

12149

Orig.

12149

12149

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey <u>Shoreline (Photogrammetric)</u>	
Field No. _____	Office No. <u>T-12149</u>
LOCALITY	
State <u>Puerto Rico</u>	
General locality <u>East Coast of Puerto Rico</u>	
Locality <u>La Cordillera</u>	
<u>1958 - 1962</u>	
CHIEF OF PARTY	
<u>E. L. Jones - Chief of Party</u>	
LIBRARY & ARCHIVES	
DATE <u>1 JUL 1968</u>	



## DESCRIPTIVE REPORT - DATA RECORD

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12149

PROJECT NO. (II): Ph-6106		
FIELD OFFICE (II): Tampa		CHIEF OF PARTY E.L. Jones
PHOTOGRAMMETRIC OFFICE (III): Washington, D.C.		OFFICER-IN-CHARGE J.E. Waugh
INSTRUCTIONS DATED (II) (III): Field and Office - Aug. 30, 1961 AMENDMENT: " " " - Jan. 15, 1962 X X Interior planimetry restricted to those features useful to photo hydro. Support. SGP		
METHOD OF COMPILATION (III): Graphic		
MANUSCRIPT SCALE (III): 1:10,000		STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):
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): N.A. 1927		VERTICAL DATUM (III): 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): CORDILLERAS 2, 1962		
LAT.: 18° 21' 54.725" (1682.5m)	LONG.: 65° 31' 42.255" (1328.6m)	<input checked="" type="checkbox"/> ADJUSTED <input type="checkbox"/> UNADJUSTED
PLANE COORDINATES (IV): Y = X =		STATE PUERTO RICO ZONE
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): <b>G.E. Wirth (control) (only)</b>		DATE: <b>5-3-62</b>
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):  <b>February 1962      Office interpretation</b>		
PROJECTION AND GRIDS RULED BY (IV):  <b>A. Roundtree</b>		DATE  <b>10-4-62</b>
PROJECTION AND GRIDS CHECKED BY (IV):  <b>L.F. Bougnet</b>		DATE  <b>10-11-62</b>
CONTROL PLOTTED BY (III):  <b>J.B. Phillips</b>		DATE  <b>1-24-62</b>
CONTROL CHECKED BY (III):  <b>J.T. Gerlach</b>		DATE  <b>1-24-62</b>
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):  <b>J. Battley, J.T. Gerlach</b>		DATE  <b>2-18-62</b>
STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY	DATE
	CONTOURS	DATE
MANUSCRIPT DELINEATED BY (III):  <b>J.B. Phillips</b>		DATE  <b>Feb. 1963</b>
SCRIBING BY (III):  <b>A. Shands</b>		DATE  <b>July 1966</b>
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):  <b>R. E. Smith, Jr.</b>		DATE  <b>July 1966</b>
REMARKS: <b>There was no field inspection or field edit for this survey.</b>		



## DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

9-lens &amp; single lens Wild RC-5

## PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
59310 thru 59314	10-28-58	1224 - 1228	1:10,000	(Not used for MHW delineation)
61W 1592 thru 1598	10-19-61	1508 - 1510	1:10,000 (ratio)	1.6 above MLW
61 W 1555	10-19-61	14:28		1.4 above MLW

*Predicted* TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: San Juan		1.1	
SUBORDINATE STATION: Bahia de Fajardo		1.5	
SUBORDINATE STATION:			

~~WASHINGTON OFFICE~~ Atlantic Marine Center  
REVIEW BY (IV):

M. M. Slavney

DATE:

December 1967

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (III): /

RECOVERED: /

IDENTIFIED: /

NUMBER OF BM(S) SEARCHED FOR (III):

RECOVERED:

IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

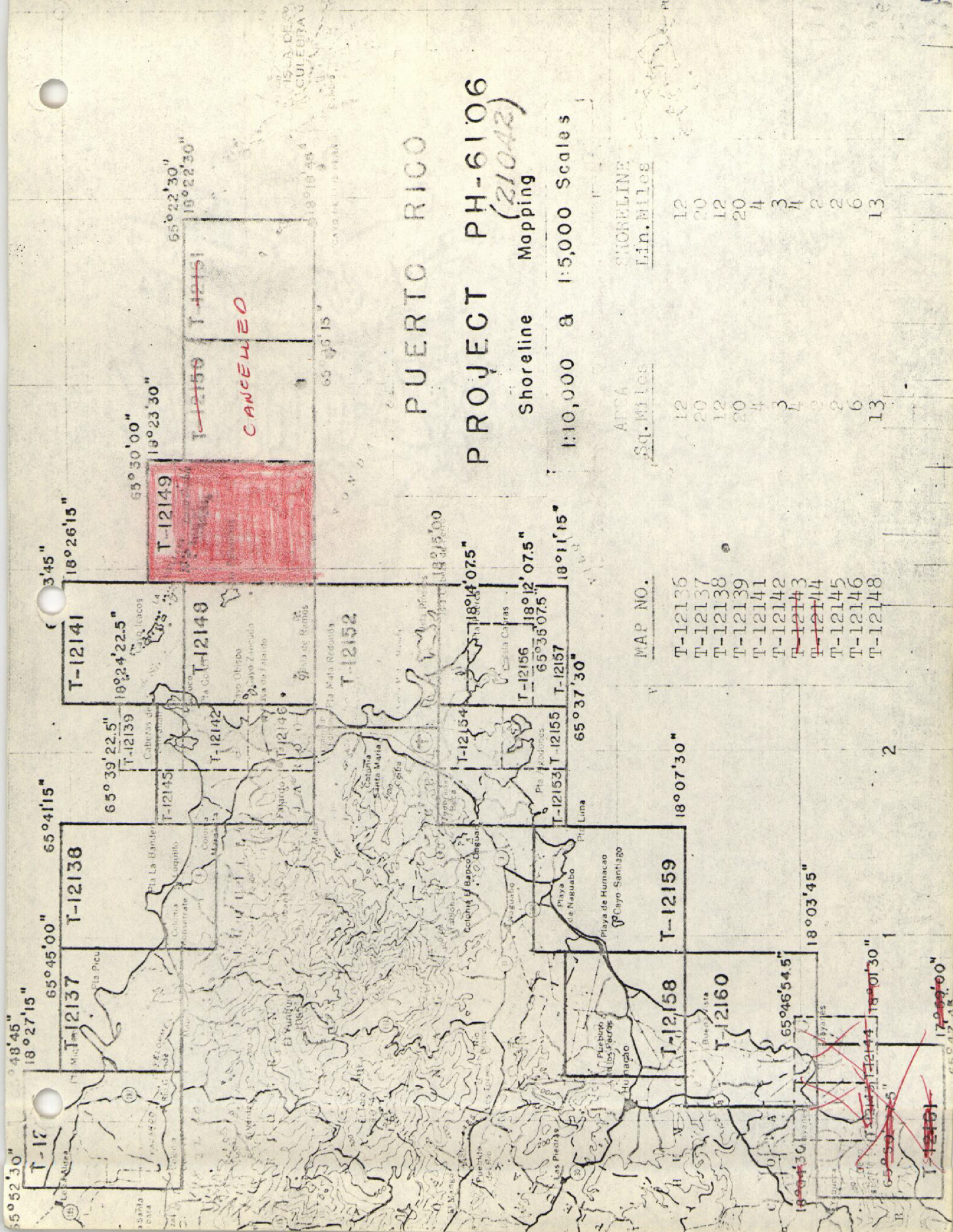
NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:



COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore area for hydro	1963	
Compilation Scribed (No field edit, no changes)	July 1966	Superseded
Some revisions during Final Review	November 1967	





PUERTO RICO

# PROJECT PH-6106 (21042) Shoreline Mapping

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

APCA  
Shoreline  
Lin. Miles

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



6.

SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT T-12149

Shoreline manuscript T-12149 is one of sixteen 1:10,000 scale maps in Ph-6106 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 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.~~ *cancelled, 7/27/63*

This is a stereo-instrument project in advance of hydrographic surveys of the area with the exception of T-12141 and T-12148, which were partially graphic; and T-12149 which was entirely graphic. The radial plot utilized 1:10,000 scale 9-lens photographs and 1:10,000 ratio prints of October 19, 1961, 1:15,000 scale photographs made with the "W" camera. These 1:10,000 ratio prints were used for compilation. Ratio prints, at 1:10,000 scale were processed and provided for photo-hydro support.

Field work preceding compilation consisted of control identification only; no field inspection was provided for compilation. The manuscript was not field edited.

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



FIELD INSPECTION REPORT  
T-12149

No field inspection was done for this map.



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# PHOTOGRAMMETRIC PLOT REPORT

PH-6106

Scale 1:10,000

February 1963

## 21. Area Covered

This radial plot comprises three manuscripts at 1:10,000 scale covering the group of islands known as La Cordilleras, just east of Cape San Juan, Puerto Rico. The surveys included are T-12141, 12148 and T-12149.

## 22. Method

The plot was laid with a single flight of five 9-lens photographs taken in 1958 and supplemented with nine 1961 single lens photographs.

1958 master calibration templet #57218 was used to prepare the 9-lens templates.

Holding to pass points established by a previous bridge junctioning to the west of this area (T-12145), the 9-lens templates were extended eastward down the narrow chain of islands on which control was located.

The enclosed sketch shows the positioning of control and photography used in this plot.

As the 9-lens photographs and the single-lens were closely aligned in flight, weak cuts were realized for the scattered islands on the eastern extremities of the area bridged.

Utilizing single-lens photographs, closely ratioed to the strongest pass points achieved by the 9-lens, an adequate fix in position was realized for these islands.

## 23. Adequacy of Control

Six field identified triangulation stations were available to bridge the area. Of these, five stations held within  $\pm 0.3$  mm of their plotted position.

Lobos 2 1962 RM 1 & RM 2 could not be held. It was felt that the accuracy of identification was doubtful at best. RM 1 & RM 2 were points of vegetation which were indefinitely defined on the photography. A positive identification of a control station nearby, Nob 2 1962, held well.

- 2 -

24. Supplemental Data

None

25. Photography

As the area to be compiled was a narrow chain of islands, it was impossible to have both strong pass points and transferable azimuths. The photography used was flown down the chain, affording the transference of conjugate centers but resulting in weak cuts on the islands falling between centers.

Submitted by:

John P. Battley, Jr.  
J. P. Battley, Jr.



$$\begin{array}{r} 65^{\circ}33'45'' \\ - 18^{\circ}26'15'' \\ \hline \end{array}$$

