.0
6.0	124.6	28.0	551.0
6.5	134.2	28.5	562.0
7.0	143.4	29.0	572.0
7.5	152.9	29.5	583.0
8.0	162.1	30.0	594.0
8.5	171.5	30.5	605.0
9.0	180.6	31.0	615.0
9.5	190.0	31.5	626.0
10.0	199.5	32.0	638.0
10.5	210.0	32.5	650.0
11.0	219.0	33.0	660.0
11.5	228.0	33.5	674.0
12.0	236.0	34.0	685.0
12.5	248.0	34.5	696.0
13.0	257.0	35.0	708.0
13.5	266.0	35.5	720.0

VELOCITY TABLE 02

CORRECTION TO	DEPTH	CORRECTION TO	DEPTH
36.0	735.0	43.5	920.0
36.5	745.0	44.0	935.0
37.0	757.0	44.5	947.0
37.5	770.0	45.0	959.0
38.0	784.0	45.5	971.0
38.5	795.0	46.0	985.0
39.0	806.0	46.5	1000.0
39.5	820.0	47.0	1014.0
40.0	834.0	47.5	1025.0
40.5	845.0	48.0	1037.0
41.0	857.0	48.5	1050.0
41.5	870.0	49.0	1065.0
42.0	883.0	49.5	1077.0
42.5	896.0	50.0	1090.0
43.0	906.0		

SETTLEMENT AND SQUAT ABSTRACT

LAUNCH MI-3 14 Feb. 1972 Transducer depth 1.8'

1. Two engines running

<u>RPM'S</u>	<u>PASS#1</u>	<u>PASS#2</u>	<u>PASS#3</u>	<u>PASS#4</u>	<u>Mean Diff.</u>	<u>Correction</u>
DIW	8.1	8.1	8.15	-	0.0	0.0
SLOW	8.15	8.1	8.15	-	+0.05	0.0
HALF	8.05	8.15	8.15	-	0.0	0.0
HYDRO(3/4)	8.0	7.95	8.0	8.0	-0.1	-0.1
FULL	8.0	7.95	7.95	7.95	-0.15	-0.2

2. One engine running(port)

<u>RPM'S</u>	<u>PASS#1</u>	<u>PASS#2</u>	<u>PASS#3</u>	<u>PASS#4</u>	<u>MEAN DIFF.</u>	<u>CORRECTION</u>
HALF	8.15	8.15	-	-	+0.05	0.0
Test stopped due to engine overheating-Used same values obtained from starboard engine test.						

3. One engine running(stbd.)

<u>RPM'S</u>	<u>PASS#1</u>	<u>PASS#2</u>	<u>PASS#3</u>	<u>PASS#4</u>	<u>MEAN DIFF.</u>	<u>CORRECTION</u>
HALF*	8.15	8.15	8.15	-	+0.05	0.0
FULL*	8.15	8.1	8.1	-	0.0	0.0

*FULL or HYDRO

LAUNCH MI-5 14 Feb. 1972 Transducer depth 2.0'

<u>RPM'S</u>	<u>PASS#1</u>	<u>PASS#2</u>	<u>PASS#3</u>	<u>MEAN DIFF.</u>	<u>CORRECTION</u>
DIW	6.05	6.0	6.05	0.0	0.0
1000	6.15	6.15	6.1	+0.05	0.0
1500	6.3	6.27	6.3	+0.25	+0.2
2000	6.65	6.65	6.6	+0.60	+0.6

