

12136

Original

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	SHORELINE (PHOTOGRAMMETRIC)
Field No.	Office No. T-12136
LOCALITY	
State	PUERTO RICO
General locality	NORTHEAST COAST
Locality	PUNTA UVERO
1961 1959-1964	
CHIEF OF PARTY	
M. L. Olivier, Chief of Field Party	
V.R. Sobieralski, Tampa District Officer	
LIBRARY & ARCHIVES	
DATE	1 JUL 1964

USCOMM-DC 5087

DESCRIPTIVE REPORT - DATA RECORD

T -12136

PROJECT NO. (II):

PH-6106

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 August 30, 1961

Amend: " " Jan. 15, 1962 *

** Interior planimetry restricted to those features useful to photo hydro support*

METHOD OF COMPILATION (III):

Kelsh Plotter

MANUSCRIPT SCALE (III):

1:10,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

1:6,000

DATE RECEIVED IN WASHINGTON OFFICE (IV):

APRIL 13, 1968

DATE REPORTED TO NAUTICAL CHART BRANCH (IV):

APPLIED TO CHART NO.

DATE:

DATE REGISTERED (IV):

GEOGRAPHIC DATUM (III):

Puerto Rico

VERTICAL DATUM (III): MHW

/MEAN/SEA/LEVEL/ 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):

RIO GRANDE CHURCH (USGS) 1934

LAT.: ✓ ✓ ✓ ✓ ✓

18°22'57.89" (1779.8 m)

LONG.: ✓ ✓ ✓ ✓ ✓

65°49'47.83" (1404.2m)

☐ ADJUSTED☒ UNADJUSTED Field Position

PLANE COORDINATES (IV):

STATE

Puerto Rico

ZONE

Puerto Rico

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

FIELD INSPECTION BY (II): M. L. Olivier		DATE: Dec. 1961* (Date of CSI sketch)
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): Air photo compilation Date of photography: April 18, 1959		
PROJECTION AND GRIDS RULED BY (IV): A.R.(W.O.)		DATE July 1962
PROJECTION AND GRIDS CHECKED BY (IV): L.F.B.(W.O.)		DATE
CONTROL PLOTTED BY (III): V. P. Cackowski		DATE Aug. 1962
CONTROL CHECKED BY (III): V. P. Cackowski		DATE Aug. 1962
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): R. E. Fuechsel		DATE March 1962
STEREOSCOPIC INSTRUMENT COMPILATION (III): J. Honick	PLANIMETRY J. Honick Reviewed by: I. I. Saperstein	DATE Oct. 1962 " "
	CONTOURS Inapplicable	DATE
MANUSCRIPT DELINEATED BY (III): J. Honick		DATE Oct. 1962
SCRIBING BY (III): Inapplicable A. Shands		DATE July 1966
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): W. H. Shearouse		DATE Nov. 1962
REMARKS: * Field inspection report did not include data record nor did field inspection photographs show dates work was done. FIELD EDIT NOT DONE		

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

Single-lens Wild "S"
Wild "W"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
59-S-3903	4/18/59	10:52	1:30,000 Dia-	0.0 (Photos taken
" 3904	"	"	" positives	" at approx. MLW)
" 3905	"	10:53	" "	"
" 3906	"	"	" "	"
61-W-1659	10/20/61		1:30,000 Contact Prints	0.8 above MLW
61-W-1660	"		Only	"
61-W-1661	"			"
64W 3192	1964			
3193				

Predicted TIDE (III)

Diurnal

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: San Juan		1.1	1.3
SUBORDINATE STATION: Bahia de Fajardo	1.0	1.1	1.4
SUBORDINATE STATION:			
WASHINGTON OFFICE REVIEW: <i>Atlantic Marine Center N.M. SLAVY</i>	DATE: MARCH, 1967		
PROOF EDIT BY (IV): <i>NONE</i>	DATE:		
NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (III): 6*	RECOVERED: 2**	IDENTIFIED: 1	
NUMBER OF BM(S) SEARCHED FOR (III): 0	RECOVERED: 0	IDENTIFIED: 0	
NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III): 0			
NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III): 1			

REMARKS:

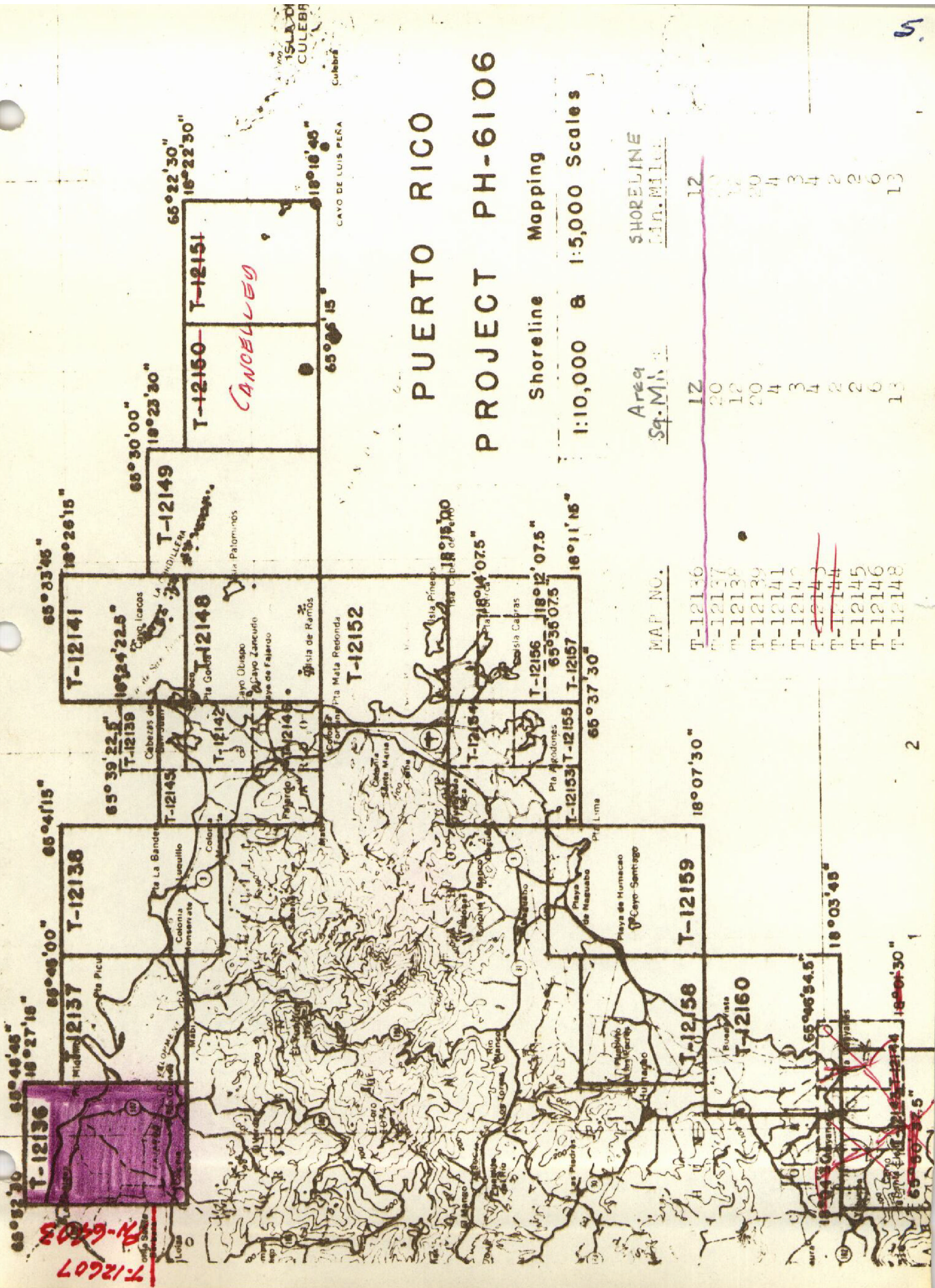
- * 2 of the stations searched for are west of project limits
** 1 recovered station is west of project limits

COMPILATION RECORD

COMPLETION DATE

REMARKS

Alongshore area for hydro	Nov. 1962	<i>Superseded</i>
<i>Manuscript complete</i>	<i>July 1966</i>	<i>"</i>
<i>Area west of 65°51'30" revised from photos. 64-W-3192, 3193 of PH-6403.</i>	<i>MARCH, 1967</i>	
<i>Revised during final review</i>		



PUERTO RICO PROJECT PH-6106

Shoreline Mapping
1:10,000 & 1:5,000 Scales

SHORELINE
Miles

Area
Sq. Miles

MAP NO.