T-12141

## PHOTOGRAMMETRIC PLOT LAYOUT

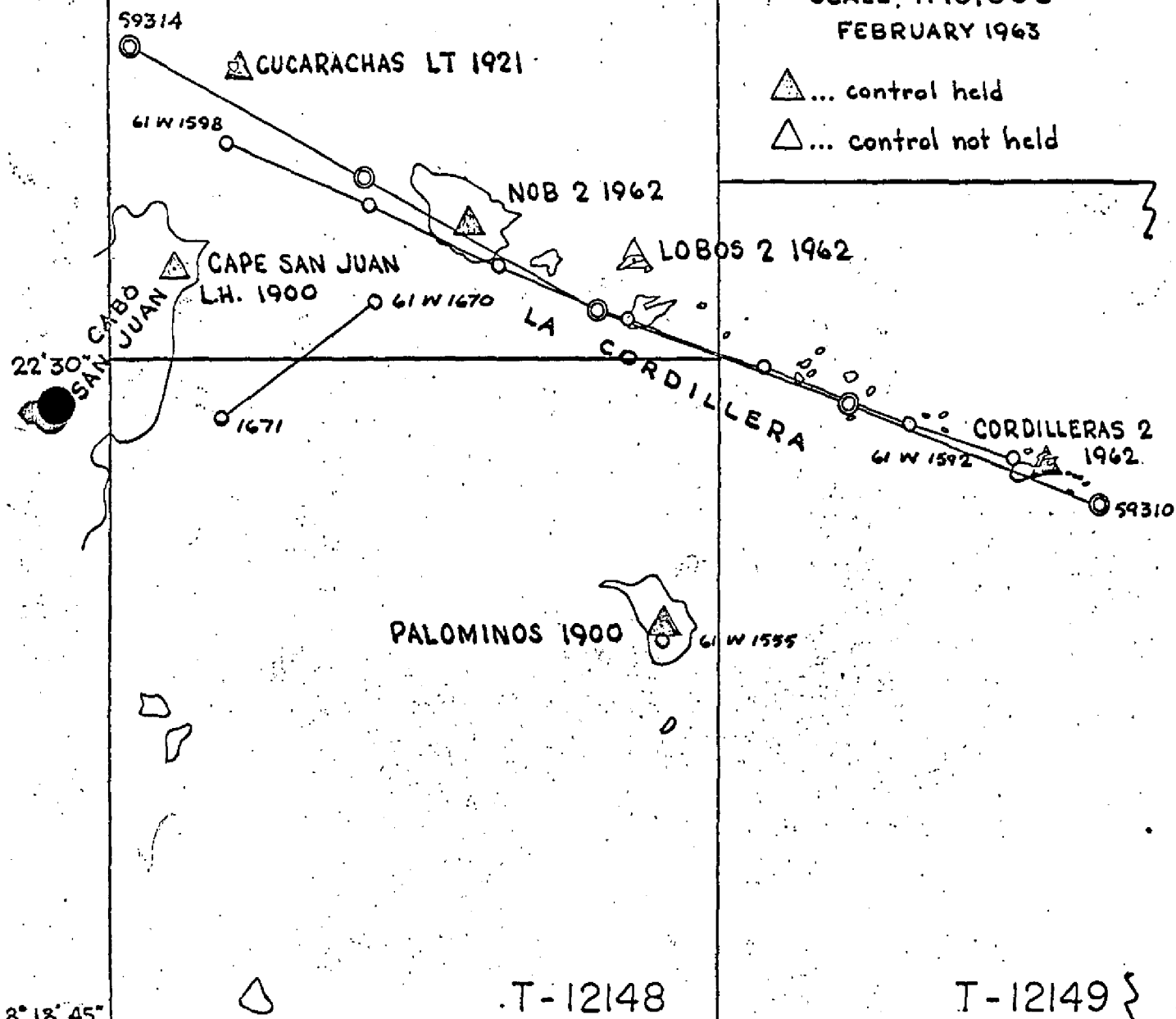
PH-6106

SCALE 1:10,000

FEBRUARY 1963

△... control held

$\Delta$ ... control not held



T-12148

T-12149

8° 18' 45"

65°37'30"

## DESCRIPTIVE REPORT CONTROL RECORD

MAP T-12749

[illegible]



COMPILATION REPORT  
PH-6106  
T-12141, 12148 & 12149  
February 1963

31. Delineation

Graphic methods were used to compile these manuscripts, utilizing ratioed single-lens cronapague photographs. All compilation was based on office interpretation of the photography. Due to lack of control compilation was not accomplished in the area of Cayo Largo (T-12148). Color photography was available and was used as an aid in interpreting foreshore coral and bottom characteristics.

32. Control

See item 23 and 25 of the Plot Report. In resecting the ratio prints to the manuscript it was evident that the placement of the triangulation stations available to control this area was such that an absolute fix in horizontal positioning of the islands on T-12149 is subject to a possible shift in an East-West direction.

33. Supplemental Data

Charts 917 and 921 were used to obtain geographic names.

34. Contours and Drainage

Inapplicable

35. Shoreline and Alongshore Details

Coral surrounds most of the islands, however identification could not be positive and the limits of such areas are not well defined on the photographs. To delineate the areas of coral and/or shallow water, a dashed line has been shown and the area labeled "shallow." Where interpretation was more positive, the symbol for coral has been shown.

36. Offshore Details

No unusual problems were encountered.

37. Landmarks and Aids

None office identified

38. Control for Future Surveys

None



39. Junctions

Junctions have been made and are in agreement with the adjoining sheets.