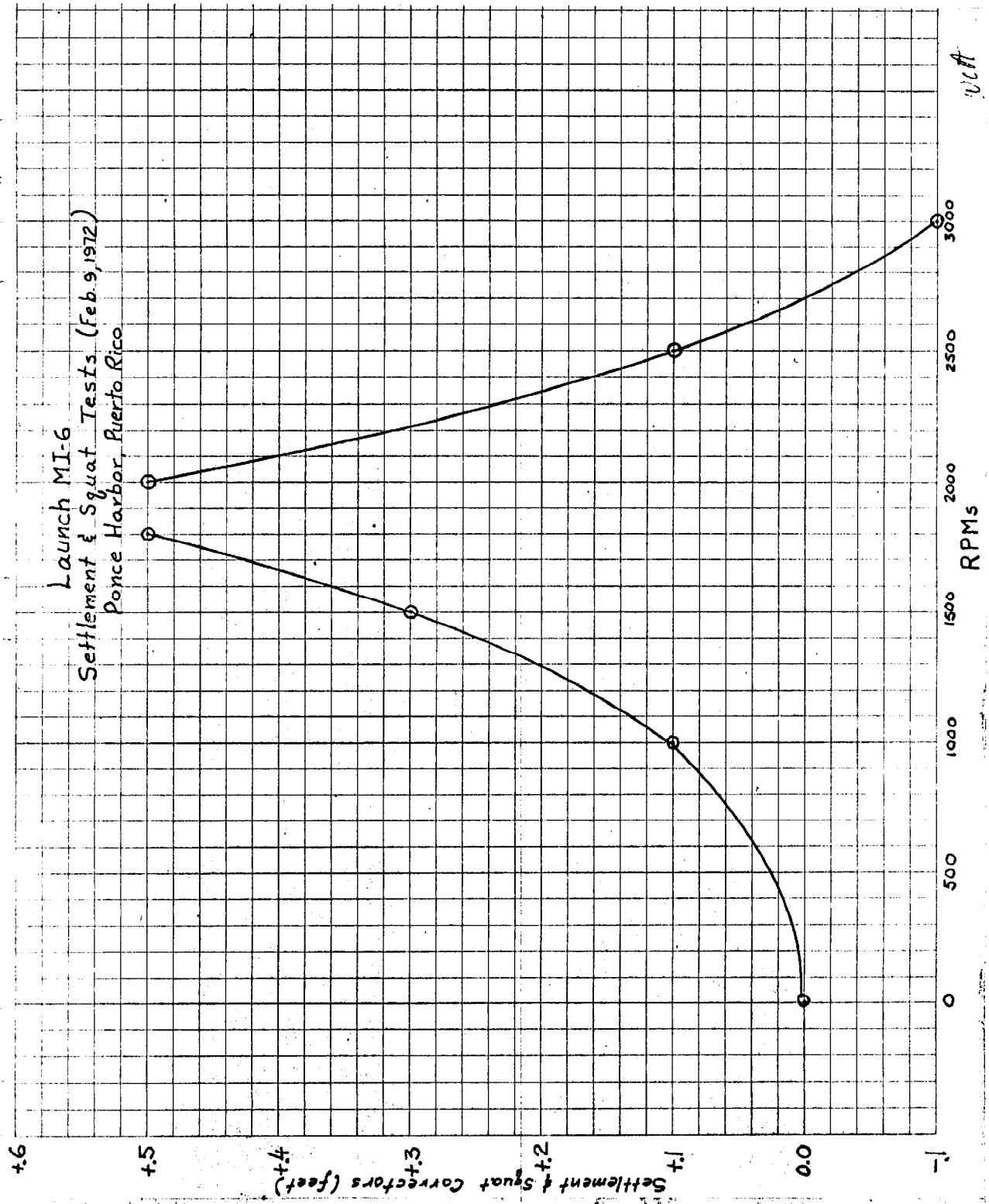
LAUNCH MI-6 9 Feb. 1972 Transducer depth 2.6'

Both engines running

<u>RPM'S</u>	<u>PASS#1</u>	<u>PASS#2</u>	<u>PASS#3</u>	<u>MEAN DIFF.</u>	<u>CORRECTION</u>
DIW	7.3	7.3	7.3	0.0	0.0
1000	7.45	7.5	7.4	+0.15	+0.1
1500	7.6	7.75	7.6	0.35	+0.3
1800	7.8	7.8	7.8	0.5	0.5
2000	7.85	7.8	7.8	0.5	0.5
2500	7.45	7.4	7.4	0.1	0.1
FULL*	7.15	7.15	7.0	-0.1	-0.1

* 3000(port), 2600(stbd.)

