

12152

Original

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	SHORELINE (Photogrammetric)
Field No.	Office No. T-12152
LOCALITY	
State	PUERTO RICO
General locality	EAST COAST
Locality	PUNTA BARRANCAS TO ISLA PINEROS
1958 1961-62	
CHIEF OF PARTY	
M. L. Olivier, Chief of Party 708	
V. R. Sobieralski, Tampa District Officer	
LIBRARY & ARCHIVES	
DATE	1 JUL 1968

USCOMM-DC 5087

DESCRIPTIVE REPORT - DATA RECORD

T-12152

Project No. (II): PH-6106

Quadrangle Name (IV):

Field Office (II): Puerto Rico

Chief of Party: M. L. Olivier

Photogrammetric Office (III): Tampa, Florida

Officer-in-Charge: V. R. Sobieralski

Instructions dated (II) (III): Field and Office - Aug. 30, 1961

Copy filed in Division of  
Photogrammetry (IV)

Amendment " " "

Jan. 15, 1962 \*

\* Interior planimetry restricted to those features  
useful to photo hydro support. 15%

Method of Compilation (III): Kelsh Plotter

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1:6,000

Scale Factor (III): Pantographed to 1:10,000

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

APRIL 11, 1968

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): Puerto Rico

Vertical Datum (III): MHW

~~Mean low water~~ except as follows:  
Elevations shown as (25) refer to mean high water  
Elevations shown as (5) refer to sounding datum  
i.e., mean low water or mean lower low water

Reference Station (III): MEDIO, 1941

Lat.: 18°15'45.354" (1394.4m)

Long.: 65°36'23.395" (687.2 m)

Adjusted

~~Unadjusted~~

Plane Coordinates (IV):

State: Puerto Rico Zone: Puerto Rico

Y= 156,516.74 FT.

X= 786,862.44 FT.

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,  
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

DESCRIPTIVE REPORT - DATA RECORD


S H O R E L I N E

Areas contoured by various personnel  
(Show name within area)  
(II) (III)

Inapplicable



DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): M. L. Olivier

5 Dec. 1961  
(See Repeat)  
SGD

No field inspection report available, nor were dates shown on field photos, CSI cards shows date as Dec. 1961

Planetable contouring by (II): Inapplicable

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location): Air photo compilation  
Date of photography: April 1959, Oct. 1961

Projection and Grids ruled by (IV): A.R. (Washington Office)

Date: April 1962

Projection and Grids checked by (IV): A.R. " "

Date: April 1962

Control plotted by (III): I. I. Saperstein

Date: April 1962

Control checked by (III): I. I. Saperstein

Date: April 1962

~~Recheck of~~ Stereoscopic

Date: March 1962

Control extension by (III): R. E. Fueshsel (W.O.)

Planimetry I. I. Saperstein

Date: April 1962

Stereoscopic Instrument compilation (III):

~~Outlooks~~

Date:

Manuscript delineated by (III): I. I. Saperstein

Date: April 1962

Photogrammetric Office Review by (III): W. H. Shearouse

Date: May 1962

Elevations on Manuscript

Date:

checked by (II) (III): Inapplicable

See page 18 for note pertaining to  
field edit. 17



## DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): Wild "W" and "S" 4

## PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
61W-1681	Oct. 26, 1961	15:03	1:30,000(Diaposi-	0.9
59S-3943	Apr. 18, 1959	11:57	" tives)	0.1
59S-3944	" "	" "	"	0.1
59S-3945	" "	11:58	"	0.1
59S-3946	" "	" "	"	0.1
58-S-2576 thru 2578	1958	12:15	1:10,000(Color	
58-S-2744 "	2746	10:42	" Photos)	
58-S-2800 "	2802	11:10	"	
58-S-2808 "	2809	11:12	"	
58-S-3054 "	3063	11:47	"	
62-S-146-148, 210-212 Feb. 15, 1962				
62-S-478-484, 514-516 " 17 "				

## Predicted Tide (III)

Reference Station: San Juan, P. R.  
Subordinate Station: Bahia de Fajardo  
Subordinate Station:

Atlantic Marine Center  
Washington Office Review by (IV):

Scribed  
Final Drafting by (IV): B. Barge

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Diurnal		
Ratio of Ranges	Mean Range	Spring Range
-	1.1	1.3
1.0	1.1	1.4