T-12136	12	12
T-12137	20	20
T-12138	12	12
T-12139	20	20
T-12141	4	4
T-12142	3	3
T-12143	4	4
T-12144	2	2
T-12145	2	2
T-12146	6	6
T-12148	13	13

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-12136

Shoreline manuscript T-12136 is one of sixteen 1:10,000 maps in Ph-6106 (21042) Puerto Rico, which also contains eight 1:5,000 scale maps. The sketch on page 5 of this report shows the position of this manuscript in the project. It is noted that 1:5,000 maps T-12113 and T-12114; and 1:10,000 maps T-12150, T-12151, and T-12161 of this project are in ~~in a "postponed" status until some future date~~ cancelled.

M. M. S.

This is a stereo-instrument project in advance of hydrographic surveys of the area. 1:30,000 scale panchromatic photographs were taken with the "S" camera on April 8, 1959. 1961 panchromatic "W" photography was taken on October 20 at 1:30,000 scale; only contact prints were furnished. Color photographs at 1:10,000 were taken with the "S" camera in 1962, but were not furnished. 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 prepared for photo-hydro support, from the 1959 photos.

Field work preceding compilation consisted of control identification and field inspection was provided for compilation. The manuscript has not been field edited. Hydrography is planned for some future date.

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

2. AREAL FIELD INSPECTION

T-12136 thru T-12138

These shoreline sheets are located on the northeastern coast of Puerto Rico. The area is rural and undeveloped except for the village of Luquillo.

Field inspection was performed on ratio photographs 59-S-3892 through 59-S-3906. Where there ^{were} changes since the 1959 photography some inspection was done on contact photographs 61-W-1651 through 61-W-1657, and 61-W-1742.

3. HORIZONTAL CONTROL

All Coast and Geodetic Survey control stations within the project limits were searched for. Only those stations as specified on the project diagram were photo-identified. Photo-identification was done on the 1959 photographs. The following U. S. Geological Survey control stations were used to supplement the photo control: LUQUILLO CHURCH, 1934; PALMER, 1939; RIO GRANDE CHURCH, 1934; and CENTRAL FAJARDO NORTH STACK, 1941. RIO GRANDE CHURCH, 1934 (USGS) was photo-identified in place of POINT IGLESIAS, 1902 and POINT UVERO, 1902 because these two stations were not recovered.

4. VERTICAL CONTROL

There were no tidal bench marks in the area.

5. CONTOURS AND DRAINAGE

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

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.

7. SHORELINE AND ALONGSHORE FEATURES

The mean high water line was inspected by walking along the shoreline. In places the mean high water line is not clearly visible on the photographs. Therefore measurements were made from a distinguishable feature on the photograph.

The low water line was not indicated on the photographs because with the large breakers and heavy seas there was no appreciable difference between mean low water and mean high water.

The foreshore is flat in most areas.

There are no docks, piers, wharves, etc.

There are no submerged cables.

8. OFFSHORE FEATURES

An abundance of coral growth surrounds the coast line. These coral areas are distinguishable on the photographs. Rock areas have been noted on the photographs.

9. LANDMARKS AND AIDS

Landmarks and aids to navigation 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 and indicated by three digit numbers on the field inspection photographs.

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 almost all of 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. Where discrepancies were found the proper name has been indicated on the photograph.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

Contact photographs were forwarded to the Washington office by Letter of Transmittal No. PH-6106-5 dated 13 December 1961.

Submitted
4 January 1962

Michael L. Olivier
Michael L. Olivier
Chief, Photo-party 708

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

21. Area Covered:

T-12136 through T-12139; T-12141 through ^{T-12146;} 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

SCALE FACTOR

000501: T

SCALE OF MAP

PH-6706

PROJECT NO.:

MAP T- 12136

[illegible]

COMPUTED BY

V. C. Cackowski

DATE _____

4/3/62

CHECKED BY

I. I. Saperstein

DATE _____

8/1/62

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COMPILATION REPORT
T-12136

PHOTOGRAMMETRIC PLOT REPORT

The stereo bridge was run in the Washington Office.