Launch MI-6
 Settlement & Squat Tests (Feb. 9, 1972)
 Ponce Harbor, Puerto Rico



FORM C&GS-733M (6-66)		U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY ESSA									
VESSEL MT MITCHELL		OCEANOGRAPHIC LOG SHEET - M BOTTOM SEDIMENT DATA									
NOAA SHIP MT MITCHELL		Boatsheet MI-10-1-72 H-9264									
PRJ. NO. DPR-423-MI-72		YEAR 1972									
DATE (1972) Feb.		Puerto Rico (South Coast)									
SERIAL NO.	DATE (1972) Feb.	SAMPLE POSITION		DEPTH feet	WEIGHT SAMPLER	AP. PEN- TRA- TION	LENGTH OF CORE	COLOR SED- IMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, deposition, etc.)	OBS. INIT.
		NORTH LATITUDE	WEST LONGITUDE								
1	11	55.7'	36.9'	52	14LB	NA	NA	-----	Ms	Leadline sounding Pos. No. 0001	JM
2	11	55.0'	37.0'	78				-----	Ms	Leadline sounding Pos. No. 0002	JM
3	11	54.4'	36.8'	54				white	wh Co	Leadline sounding Pos. No. 0003	JM
4	11	54.4'	35.9'	101				brown	crs br S brk Sh	Leadline sounding Pos. No. 0004	JM
5	12	54.9'	35.9'	100				brown	fne br S brk Sh	Pos. No. 0005	JM
6	12	55.5'	35.8'	99				brown	fne br S Sh	Pos. No. 0006	JM
7	13	55.6'	35.3'	98				brown	sft br M	Pos. No. 0099	JM
8	13	54.9'	35.4'	104				brown	crs br S brk Sh	Pos. No. 0100	JM
9	13	54.9'	34.9'	108				brown	fne br S brk Sh	Pos. No. 0101	JM
10	13	54.4'	35.4'	142				brown	sft br M	Pos. No. 0102	JM
11	13	54.5'	34.8'	128				brown	fne br S Sh	Pos. No. 0103	JM
12	13	55.6'	34.7'	100				brown	sft br M brk Sh	Pos. No. 0104	JM
13	13	55.5'	34.3'	104				brown	sft br M Sh	Pos. No. 0105	JM
14	13	55.6'	33.7'	105				brown	sft br M Sh	Pos. No. 0106	JM
15	13	55.6'	33.0'	105				brown	sft br M Sh	Pos. No. 0107	JM
16	13	55.0'	33.2'	111				brown	sft br M Sh	Pos. No. 0108	JM
17	13	55.8'	33.3'	115				brown	sft br M Sh	Pos. No. 0109	JM

Use more than one line per sample if necessary.