Date: Nov. 1967

Date: July 1966

Date:

Date:

Land Area (Sq. Statute Miles) (III): Shoreline only  
Shoreline (More than 200 meters to opposite shore) (III): 13.5  
~~Shoreline (Less than 200 meters to opposite shore) (III):~~  
Control Leveling - Miles (II): Inapplicable  
Number of Triangulation Stations searched for (II): 16\*  
Number of BMs searched for (II): None  
Number of Recoverable Photo Stations established (III): 0  
Number of Temporary Photo Hydro Stations established (III): 2\*\*

Recovered: 9\*

Identified: 2

Recovered: 0

Identified: 0

Remarks: \* Including 1 station west of T-12152  
\*\* " 1 " North " " (No. 110)







SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT T-12152

Shoreline manuscript T-12152 is one of sixteen 1:10,000 scale surveys in PH-6106 Puerto Rico, which also contains eight 1:5,000 scale surveys. The sketch on page 5 of this report shows the position of this manuscript in the project. It is noted that 1:5,000 scale maps T-12143 and T-12146\*, and 1:10,000 scale maps T-12150, T-12151, and T-12161 of this project are ~~in a postponed status until some future date.~~ \* T-12144 cancelled.

M.M.S.

This is a stereo-instrument project in advance of hydrographic surveys of the area. Field inspection was done on 1:10,000 ratio prints from 1:30,000 panchromatic photographs made with the "S" camera April 18, 1959, and with the "W" camera on Oct. 26, 1961. The same photography was used for compilation. Color prints at 1:10,000 taken with the "S" camera during 1958 were furnished for reference. 1:10,000 color photographs taken with the "S" camera on February 15, and 17, 1962 were available for map completion and final review. The stereo-bridge was run and adjusted to field identified control in the Washington Office. Compilation was done with the Kelsh Plotter. Ratio prints, at 1:10,000 scale were processed and provided for photohydro support.

Field work preceding compilation consisted of control identification and field inspection was provided for compilation. A limited field edit was done concurrently with hydrography, but it was so skimpy it has been classified as "NONE", please see FIELD EDIT REPORT on page 17.

The compilation manuscript was a vinylite sheet, 3 minutes 45 seconds in latitude, and 4 minutes, 45 seconds in longitude. The smooth manuscript was on cronaflex for registry and record after final review.



# *FIELD INSPECTION REPORT - 9 -*

## 2. AERIAL FIELD INSPECTION

*T-12139, T-12142, T-12145, T-12146, and T-12152 through T-12157,*

These shoreline sheets are located on the eastern coast of Puerto Rico. The area is undeveloped except for the village of Fajardo and the Roosevelt Roads Naval Reservation.

Field inspection was performed on photographs 59-S-3940 through 59-S-3949 and 59-S-3915 through 59-S-3923. Some difficulty of interpretation of the apparent MHWL was encountered around mangrove areas.

Three housing areas within the naval station were not field inspected. It is believed that the 1961 photographs will cover these spots. Also a small marina in Ensenada Honda was left for the 1961 photographs. A new marina, under construction, on the south side of Cayo Obispo (a small island just east of Playa de Fajardo) was left for field edit.

## 3. HORIZONTAL CONTROL

All Coast and Geodetic Survey control stations except four within the project limits were searched for. HOUSE, 1901; KID, 1941; MONTE, 1941; and NORTH, 1941 were not searched for because no descriptions were furnished. Only those stations as specified on the project diagram were photo-identified. One U. S. Geological Survey control station (CENTRAL FAJARDO, NORTH STACK, 1941) was recovered and photo-identified.

There were many triangulation stations that could not be recovered especially around the naval base. It is believed that much of this control was destroyed during construction of the base.

## 4. VERTICAL CONTROL

All tidal bench marks in the area were searched for. The one at Playa de Fajardo was recovered but the two in Ensenada Honda could not be found.

## 5. CONTOURS AND DRAINAGE

Contours were not a part of the work requirements for this project.

The drainage patterns can be distinguished on the photographs.

## 6. WOODLAND COVER

Woodland cover has been classified in accordance with the requirements for topographic maps. Wooded areas are adequately covered by the field inspection photographs.

Swamp areas were designated as mangrove. There is considerable mangrove throughout the area.

## 7. SHORELINE AND ALONGSHORE FEATURES

The mean high water line was inspected from a small boat and by walking along the shoreline.



The shoreline in places was visited at low water. The mean low water line is shown on the photographs in green ink.

The foreshore is steep in some places and somewhat flat in other places.

Docks, piers, wharves, etc. are adequately covered on the field inspection photographs.

One submerged cable was identified on the photographs.

#### 8. OFFSHORE FEATURES

Some offshore rocks were visited and their heights above MHW were noted. Coral is distinguishable on the photographs.

#### 9. LANDMARKS AND AIDS

Landmarks and aids to navigation located by photogrammetric methods are shown on the contact prints. One landmark, a tower on Pineros Island, was identified on the field inspection photographs.

All landmarks and aids to be charted or deleted are adequately covered on Form 567.

#### 10. BOUNDARIES, MONUMENTS, AND LINES

Boundaries were excluded by the project instructions.

#### 11. OTHER CONTROL

Existing objects suitable for photo hydro control were identified on the field inspection photographs. These are shown on the photographs by three digit numbers. Many of the landmarks and aids can be used for photo hydro control.

#### 12. OTHER INTERIOR FEATURES

All buildings and roads have been classified in accordance with project instructions dated 30 August 1961.

#### 13. GEOGRAPHIC NAMES

An investigation of geographic names was not required by the project instructions. It was noticed that the geographic names on the existing charts and quads of this area agree with one another and with the general opinion of the local people.

#### 14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

Contact photographs were forwarded to the Washington office by Letter of Transmittal No. PH-6106-3 dated 20 November 1961.

Submitted  
5 December 1961

*Michael L. Olivier*  
Michael L. Olivier  
Chief, Photo Branch 708

8.

PHOTOGRAMMETRIC PLOT REPORT  
PUERTO RICO, EAST COAST  
PROJECT PH-6106  
March, 1962

21. Area Covered:

T-12146;

T-12136 through T-12139; T-12141 through T-12148; T-12152  
through T-12161.

22. Method:

Five stereoplanigraph bridges were run in order to provide pass points for Kelsh compilation of the project.

Strip #4 was adjusted on a linear basis. All other strips were adjusted on a least-squares basis on the IBM 650 computer. Satisfactory adjustments were obtained for all strips in the project.

23. Adequacy of Control:

The horizontal control provided complied with project instructions, and was adequate. The following control failed to hold in bridging:

Δ PINERITA 2, 1941-SUB.PT. 2. This station had been designated as a poor image pt. at the time of bridging, and may safely be disregarded due to the proximity of other control that held in bridging.

24. Supplemental Data:

None

25. Photography:

The photography was adequate for the needs of aerotriangulation.

Submitted by:

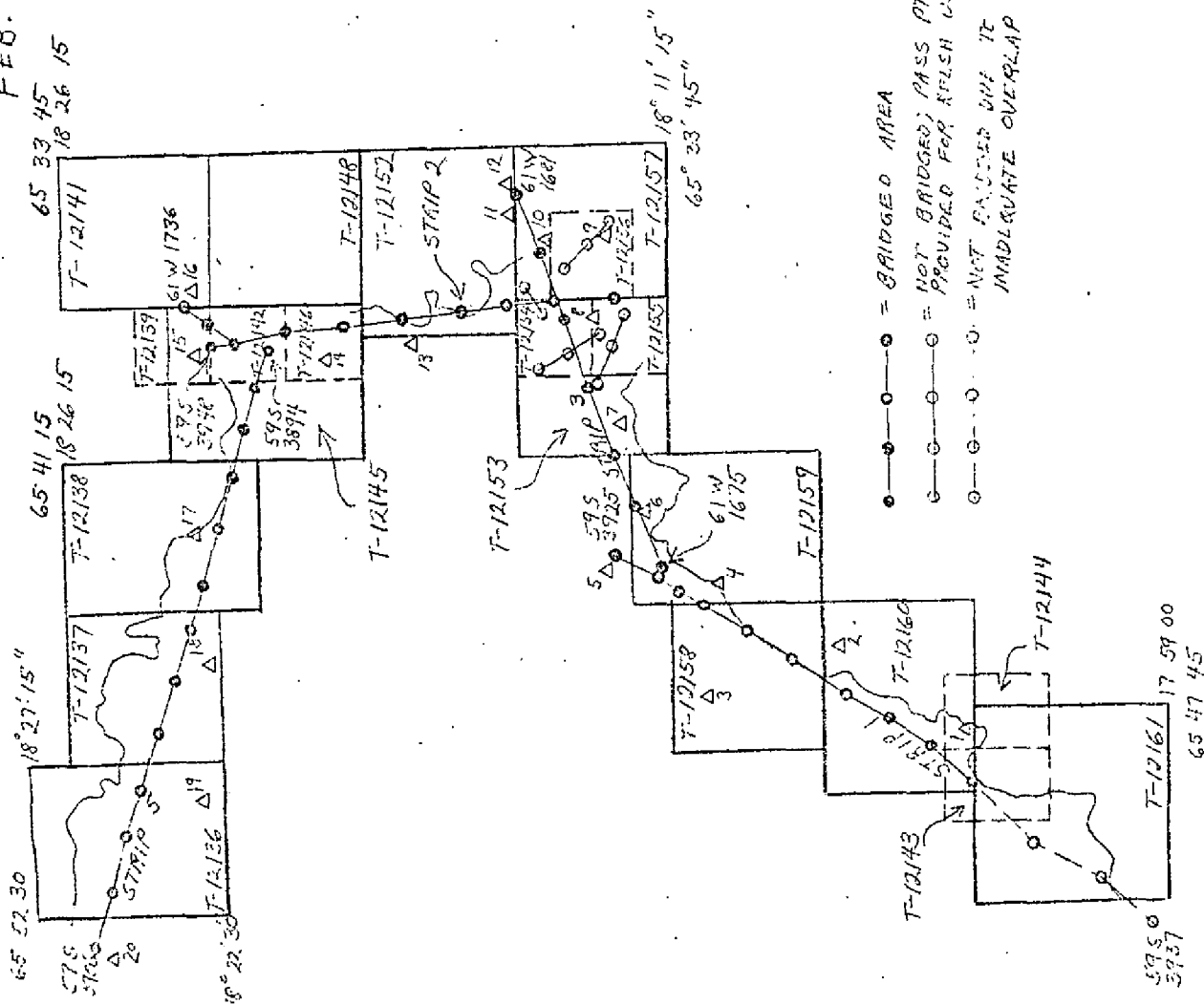
*R. E. Fuechsel*  
\_\_\_\_\_  
R. E. Fuechsel

Approved:

*E. H. Ramey*  
\_\_\_\_\_  
E. H. Ramey, Chief  
Aerotriangulation Section



Feb. 1962



TRIANGULATION LIST

1. GUAYANES 2, 1923-SUB. 1+2  
2. BATATA, 1901-SUB. 1+2  
3. PASTO VIEJO EASTERN  
SUGAR ASSN. WH. COM.  
STACK, 1941  
4. HUMACAO PLAYA CH,  
(USGS) 1934  
5. NAGUABO CH.(USGS) 1934  
6. COLON (USGS) 1941-SUB. 1+2  
7. LOMA 1941 - SUB. 1+2  
8. HONDA 1941- SUB. 1+2  
9. CABRAS IS. LT., 1941  
10. MONDO, 1926 - SUB. 1+2  
11. PUJERITA 2, 1941-SUB. 1+2  
12. CAÑAL DE SANJO LT., 1923  
13. PENEDO, 1941-SUB. 1+2  
14. CENTRAL FAJARDO  
NORTH STICK, 1941  
15. CAPE. 1901-SUB. 1+2



DESCRIPTIVE REPORT CONTROL RECORD

MAP T- 12152 PROJECT NO. PH-6106 SCALE OF MAP 1:10,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (1 Ft. = 304.8006 meter)	
				FORWARD	(BACK)
PENEDO, 1941	✓	Puerto Rico	166 440.2 775 601.8		
CABEZA de PERRO LT. 1923	✓	Puerto Rico	152 584.03 797 228.97		
LUNA, 1941	✓	Puerto Rico	154 025.52 789 209.49		
MEDIO, 1941	✓	Puerto Rico	156 516.74 786 862.44		
PALMA, 1941	✓	Puerto Rico	163 573.55 778 254.76		
MOUND, 1941	✓	Puerto Rico	157 844.76 776 796.02		
PLAYA, 1941	✓	Puerto Rico	155 144.80 785 794.14		
CEIBA, SAN ANTONIO CATH. CH. CROSS, 1941	✓	Puerto Rico	157 916.31 772 203.13		OUTSIDE LIMITS
RED BLUFF, 1900	✓	Puerto Rico	174 184.27 780 050.82		
<del>RED BLUFF 2, 1922</del>	✓	Puerto Rico			
SANTA MARIA STACK, 1941	✓	Puerto Rico	161 856.69 775 287.28		9
PIEDRA, 1941	✓	Puerto Rico	155 101.57 793 983.39		
COMPUTED BY V. P. Cackowski	DATE 4/3/62	CHECKED BY I. I. Saperstein	DATE 4/12/62		



MAP T- 12152 PROJECT NO. PH-6106 SCALE OF MAP 1:10,000 SCALE FACTOR \_\_\_\_\_

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE		N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (1 ft. = 3048006 meter) FORWARD
					(BACK)
NORTH CABRAS ISLAND 1900-1941		Puerto Rico	151 803.29 797 176.91	<i>OUTSIDE</i>	<i>LIMITS</i>
FIGUERITA, 1941 ✓		Puerto Rico	161 142.67 779 949.80		
STUMP, 1941 ✓		Puerto Rico	152 104.08 792 176.44		
PINERITA 2, 1941		Puerto Rico	150 822.21 790 883.58 152 592.78	<i>OUTSIDE</i>	<i>LIMITS</i>
PINEROS 2, 1941 ✓		Puerto Rico	793 183.29 163 729.39 780 364.51		
FIG, 1901 ✓		Puerto Rico			
COMPUTED BY V. P. Cackowski	DATE 4/3/62	CHECKED BY I. I. Saperstein	DATE 4/12/62		



COMPILATION REPORT  
T-12152

PHOTOGRAMMETRIC PLOT REPORT

The bridge was run in the Washington Office and ~~the report is included with T-12157 Descriptive Report.~~ *see page 8*  
*Received by final review.*

31. DELINEATION

The Kelsh Plotter was used for delineation. The area east of Long.  $65^{\circ}37'$  and south of Lat.  $18^{\circ}16'$  was compiled from the 1961 photographs, used to compile T-12157 to the south. The remainder of the manuscript was compiled from 1959 photographs.

The color photographs were used as an aid in delineating rocks, coral and shallow areas.

The field inspection was generally adequate.

32. CONTROL

The density and placement of bridge points was adequate.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Inapplicable.

35. SHORELINE AND ALONGSHORE DETAILS

The mean high-water and low-water lines were delineated according to the field inspection, which was adequate. The shoal and shallow lines and limits of coral were delineated by office interpretation of the photographs. Several questionable coral areas have been called to the attention of the hydrographer (item 49).

36. OFFSHORE DETAILS

All rocks, detached ledges and coral areas that could be seen on the photographs were shown. The color prints furnished were particularly useful.



//

COMPILATION RECORD

COMPLETION DATE

REMARKS

Shoreline and alongshore pass points compiled	May 1962	
<i>Manuscript Complete</i>	<i>July 1966</i>	



37. LANDMARKS AND AIDS

One aid and four landmarks (one west of sheet) have been shown.

Form 567 is submitted for three landmarks. One landmark (TOWER) and the aid to navigation (Cabeza de Perro Light) were listed on form 567 with T-12157.

38. CONTROL FOR FUTURE SURVEYS

Two (2) photo-hydro stations (one north of sheets T-12148) were located and are listed under item 49.

Shoreline pass points have been located by the Kelsh plotter for the use of the hydrographer.

39. JUNCTIONS

Junctions have been made with:

T-12145 (1:10,000) to the northwest

T-12146 (1:5,000) to the north

T-12148 also to the north

T-12157 to the south

No junction to the west. Planimetric details were not compiled inland and the shoreline does not touch the western limits.

Water is to the east.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with USGS quadrangle "NAGUABO" dated 1958, "FAJARDO" and "PUNTA PUERCA" dated 1957, scale 1:20,000. The comparison is generally good.

Comparison has also been made with USC&GS topographic survey 6875, 6876a and 6877a, 1:4,800 edition of 1941. These surveys are obsolete for comparison purposes.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with Chart 917, 1:40,000 edition of May 6, 1930 revised Oct. 12, 1959. The comparison is generally good.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

*I. J. Saperstein*  
I. J. Saperstein  
Cartographer (Photo)

APPROVED AND FORWARDED

*V. Ralph Sobieralski*  
V. Ralph Sobieralski  
Tampa District Officer



GEOGRAPHIC NAMES  
FINAL REVIEW LIST  
PH-6106  
T-12152 (Shoreline)

*DEMAJAGUA - J.P.*

BAHIA ~~DEMAJAGUA~~

ISLA CABEZA DE PERRO  
ISLA PINEROS

PASAJE MEDIO MUNDO  
PUERTO MEDIO MUNDO  
PUNTA BARRANCAS  
PUNTA FIGUERAS  
PUNTA FIGUERITA  
PUNTA MATA REDONDA  
PUNTA MEDIO MUNDO

RIO DEMAJAGUA

SONDA DE VIEQUES

Names are from FINAL NAME SHEETS (3,4,and 6, of 7) on NAGUOBO, PUNTA  
PUERCA, and FAJARDO, PERTO RICO quadrangles.

M. M. Slavney  
Final Review

*Names approved  
May 29, 1968*

*A. J. Wright  
Frank W. Fickett*

49. NOTES FOR THE HYDROGRAPHER:

Two (2) photo-hydro stations have been located, one of which falls north of sheet (on T-12148).

110 (NE corner small concrete building)

113 (Control tower)

Several offshore areas have been outlined on the sheet because of their questionable nature. The hydrographer should determine if they are coral. Their locations are:

1. Offshore from Punta Barrancas
2. Offshore from Punta Mata Redonda
3. Area north of Punta Medio Mundo
4. Two detached areas north of Isla Pineros

The coral areas were identified but not delimited by the field inspector. Limits shown are from study of Kelsh models and color photographs, when available. The coral limits do not necessarily define the low water line; this has been left for investigation by the hydrographer.



TO BE CHARTED  
~~UNDETERMINED~~  
~~1946-1947~~

STRIKE OUT TWO

## NAVIGATION AIDS FOR LANDMARKS FOR CHARTS

Tampa District Office

April 30

19 62

I recommend that the following objects which have ~~(unexamined)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(charts)~~ the charts indicated.

The positions given have been checked after listing by

I. I. Saperstein

V. Ralph Schmalzer

Chief of Party.

STATE	PUERTO RICO			POSITION							METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE*		LONGITUDE*		DATUM								
				° ' "	D. M. METERS	° ' "	D. P. METERS									
STACK	N# 73 (91)	(Santa Maria Stack, 1941)		18 16	38.803 1193.0	65 38	23.262 885.3	Puerto Rico	P-12152	May 29* 1961	X	X	X	926 917		
CHURCH TOWER	N# 43 (118)	OUTSIDE LIMITS (Ceiba, San Antonio Catholic Church, cross, 1941)		18 15	59.869 1840.6	65 38	55.442 1628.6	"	P-12152	"	X	X	X	924 919		
RADIO TOWER	N# 137 (203)			18 15	59.00 1814	65 38	07.56 222	"	Photo P-12152	"	X	X	X	926 917		

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

\* TABULATE SECONDS AND METERS

USCOMMALDC 27126

16.

FORM 182 (3-61)		PHOTOGRAMMETRIC OFFICE REVIEW		U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY	
50		T- 12152			
1. PROJECTION AND GRIDS WHS		2. TITLE WHS		3. MANUSCRIPT NUMBERS WHS	
		4a. Classification label unclassified		4. MANUSCRIPT SIZE WHS	
CONTROL STATIONS	5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY WHS		6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (TOPOGRAPHIC STATIONS) XX		
	7. PHOTO HYDRO STATIONS WHS	8. BENCH MARKS XX	9. PLOTTING OF SEXTANT FIXES XX	10. PHOTOGRAMMETRIC PLOT REPORT W O BRIDGE	
	11. DETAIL POINTS KELSH				
ALONGSHORE AREAS (Nautical Chart Data)	12. SHORELINE WHS	13. LOW-WATER LINE XX	14. ROCKS, SHOALS, ETC. WHS	15. BRIDGES XX	
	16. AIDS TO NAVIGATION WHS	17. LANDMARKS WHS	18. OTHER ALONGSHORE PHYSICAL FEATURES WHS		
	19. OTHER ALONGSHORE CULTURAL FEATURES WHS				
PHYSICAL FEATURES	20. WATER FEATURES WHS		21. NATURAL GROUND COVER XX		
	22. PLANETABLE CONTOURS XX		23. STEREOSCOPIC INSTRUMENT CONTOURS XX		
	24. CONTOURS IN GENERAL XX		25. SPOT ELEVATIONS XX		
	26. OTHER PHYSICAL FEATURES WHS				
CULTURAL FEATURES	27. ROADS XX	28. BUILDINGS XX	29. RAILROADS XX		
	30. OTHER CULTURAL FEATURES XX				
BOUNDARIES	31. BOUNDARY LINES XX		32. PUBLIC LAND LINES XX		
MISCEL- LANEOUS	33. GEOGRAPHIC NAMES WHS			34. JUNCTIONS WHS	
	35. LEGIBILITY OF THE MANUSCRIPT WHS	36. DISCREPANCY OVERLAY XX		37. DESCRIPTIVE REPORT WHS	
	38. FIELD INSPECTION PHOTOGRAPHS WHS		39. FORMS WHS		
	SIGNATURE OF REVIEWER William H. Shearouse		SIGNATURE OF SUPERVISOR REVIEW SECTION OR UNIT Milton M. Slawney		
40. FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT-Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted in remarks on reverse side.					
SIGNATURE OF COMPILER			SIGNATURE OF SUPERVISOR		



## TIDE COMPUTATION

DIA. 1.4

PROJECT NO. Ph. 6106 T. 12152

Time and date of exposure 1157 Apr 18, 1959 Reference station San Juan Mean range 1.1 ✓  
 Date of field inspection Dec 1961 Subordinate station Bahia de Fajardo Ratio of ranges 1.0 ✓

	Time		Height feet	Height x Ratio of ranges
	h.	m.		
High tide	16	48	0.8	0.8 ✓
Low tide	10	59	0.0	0.0
Duration of rise or fall	5	49		0.8

	Time	
	h.	m.
High tide at Ref. Sta.	16	57
Time difference	-	09
Corrected time at Subordinate station	16	48

	Time	
	h.	m.
Low tide at Ref. Sta.	11	10
Time difference	-	11
Corrected time at Subordinate station	10	59

	h.	m.	Ht. H. T. or L. T. Tabular correction Stage of tide above MLW	feet	Photo. No.
Time H. T. or L. T.	10	59			
Required time Interval	11	57			5853944
		58			
Time H. T. or L. T.					
Required time Interval					
Time H. T. or L. T.					
Required time Interval					
Time H. T. or L. T.					
Required time Interval					
Time H. T. or L. T.					
Required time Interval					
Time H. T. or L. T.					
Required time Interval					

FIELD EDIT REPORT  
T-12152

No field edit report was submitted as such. The Item "SHORELINE INSPECTION", on page 2 of Descriptive Report for "Control and Shoreline" for OPR 423, 1964, which is a part of the hydrographic records states:

"A limited field edit was carried on concurrently with hydrography for each boat sheet. What field edit notes were made were placed on the cronaflex T-sheets and marked on appropriate photos in green ink. T-sheets and accompanying photographs were sent to the Washington Office on September 15, 1964."

"All offshore detail shown on the T-sheet was verified or deleted by the hydrographic party."

This completed the Item.

The field edit was so skimpy, one note on a "bulkhead", and another "pile-boat slip" were the only notes on this entire survey; that it has been classified "None."

M. M. Slavney  
Final Review



REVIEW REPORT T-12152  
SHORELINE  
NOVEMBER 1967

61. GENERAL STATEMENT:

See Summary accompanying Descriptive Report (page 6).

An ozalid Comparison Print showing the differences noted in Items 62, 63, 64, and 65, is included with the "original" of this report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Registered Survey T-6875; 1:4,800; Oct. 1941  
Registered Survey T-6876a; 1:4,800; Aug. 1941  
Registered Survey T-6877a; 1:4,800; Aug. 1941  
Registered Survey T-2538; 1:20,000; 1901

The Comparison Print shows the areas of this map covered by these registered surveys, and the differences in blue.

The surveys are in good agreement with the following exceptions: A jetty at lat.  $18^{\circ} 15.85'$ , long.  $65^{\circ} 37.75'$  that is new since T-6876A was done; and a fill, bulkhead and boat slip at lat.  $18^{\circ} 15.1'$ , long.  $65^{\circ} 36.4'$ , apparently built since T-6875 was surveyed. There are minor differences in "fast" shoreline, and the registered surveys generalized the mangrove shoreline, or showed it as "approximate" shoreline.

This survey supersedes the previous registered surveys for nautical chart construction.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

CAYO ICACOS, P.R., U.S.G.S. quad; 1:20,000; 1943, revised 1958  
PUNTA PUERCA, P.R., U.S.G.S. quad; 1:20,000; 1943, revised 1957  
NAGUOBO, P.R., U.S.G.S. quad; 1:20,000; 1943, revised 1957  
FAJARDO, P.R., U.S.G.S. quad; 1:20,000; 1942, revised 1957

The quadrangle shoreline is on the Comparison Print in brown.

The quadrangle shoreline at Punta Figueras is about 110 meters offshore of that on T-12152. There are also 15 and 20 meter discrepancies at Punta Media Mundo and the shoreline of Bahia Demajagua.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

BOAT SHEET EX 10-3-62 (H-8811); 1:10,000; 1962  
BOAT SHEET EX 10-3-62 (H-8811); Skiff sheet overlays.

Fishing platforms, rocks, and underwater obstructions from the boat sheet are on the Comparison Print in green, and are as follows:

Fishing platforms:	Lat. 18° 18.4'	long. 65° 37.44'
	" 18.55'	" 37.39'
	" 18.6'	" 37.52'
	" 17.12'	" 38.05'
	" 17.84'	" 37.82'
Fishing Pier at	" 17.68'	" 38.07'
Rocks at	18° 18.7'	65° 37.52'
	" 18.6	" 37.56'
	" 17.8	" 37.9'
	" 15.7	" 36.68'
	" 15.8	" 36.69'
	" 15.7	" 36.3'
	" 15.56	" 36.45'
	" 15.47	" 36.01'
	" 15.12	" 35.0'
	" 15.2	" 35.01'
	" 15.02	" 34.82'
	" 15.1	" 34.7'
	" 15.07	" 34.53'

5 rocks awash about 125 meters north of Isla Pineros from long. 65° 35.4' to 65° 35.68'.

3 underwater obstructions in Puerto Medio Mundo:		
at:	Lat. 18° 15.55'	Long. 65° 36.98'
	15.67	37.35
	15.94	37.44

The 1962, 1:10,000 scale color photographs were carefully examined for these details, but they were not identifiable. No shoreline changes were noted.

65. COMPARISON WITH NAUTICAL CHARTS:

Chart 940; 1:25,000; 3rd edition July 25, 1966  
Chart 917; 1:40,000; 6th edition May 16, 1966

The nautical chart differences are on the Comparison Print in red.

The northern limits of Chart 940 are at lat. 18° 15.34' and the comparison north of here utilized chart 917, which is 1:40,000 and required a 4x enlargement.



Agreement with the charts is fair, considering the scale differences. The 1962 color photographs were examined for rocks, etc. on the charts and not on this survey, see Item 64.

Chart 917 shows a "Fence" at lat.  $18^{\circ} 15.85'$ , long.  $65^{\circ} 37.75'$ , which this survey shows as a "Rock jetty". See field inspection photo 59-S-3944. It is noted that "Skiff" sheet No. 1 of EX-10-3-62 describes a signal "COW", on the jetty as "wh. X bar on rock jetty".

It is noted that the interior details of Chart 917 in the area south of  $18^{\circ} 15.34'$  do not agree with this survey or with Chart 940.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This survey complies with the project instructions, Bureau requirements, and meets the National Standards for Map Accuracy. No accuracy tests were run in the field.

Reviewed by:

M. M. Slavney  
M. M. Slavney

Approved by:

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Approved by:

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J. Ralph Sobieralski  
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JUN 28 1968

John O. Boyer  
Chief, Chart Division

Chief, Operations Division

NOTES TO VERIFIER  
T-12152 Project Ph-6106  
BOAT SHEET NO. EX-10-3-62 (H-8811)

Please refer to Items 64 and the paragraph pertaining to the  
"fence" or "rock jetty" in Item 65.