SEE PAGES 8 & 8A.

~~The photogrammetric plot report is bound in the report for T-12157.~~

31. DELINEATION

The manuscript was compiled from April 1959, 1:30,000 diapositives on the Kelsh plotter. A small area west of the neat line was compiled from October 20, 1961 contact prints by use of the ratio projector. Contact photos 61-W-1659, 1660 and 1661 were also used for interpretation of offshore details.

The field inspection was adequate and no difficulty was encountered in the interpretation of the photographs.

32. CONTROL

The density and placement of bridge points were adequate.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Inapplicable

35. SHORELINE AND ALONGSHORE DETAILS

The mean high-water line was delineated according to the field inspection which was adequate. No low-water line was shown.

36. OFFSHORE DETAILS

The field inspector made notations of coral areas on the field photos but did not delimit their extent. A study of these features was made while delineating with the Kelsh plotter and subsequently with 1961 contact photos 61-W-1559, 1560 and 1561 under the stereoscope. Coral and shallow areas as compiled are approximate and have been referred to the hydrographer for development.

10.

37. LANDMARKS AND AIDS

None.

38. CONTROL FOR FUTURE SURVEYS

One photo-hydro station was located and is listed under Item 49.

Shoreline pass points have been located by the Kelsh plotter for photo-hydro support.

39. JUNCTIONS

ET-12607 of PK-6403 to the west
Junction with T-12137 to the east ~~has~~ been made. There are no contemporary surveys to the south ~~and west~~. An all-water area is to the north.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with USGS quadrangle RIO GRANDE, dated 1956, scale 1:20,000. No changes seem apparent.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with Chart No. 904, scale 1:100,000 10th edition dated Feb. 12, 1962, corrected to Mar. 24, 1962. No apparent changes were noted.

ITEMS APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Jack Honick
Jack Honick
Carto Photo Aid

APPROVED AND FORWARDED: - 4 DEC 1962

V. Ralph Sobieralski
V. Ralph Sobieralski
Tampa District Officer

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GEOGRAPHIC NAMES
FINAL REVIEW LIST
PH-6106
T-12136 (Shoreline)

Atlantic Ocean
Boca Herrera
Punta Iglesia
Punta San ~~Agustin~~
 Agustin - J. J.
Punta Uvero
Rio Espiritu Santo
Rio Herrera

M. M. Slavney
M. M. Slavney
Final Review

*Names approved
May 28, 1968*

*A. J. Wright
Frank W. Fickett*

49. NOTES FOR THE HYDROGRAPHER

One photo-hydro station was located:

122 (E tree of two tall trees)

Further investigation of the coral and shallow areas is suggested. The limiting lines shown are approximate and were arrived at by stereoscopic study of the spots and areas labelled by the field inspector. They are not intended as "fixed" lines but are sketched as an aid to the hydrographer who will determine their limits.

FORM 182 (3-61)		PHOTOGRAMMETRIC OFFICE REVIEW		U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY	
50		T- 12136			
1. PROJECTION AND GRIDS WHS		2. TITLE WHS 4a Classification label unclassified		3. MANUSCRIPT NUMBERS WHS	
4. MANUSCRIPT SIZE WHS		5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY WHS		6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (TOPOGRAPHIC STATIONS) XX	
CONTROL STATIONS		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 (J.H.)			
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 XX		17. LANDMARKS XX	
		18. OTHER ALONGSHORE PHYSICAL FEATURES WHS			
		19. OTHER ALONGSHORE CULTURAL FEATURES WHS			
PHYSICAL FEATURES		20. WATER FEATURES XX		21. NATURAL GROUND COVER WHS	
		22. PLANETABLE CONTOURS XX		23. STEREOSCOPIC INSTRUMENT CONTOURS XX	
		24. CONTOURS IN GENERAL XX		25. SPOT ELEVATIONS XX	
		26. OTHER PHYSICAL FEATURES XX			
CULTURAL FEATURES		27. ROADS XX		28. BUILDINGS WHS	
		29. RAILROADS XX		30. OTHER CULTURAL FEATURES WHS	
BOUNDARIES		31. BOUNDARY LINES XX		32. PUBLIC LAND LINES XX	
MISCELLANEOUS		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 SUPERVISOR REVIEW SECTION OR UNIT Milton M. Slavney	
		SIGNATURE OF REVIEWER William H. Shearouse			
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. NOT FIELD EDITED MAR. 1967					
SIGNATURE OF COMPILER			SIGNATURE OF SUPERVISOR		

FIELD EDIT REPORT
T-12136

No field edit was done for T-12136.

REVIEW REPORT T-12136
SHORELINE
March 1967

61. GENERAL STATEMENT

See summary accompanying Descriptive Report (page 6)

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

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Registered Survey 4205; 1:20,000; 1921

The shoreline, rocks, islets and reefs from No. 4205 are on the Comparison Print in blue.

- (a) There are shoreline differences to 75 meters.
- (b) Two islands, about 35 and 50 meter wide, are shown on Survey 4205 at latitude $18^{\circ}26.2'$, longitude $65^{\circ}50.9'$ that do not appear on T-12136. The islands are not visible on the photographs, 59-S-3903 through 3905. The field inspector noted "coral" near them on photograph 59-S-3904; the note is similar to numerous others he made to identify underwater details.
- (c) Survey 4205 shows two rocks awash at latitude $18^{\circ}25.53'$, longitude $65^{\circ}48.82'$, which are not shown on this map. They were not noted by the field inspector and breakers obscure the area in the photographs. Examination of 59-S-3902 and 3903 indicates a high point in the "coral" may be responsible for the breakers here but no positive identification could be made from the photographs. There was no field edit, and no color photographs were furnished.
- (d) The reef limits in No. 4205 could not be justified from the photographs or the field inspection. The flight of color photographs, 62-S-9956 through 9964 may have helped, but they were not furnished.
- (e) A sunken rock on No. 4205 at latitude $18^{\circ}26.13'$, longitude $65^{\circ}49.75'$ does not appear on this map. It could not be seen on the photographs, and was not noted by the field inspector.

16.

(f) Survey 4205 shows a breakwater or pier at latitude 18°25.2', longitude 65°49.29' that is not on this map. No evidence of it is seen on the photographs and no note of it is taken by the field inspection.

(g) Rio Herrera, whose mouth is at latitude 18°25.5' longitude 65°49.75', does not appear on No. 4205.

This map superseded the previous registered surveys for nautical chart construction.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

U. S. G. S. quad. RIO GRANDE P. R.; 1:20,000; 1939-40 revised in 1956.

The quadrangle is in fair agreement; the Comparison Print shows shoreline differences to 130 meters in the western part of this map.

It is noted that the islands, see paragraph "b" of Item 62 and the breakwater (?), see paragraph "f" of Item 62, that are not on T-12136, are not shown on the quadrangle.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

None. The latest hydrographic survey is No. 4205; 1:20,000; 1921, see Item 62.

65. COMPARISON WITH NAUTICAL CHARTS

Chart 904; 1:100,000; 11th Edition of December 28, 1964.

The scale disparity, T-12136 is 1:10,000 and the chart is 1:100,000, precludes close comparison of the shoreline. It is, however, shown on the Comparison Print and there are differences to 80 meters.

The offshore details, rocks, islands and reefs, are obviously from Registered Survey 4205; see Item 62 and the same differences discussed in paragraphs "b", "c" and "d" also apply to the chart. They are also noted in the Comparison Print.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

No accuracy tests were run. The map meets the Bureau requirements and the National Standards for Map Accuracy.

Approved by:

Reviewed by:

J. Bull
J. Bull, RADM
Director, Atlantic Marine Center

M. M. Slavney
M. M. Slavney

Approved by:

Charles L. Lerner
Chief, Cartographic Branch
Photogrammetric

Ralph Sobieralski JUN 19 1968
Chief, Photogrammetry Division

John P. Boyer
Chief, Chart Division

Chief, Operations Division

NOTES TO VERIFIER
T-12136 Project 21042 (Ph-6106)
BOAT SHEET No. None

No contemporary hydrographic survey.