FORM C&GS-733M (6-66)		U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY		OCEANOGRAPHIC LOG SHEET - M BOTTOM SEDIMENT DATA		Boatsheet MI-10-1-72 H-9264		DATE CHECKED												
VESSEL NOAA Ship MT MITCHELL		PROJ. NO. QPR-423-MI-72		YEAR 1972		Puerto Rico (South Coast)		CHECKED BY T. J. McConnell												
Using snapper type sampler imbedded in a 10 lb. sounding lead		SAMPLE POSITION		DEPTH		WEIGHT OF SAMPLE		AP. PROX. PENETRATION		LENGTH OF CORE		COLOR OF SEDIMENT		FIELD DESCRIPTION		REMARKS		OBS.		
SERIAL NO.	DATE (1972)	North	West	Log	Use	Feet	Pounds	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet
18	March 8	51.8'	30.2'	17°	66°	74	14 lb.	NA	NA	NA	NA	NA	NA	Co	Co	Pos. No. 1131				JS
19	8	51.8'	29.7'			72								Wd Co	Wd Co	Pos. No. 1132				JS
20	8	52.3'	29.6'			49								Co	Co	Pos. No. 1133				JS
21	8	52.4'	30.4'			55								Co Sh	Co Sh	Pos. No. 1134				JS
22	8	51.7'	30.2'			74								Co	Co	Pos. No. 1135				JS
23	8	51.7'	31.1'			57								Co Sh	Co Sh	Pos. No. 1136				JS
24	8	52.4'	31.1'			39								Co	Co	Pos. No. 1137				JS
25	8	52.5'	31.7'			40								fne br S Co Wd	fne br S Co Wd	Pos. No. 1138				JS
26	8	51.7'	31.7'			49								Co	Co	Pos. No. 1139				JS
27	8	51.7'	32.6'			66								Co Sh	Co Sh	Pos. No. 1140				JS
28	8	52.4'	32.4'			70								Co Sh	Co Sh	Pos. No. 1141				JS
29	8	52.5'	33.1'			67								Co	Co	Pos. No. 1142				JS
30	8	51.2'	33.2'			97								fne br spk S Sh	fne br spk S Sh	Pos. No. 1143				JS
31	8	51.9'	34.0'			103								fne br S Sh Co	fne br S Sh Co	Pos. No. 1144				JS
32	8	52.7'	34.2'			141								Co Sh	Co Sh	Pos. No. 1145				JS
33	8	52.7'	33.4'			118								fne br S Sh	fne br S Sh	Pos. No. 1146				JS
34	8	53.4'	34.0'			129								sft gy M Sh	sft gy M Sh	Pos. No. 1147				JS

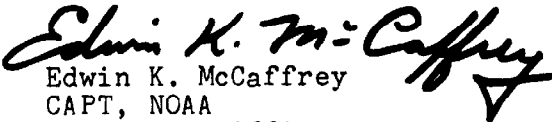
Use more than one line per sample if necessary.

Approval Sheet

Field Number MI-10-1-72

Registry Number H-9264 (1972)

The field work and processing of data from this hydrographic survey was under my immediate daily supervision. The boat-sheet (Sheets A, B, C) and all records have been reviewed and are approved by me. This survey is complete and adequate to supersede all prior surveys of the area.


Edwin K. McCaffrey
CAPT, NOAA
Commanding Officer

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H-9264

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has not~~ been made. A new final sounding printout has/~~has not~~ been made.

Date: February 26, 1975

Signed:

William L. Jonns

Title: William L. Jonns
Chief, Verification Branch

- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic and AMC Manuals. Exceptions are listed in the verifier's report.

Date: February 26, 1975

Signed:

C. Dale North, Jr.

Title: C. Dale North, Jr. LCDR, NOAA
Chief, Processing Division

ATLANTIC MARINE CENTER
VERIFICATION OF SMOOTH TIDES

SURVEY H-9264

PLANE OF REFERENCE _____ MLW OR MLLW
TIME MERIDIAN _____ GMT
HEIGHT DATUM ON STAFFS 1. 3.4 2. _____ 3. _____

TIDE STATIONS	POSITION	TYPE GAGE	TIME CORR.		HEIGHT CORR. *	
			H.W.	L.W.	H.W.	L.W.
1. Muelle de Ponce	Ø 17° 58.2'N Y 66° 37.2'W	Bubbler				
2.	Ø Y					
3.	Ø Y					

HOURLY HRIGHTS FROM ROCKVILLE OFFICE
 FROM FIELD MARIGRAMS VERIFIED BY: Rockville

TIDE ZONING NOT APPLICABLE
 BY COMPUTER
 FROM TWO OR MORE GAGES

LIMITS AND DESCRIPTION OF ZONING METHODS

Direct on Muelle de Ponce. ✓

TIDE CORRECTIONS COMPILED BY COMPUTER
 MANUALLY VERIFIED BY: R. Cram
VERIFIED BY: _____

HEIGHT OF MHW ABOVE PLANE OF REFERENCE 0.7

TIDE CORRECTIONS VERIFIED ON SOUNDING PRINTOUT BY: R. Cram

DATE OF VERIFICATION 5 June 1974

*OR RATIO

[Signature]
EXAMINED & APPROVED

4/16/74

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): Muelle de Ponce

Period: 3 Feb. - 25 May, 1972

HYDROGRAPHIC SHEET: H-9264

OPR: 423

Locality: South Coast of Puerto Rico

Plane of reference (mean ~~lower~~ low water): 3.4 ft.