40. Horizontal and Vertical Accuracy

Horizontal positions in the area of Cayo Diablo (T-12149) are considered weak. See item 32 of this report and the Photogrammetric Plot Report. With the combination of ratioed single-lens photographs and 9-lens radial cuts, a position for pass points within the tolerances for this scale mapping is believed to be maintained in this area.

41-45 - None

47. Comparison with Nautical Charts

The manuscripts have been compared with Chart No. 917, 1:40,000 scale, published 6-18-62 and revised 1-12-63. Comparison was also made with Chart No. 921, scale 1:10,000, published 3-6-61 and revised 1-12-63.

Submitted by:

*Jacqueline B. Phillips*  
\_\_\_\_\_  
Jacqueline B. Phillips



GEOGRAPHIC NAMES  
FINAL REVIEW LIST  
PH-6106  
T-12149 (Shoreline)

➤ ATLANTIC OCEAN

➤ BAJO BLAKE (Not visible, not delineated, name not used.)

➤ CAYO DIABLO

➤ LA BLANQUILLA

➤ LA CORDILLERA

➤ SONDA DE VIEQUES

Names are from FINAL NAME SHEET (Sheet 5 of 7) on CAYO ICACOS, PUERTO RICO, quadrangle.

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

*Names approved  
May 29, 1968*

*A. J. Wright  
Frank W. Fickett*

## PHOTOGRAMMETRIC OFFICE REVIEW

T-~~10263~~ 12149

1. PROJECTION AND GRIDS <b>JEB</b>	2. TITLE <b>JEB</b>	3. MANUSCRIPT NUMBERS <b>JEB</b>	4. MANUSCRIPT SIZE <b>JEB</b>
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY <b>JEB</b>	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) <b>X</b>		7. PHOTO HYDRO STATIONS <b>X</b>
8. BENCH MARKS <b>X</b>	9. PLOTTING OF SEXTANT FIXES <b>X</b>	10. PHOTOGRAMMETRIC PLOT REPORT <b>JEB</b>	11. DETAIL POINTS <b>JEB</b>
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE <b>JEB</b>	13. LOW-WATER LINE <b>JEB</b>	14. ROCKS, SHOALS, ETC. <b>JEB</b>	15. BRIDGES <b>X</b>
16. AIDS TO NAVIGATION <b>JEB</b>	17. LANDMARKS <b>JEB</b>	18. OTHER ALONGSHORE PHYSICAL FEATURES <b>JEB</b>	19. OTHER ALONGSHORE CULTURAL FEATURES <b>JEB</b>
PHYSICAL FEATURES			
20. WATER FEATURES <b>JEB</b>	21. NATURAL GROUND COVER <b>JEB</b>		22. PLANETABLE CONTOURS <b>X</b>
23. STEREOSCOPIC INSTRUMENT CONTOURS <b>X</b>	24. CONTOURS IN GENERAL <b>X</b>	25. SPOT ELEVATIONS <b>X</b>	26. OTHER PHYSICAL FEATURES <b>JEB</b>
CULTURAL FEATURES			
27. ROADS <b>JEB</b>	28. BUILDINGS <b>JEB</b>	29. RAILROADS <b>X</b>	30. OTHER CULTURAL FEATURES <b>JEB</b>
BOUNDARIES			
31. BOUNDARY LINES <b>X</b>		32. PUBLIC LAND LINES <b>X</b>	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES <b>JEB</b>	34. JUNCTIONS <b>JEB</b>		35. LEGIBILITY OF THE MANUSCRIPT <b>JEB</b>
36. DISCREPANCY OVERLAY <b>X</b>	37. DESCRIPTIVE REPORT <b>JEB</b>	38. FIELD INSPECTION PHOTOGRAPHS <b>NONE</b>	39. FORMS <b>JEB</b>
40. REVIEWER <b>J. E. Battley</b>		SUPERVISOR, REVIEW SECTION OR UNIT <b>K. N. Maki</b>	
41. REMARKS (See attached sheet)			
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT			
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.			
COMPILER <b>No Corrections</b>		SUPERVISOR <b>Albert C. Ranck, Jr.</b> <b>A. C. Ranck, Jr.</b>	
43. REMARKS			



FIELD EDIT REPORT  
T-12149

No field edit had been done at the time of final review.

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REVIEW REPORT T-12149  
SHORELINE  
DECEMBER 1967

61. GENERAL STATEMENT:

See Summary accompanying Descriptive Report (page 6).

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

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Registered Survey No. 2537; 1:20,000; 1901

The shoreline from the registered survey is on the Comparison Print in blue.

The position of the islands from the registered surveys is generally west northwest of their positions on this map. The shift varies from practically none on a few islands to the average of 20 to 30 meters, with one island moving about 60 meters.

(1) Islands with little or no shift are at lat.  $18^{\circ} 22.36'$ , long.  $65^{\circ} 33.4'$  and lat.  $18^{\circ} 21.77'$ , long.  $65^{\circ} 31.6'$ .

(2) The island with the largest shift is about 300 meters from the second island noted in (1); at lat.  $18^{\circ} 21.8'$ , long.  $65^{\circ} 31.45'$ ; the difference between the No. 2537 position and T-12149 is about 60 meters.

(3) The size and shape of the islands differ considerably in some cases from the registered surveys delineation of those islands.

(4) The registered survey shows one island at lat.  $18^{\circ} 21.75'$ , long.  $65^{\circ} 31.05'$  that is not visible on any of the photographs nor are any breakers visible. It is noted that the island is not on Chart 917 or on the U.S.G.S. quad. CAYO ICACOS.

(5) Two "Rocks Awash", at lat.  $18^{\circ} 21.42'$ , and long.  $65^{\circ} 33.3'$  are on T-12149, that are not shown on the registered survey. They were added during final review from photographs 61-S-1593 and 1594, which clearly show a small string of rocks awash or an islet awash.



Item 32 of this Descriptive Report acknowledges some weakness in east-west positioning of the islands on T-12149 from the radial plot. It is; however, noted that though the arrangement of control and photographs may possibly accept some small shifts in position, they would be small and consistent; which the registered survey is not, as noted in some instances (see (1)) and (2) of this Item and the Comparison Print).

It is recommended that this survey supersede the previous registered survey 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

The quadrangle shoreline, etc. is on the Comparison Print in purple.

The quadrangle positions for the islands in some cases coincide with the T-12149 positions; in some instances there are shifts to the east, and others areas there are shifts to the west.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

BOAT SHEET EX 20-1-64(H-8812); 1:20,000; 1964

The hydrographer made <sup>no</sup> notes, additions, or deletions to the shoreline this map provided the boat sheet. None of the hydrography came near the islands.

65. COMPARISON WITH NAUTICAL CHARTS:

CHART 917; 1:40,000; 6th Edition May 16, 1966

The details from the nautical chart are shown on the Comparison Print in red. It is noted that the chart required a 4x enlargement to make this comparison.

The Comparison Print indicates that Registered Survey No. 2537 is the source of topography for the chart, and the same differences exist that are discussed in Item 62.

The chart shows one island at lat.  $18^{\circ} 21.15'$ , long.  $65^{\circ} 32.27'$  that is not on this map, no evidence is in the photographs, nor does it appear on Registered Survey No. 2537, or the quadrangle.

Two "rocks awash", at lat.  $18^{\circ} 21.42'$ , long.  $65^{\circ} 33.3'$  are on this map, but are not on the chart, see sub item (5) in Item 62.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This survey complies with the project instructions and the Bureau requirements. It is also believed to meet the National Standards for Map Accuracy notwithstanding Item 32 of this Descriptive Report (please see the last two paragraphs in Item 62).

No accuracy tests have been run in the field.

Reviewed by:

M. M. Slavney  
M. M. Slavney

Approved by:

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

Approved by:

Charles Henry  
Chief, Photogrammetric Branch *ABC*

John C. Boyer  
Chief, Nautical Chart Division

J. Ralph Sobieralski JUN 19 1968  
Chief, Photogrammetry Division



NOTES TO VERIFIER  
T-12149 Project Ph-6106, Puerto Rico  
BOAT SHEET NO. EX-20-1-64 (H-8812)

Please see the Comparison Print and Items 62 and 65 of the  
Descriptive Report for this map.