Height of Mean High Water above Plane of Reference is 0.7 ft.

Remarks: Zone direct on Muelle de Ponce gage.
Note: Tabulations on GMT.


Chief, Tides Branch

GEOGRAPHIC NAMES

H-9264

Name on Survey	A ON CHART NO.		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	

Isla Caja de Muertos																			1
Playa de Ponce																			2
																			3
																			4
																			5
																			6
																			7
																			8
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																			21
																			22
																			23
																			24
																			25

Approved
 Chas. E. Harrington
 Staff Geographer - C51x2
 31 Oct. 1975

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9261 (MI-10-1-72)

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO.		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS (Junctions in Compass) 1000 6			
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1					
VOLUMES	3 (Hydro. operat. log)					
BOXES			1 & 1-Bundle			
T-SHEET PRINTS (List) None						
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				1714
POSITIONS CHECKED		500	-	
POSITIONS REVISED		60	-	
DEPTH SOUNDINGS REVISED		270	10	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		1195	-	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED			-	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS			1	
JUNCTIONS		8	8	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		5	8	
SPECIAL ADJUSTMENTS			-	
ALL OTHER WORK		185	31	
TOTALS		198	54	
PRE-VERIFICATION BY M.W. Johnson, D.C. Calland		BEGINNING DATE May 1, 1974	ENDING DATE Sept. 5, 1974	
VERIFICATION BY <i>Harry R. Smith</i>		BEGINNING DATE 10/22/74	ENDING DATE 12/2/74	
REVIEW BY R. D. Sanocki: <i>casters 2/2/76</i>		BEGINNING DATE Sept. 30, 1975	ENDING DATE Oct. 28, 1975	

2025 INSPECTED BY F. SAULSBURY

1-20-76 1-23-76 (2 hrs)
U.S. G.P.O. 1972-769-562/439 REG.#6

H-9264 (1972)

Items for Future Presurvey Reviews

This is an area with a stable bottom; however, undetected isolated coral heads may exist upon the many shoal areas indicated within the present survey.

The following soundings carried forward from the prior surveys are not in harmony with present depths and should be verified or disproved:

<u>Sounding (Feet)</u>	<u>Latitude</u>	<u>Longitude</u>
45	17°52.3'	63°32.75'
49	17°52.35'	63°33.0'

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle (Years)</u>
175	0663	2	1	50
175	0664	2	2	50

OFFICE OF MARINE SURVEYS AND MAPS
MARINE CHART DIVISION
MODIFIED HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9264

FIELD NO. MI-10-1-72

Puerto Rico, Off Playa de Ponce, Vicinity of Isla Caja de Muertos

SURVEYED: February 12, 1972 - March 9, 1972

SCALE: 1:10,000

PROJECT NO.: OPR-423

SOUNDINGS: Ross 5000 Depth Recorders

CONTROL: Hi-Fix
(Hyperbolic)

Chief of Party	E. K. McCaffrey
Surveyed by	G. M. Adair
.....	W. A. Adams
.....	G. R. Bass
.....	C. R. Berman
.....	W. R. Curtis
.....	C. W. Fisher
.....	K. F. Freese
.....	M. F. Kolesar
.....	R. Lawson
.....	M. C. Meyer
.....	A. J. Pickrell
.....	D. L. Stockwell
.....	J. L. Warner
.....	S. L. Wood
Automated Plot by	Calcomp Plotter 618 (AMC)
Verified by	H. R. Smith
Reviewed by	R. D. Sanocki
.....	Date: October 28, 1975
Inspected by	F. P. Saulsbury

1. Control and Shoreline

The origin of the control is adequately described in section F of the Descriptive Report.

This is an offshore survey and consequently no shoreline is shown on the smooth sheet.

2. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves were adequately delineated.

C. The development of the bottom configuration and the investigation of least depths are considered adequate.

3. Condition of the Survey

The survey records, automated plotting, Descriptive Report, and verification are adequate and conform to the requirements of the Hydrographic Manual as amended by the Instruction Manual - Automated Hydrographic Surveys, except that some machine-plotted soundings appearing on the smooth sheet are noted on the final printout as having been excessed while others printed as excessed are plotted. Also, soundings taken out of excess and manually drafted by the verifier are not so noted on the final printout.

4. Junctions

Adequate junctions were effected with H-9186 (1971) on the north and H-9034 (1969) on the west. H-9266 (1972) on the south was not available at the time of this review and will subsequently be considered in the review of that survey. The junction with H-9265 (1972) on the east is discussed in the review of that survey.

5. Comparison with Prior Surveys

H-2420	(1899)	1:20,000
H-2736	(1905-06)	1:40,000

These surveys taken together cover the area of the present survey. A comparison of these surveys with the present survey revealed H-2736 (1905-06) to be in substantial agreement with the present survey considering the difference in scale and survey methods; however, many erratic differences were apparent between H-2420 (1899), the present survey, and H-2736 (1905-06). These differences are attributed to the survey methods employed in the prior surveys.

Attention is directed to the following:

A. The two 58-foot depths in the vicinity of latitude $17^{\circ}55.5'$, longitude $66^{\circ}35.0'$ charted from H-2420 fall in depths of about 107 feet on the present survey and also on H-2736. These are two soundings on a line of no bottom soundings and are unsupported by other depths. They are considered to be in error and should be disregarded.

B. The 42-foot depth charted at latitude $17^{\circ}55.2'$, longitude $66^{\circ}33.7'$ from H-2736 falls in 65-foot depths on the edge of a shoal developed on the present survey with least depths of 49-50 feet. The sounding was probably recorded in error, a 7 for an 11, and should be disregarded.

C. The 74-foot depth charted from H-2420 in latitude $17^{\circ}54.88'$, longitude $63^{\circ}33.88'$ and the 77-foot depth charted 200 meters to the northwest fall in present depths of 118 feet. They may have been inadvertently excluded from the series of no bottom soundings which followed. The 74 and 77 should be disregarded.

D. The 100-foot depth charted in latitude $17^{\circ}53.7'$, longitude $66^{\circ}33.8'$ falls in present depths of 133 feet. Numerous other charted soundings in this vicinity and to the southeastward are shoaler than present depths by 10 to 20 feet. Scouring has apparently occurred in this area, and the prior depths should be disregarded.

With the addition of several depths brought forward from the prior surveys, the present survey is considered adequate to supersede the prior surveys within the common area.

6. Comparison with Charts 926, 4th Ed., February 5, 1972
 25683, 10th Ed., June 28, 1975
 902, 12th Ed., April 6, 1974
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A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which need no further consideration, supplemented by applications from the boat sheets (Bps 84043-47) of the present survey and the smooth sheet of the present survey before review.

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

B. Aids to Navigation

There are no aids to navigation charted within the area of the present survey.


7. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

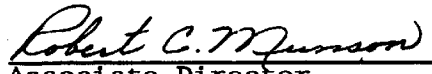
8. Additional Field Work

This is considered to be a very good basic survey and no additional field work is recommended.

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys
and Maps

REGISTRY NO. _____

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 REQUIRED _____ INITIALS _____

REMARKS:

REGISTRY NO. H9264

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE 12/10/80 TIME REQUIRED _____ INITIALS FEK

REMARKS:

