

13123

13123

FORM C&amp;GS-504

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

## DESCRIPTIVE REPORT

Type of Survey Shoreline (Photogrammetric)

Field No. Office No. T-13123

## LOCALITY

State Puerto Rico

General locality Southwest Coast

Locality Rio Matilde

19 66-1971

## CHIEF OF PARTY

Alfred C. Holmes, Director, AMC

## LIBRARY &amp; ARCHIVES

DATE

## DESCRIPTIVE REPORT - DATA RECORD

T-13123

OBJECT NO. (II):

PH-6708

FIELD OFFICE (III):

None

CHIEF OF PARTY

PHOTOGRAMMETRIC OFFICE (III):

Atlantic Marine Center, Norfolk, VA

OFFICER-IN-CHARGE

Alfred C. Holmes, Director

INSTRUCTIONS DATED (II) (III):

OFFICE - Nov. 14, 1967

OFFICE - SUPPLEMENT 1 - Nov. 4, 1968

METHOD OF COMPILATION (III):

Wild B-8 Plotter

MANUSCRIPT SCALE (III):

1:10,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

1:5,000 Pantographed to 1:10,000

DATE RECEIVED IN WASHINGTON OFFICE (IV):

DATE REPORTED TO NAUTICAL CHART BRANCH (IV):

APPLIED TO CHART NO.

DATE:

DATE REGISTERED (IV):

JUN 1975

GEOGRAPHIC DATUM (III):

Puerto Rico

VERTICAL DATUM (III):

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):

Rey, 1966

LAT.:

LONG.:

17° 57' 31.37281" (964.9M) 66° 38' 07.49182" (220.4)

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

Y =

X =

Puerto Rico

1

MAN 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.

FORM C&GS-181b (3-66)		U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION COAST AND GEODETIC SURVEY	
<b>DESCRIPTIVE REPORT - DATA RECORD</b> T-13123			
FIELD INSPECTION BY (II):		DATE:	
None			
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):			
Air Photo Compilation - Date of Photography - Nov. 15, 16, 1966			
PROJECTION AND GRIDS RULED BY (IV):		DATE	
Coradomat Auto Plotter			
PROJECTION AND GRIDS CHECKED BY (IV):		DATE	
" " "			
CONTROL PLOTTED BY (III):		DATE	
Aerotriangulation Points: - R. White		Feb. 11, 1970	
Triangulation Stations: - R. White		Feb. 11, 1970	
CONTROL CHECKED BY (III):		DATE	
Aerotriangulation Points: - A. C. Rauck, Jr.		Feb. 11, 1970	
Triangulation Stations: - A. C. Rauck, Jr.		Feb. 11, 1970	
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):		DATE	
I. I. Saperstein		Oct. 31, 1967	
STEREOSCOPIC INSTRUMENT COMPILATION (III):		DATE	
Wild B-8		Feb. 17, 1970	
PLANIMETRY By: L. Neterer, Jr.		Feb. 17, 1970	
Reviewed By: A. Shands			
CONTOURS		DATE	
Inapplicable			
MANUSCRIPT DELINEATED BY (III):		DATE	
R. R. White		Nov. 13, 1970	
SCRIBING BY (III):		DATE	
Charles Parker		July 7, 1972	
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):		DATE	
Compilation: L.F. Beugnet		Nov. 1970	
Field Edit: Pate		June 1971	
Compilation and Stick Up: F. Margiotta		July 1972-	
		Aug. 1972	
REMARKS:		DATE	
Field Edit By: Richard D. Olson		Mar. 19, 1971	

DESCRIPTIVE REPORT - DATA RECORD  
T-13123

MERA (KIND OR SOURCE) (III):

Wild RC "8" L

## PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
66-L-(c)-8451 & 52	Nov. 16, 1966	8:32	1:30,000	0.6' above MLW
66-L-(c)-8347 thru 8349	Nov. 15, 1966	10:03	1:30,000	0.8' above MLW
66-L-(1)-8544 thru 8546	Nov. 16, 1966	09:40	1:30,000	0.6' above MLW

## PREDICTED TIDE (III)

## DIURNAL

	RATIO OF RANGES	MEAN RANGE	<del>MEAN</del> RANGE
REFERENCE STATION: Galveston, Texas			1.4
SUBORDINATE STATION: Playa De Ponce, P.R.	0.57		0.4
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV): Bernard Kurs, AMC

DATE:  
Feb. 1973

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

4

RECOVERED:  
4IDENTIFIED:  
None

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

None

RECOVERED:  
NoneIDENTIFIED  
None

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

\*1

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

None

REMARKS:

\*A new topo station established. Power, 1971



ESSA FORM 76-36c  
(2-70)U.S. DEPARTMENT OF COMMERCE  
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
COAST AND GEODETIC SURVEY

## HISTORY OF FIELD OPERATIONS T-13123

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	Joseph K. Wilson	
2. HORIZONTAL CONTROL	RECOVERED BY Richard D. Olson	Feb., 1971
	ESTABLISHED BY NA	
	PRE-MARKED OR IDENTIFIED BY NA	
3. VERTICAL CONTROL	RECOVERED BY NA	
	ESTABLISHED BY NA	
	PRE-MARKED OR IDENTIFIED BY NA	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY Richard D. Olson	Feb., 1971
	LOCATED (Field Methods) BY none	
	IDENTIFIED BY none	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input checked="" type="checkbox"/> SPECIFIC NAMES ONLY BY <input type="checkbox"/> NO INVESTIGATION	Richard D. Olson March, 1971
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY Richard D. Olson	March, 1971
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
NA		NA	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

## 3. PHOTO NUMBERS (Clarification of details)

Field Photos 66L8437, 8348, 8450

## 4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

none

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

## 7. SUPPLEMENTAL MAPS AND PLANS

none

## 8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

none

T-13123

COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore Area For Hydro.	Nov. 1970	Superseded
Field Edit Applied; Compilation Complete	July 23, 1971	Superseded
Final Review	Feb. 1973	

67° 00'

66° 30'

67° 00'

66° 30'

## OFFICIAL MILEAGE FOR COST ACCOUNTS

JOB PH - 6708

Sheet No.

Sq. Mi.

Sheet No.

Sq. Mi.

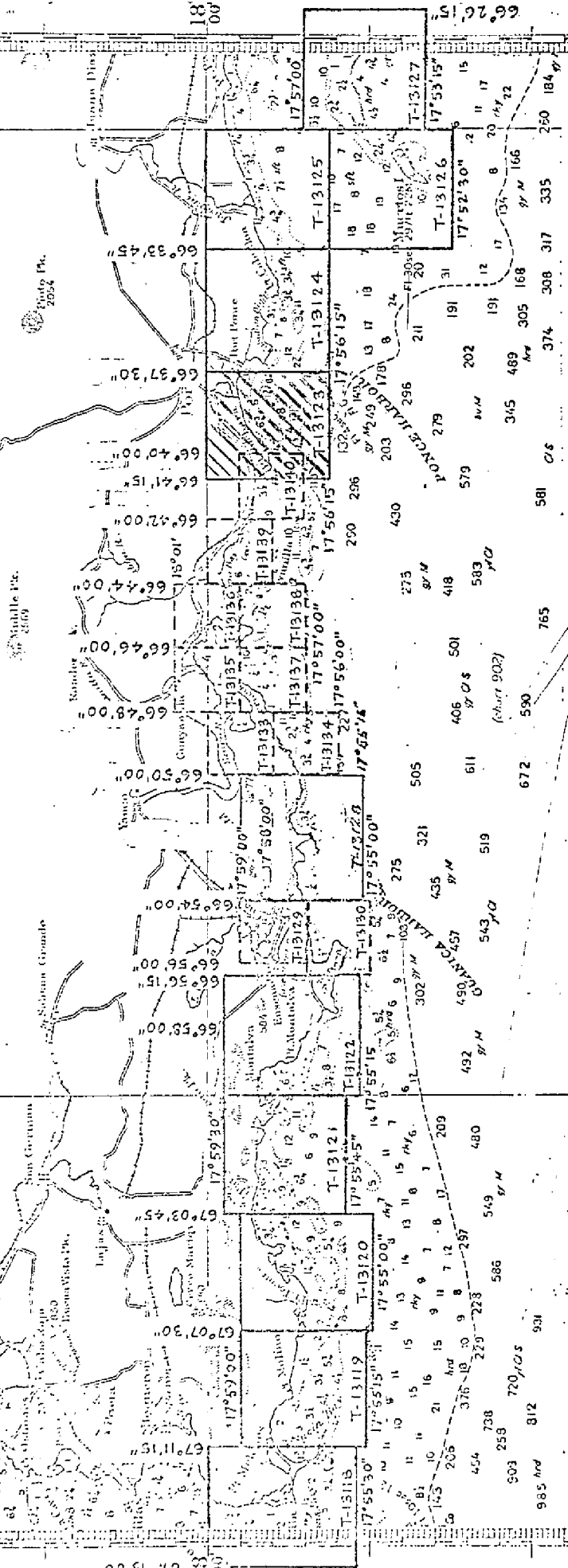
T-13118  
T-13119  
T-13120  
T-13121  
T-13122  
T-13123  
T-13124  
T-13125  
T-13126  
T-13127  
T-13128.

9  
9  
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9  
9  
9

T-13129  
T-13130  
T-13133  
T-13134  
T-13135  
T-13136  
T-13137  
T-13138  
T-13139  
T-13140  
Total

6  
3  
3  
3  
3  
3  
3  
3  
3  
3  
114

SOUTHWEST COAST  
PUERTO RICO  
SHORELINE MAPPING  
SCALE 1:5,000 & 1:10,000



## SUMMARY TO ACCOMPANY

## DESCRIPTIVE REPORT

T-13123

Shoreline survey T-13123 is one of twenty-one similar surveys in project PH-6708. The project is located on the south coast of Puerto Rico and extends from Cabo Rojo to Cayo Berberia. This survey starts just west of Punta Cuchara and continues eastward to Playa de Ponce.

There was no field work preceding the "incomplete" manuscript.

Compilation was by B-8 plotter using November, 1966 photography. A copy of the incomplete manuscript along with ozalids and specially prepared photographs were furnished for the preparation of the boat sheet, location of photo-hydro signals and field edit use.

This manuscript was a stabilene sheet three minutes, forty-five seconds latitude by three minutes, 45 seconds longitude at 1:10,000 scale. After field edit was applied and checked the manuscript was scribed, reproduced and stuck-up. The final review was at AMC in Feb., 1973. One cronaflex and negative of the final reviewed survey are being forwarded for record and registry.

FIELD INSPECTION REPORT  
PH-6708  
T-13123

There was no field inspection prior to compilation

PHOTOGRAMMETRIC PLOT REPORT  
Job PH-6708  
Puerto Rico

October 31, 1967

21. Area Covered

This report covers the southwest part of Puerto Rico, consisting of eight (8) 1:10,000 scale T-sheets, T-13118 thru T-13125, and thirteen (13) 1:5,000 scale T-sheets, T-13128 thru T-13140. Photography covering sheets T-13126 and T-13127 was not bridged at this time due to lack of control.

22. Method

Analytic aerotriangulation methods were used to bridge Strip 1, 1:60,000 scale color diapositives, using premarked and office identified control. Numerous tie points were located to control the compilation photography. Strips 3, 5, 5A, 6, 7 and 8 were bridged by analytic methods. Strips 2 and 4 were bridged by stereoplanigraph in order to facilitate the work.

The attached sketch of the strips bridged shows the placement of triangulation used in the final strip adjustment. Closures to control are shown for each strip on the IBM readout, along with all bridge points on Puerto Rico plane coordinates.

23. Adequacy of Control

Horizontal control is adequate to control Strip 1. All other strips were bridged using tie points and horizontal control and is adequate.

The premarked paneling at station PAGEN was removed prior to photography and the subpoint could not be identified. It was decided, therefore, to end Strip 1 with photo 66-M-625 and Strip 6 with photo 66-L-8433. However, it is believed that sheet T-13125 can be adequately compiled.

Station GUANICA L.H. 1900 does not have a valid position. Geodesy did not tie to this station during the 1966 work, and no adjustment was made to the new Puerto Rico datum. (Station has been reported destroyed.) The positions shown on Form 725d computed by Geodesy is arbitrary. Therefore, GUANICA L.H. Subpoint 1 and subpoint 2 are unreliable and were not held in the bridge.

It is to be noted that all horizontal control used on this job and the final pass point positions are on the new Puerto Rico Datum. A Xerox copy of triangulation station positions issued by Geodesy is submitted to the Compilation office with this job. Previously published GP's and plane coordinates should not be used for plotting.

24. Supplemental Data

Vertical control needed for the adjustment was taken from USGS quadrangles.

25. Photography

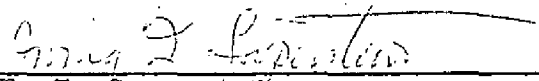
The definition and quality of the RC-9 "M" and RC-8 "L" color photography was fair and good respectively. Smoke covers parts of some photographs on Strips 3 and 5A, but should not hinder compilation of the shoreline.

Although sheets T-13137 thru T-13140 are covered by 1:15,000 scale photographs, these photographs were not bridged, nor can they be used for compilation on the plotter because of water areas. Strip 3, therefore, should be used to compile the above sheets.


Ratio prints have been ordered for the 1:30,000 and 1:15,000 scale photographs to compilation scale, on black and white base.

Several points were transferred to ratio print 66-L-8394 in order that a reef on T-13140 may be compiled graphically.

Respectfully submitted

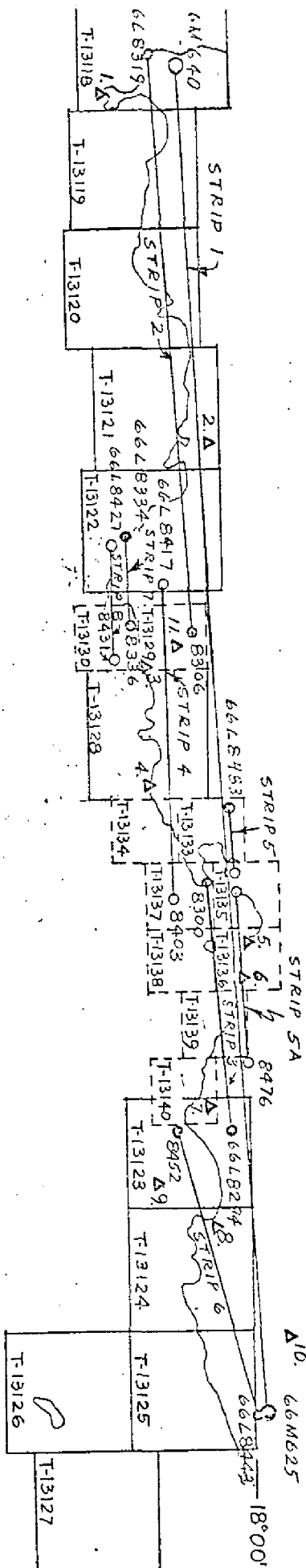
  
I. I. Saperstein

Approved and Forwarded

  
Henry P. Eichert, Chief  
Aerotriangulation Section

67°00'

66°30'



1. CABO ROJO (USAF) 1966
2. CERRO VERTERO 2 (USAF) 1934
3. FONSECADA, SOUTH R.R. SUGAR CO.
- CENT. GUANICA WEST & EAST STACKS, 1966
- GUANICA MUNIC. W.T. 1966
4. VAQUERO, 1900
5. TURN 2, 1966
6. GUAYANILLA, UNION CARBIDE CO. W.T. 1966
7. REY, 1966
8. PONCE, RADIO STATION WELO MHST, 1966
- PONCE BAY FRONT & REAR RANGE LTS. 1966
9. CARBONIA ISLAND L.H. 1900
10. PONCE, DON Q RUM CO. STACK, 1966
11. BAHIA DE GUANICA RANGE FRONT & REAR LTS. 1966

# AEROTRIANGULATION

PUERTO RICO  
Southwest Coast

PH-6708  
Oct. 1967

## LEGEND

- △ Control Used in Adjustment
- 1:60,000 Photos (color)
- 1:30,000 Photos ( " )
- 1:15,000 Photos ( " )



MAP T. 13123 PROJECT NO. PH-6708 SCALE OF MAP 1:10,000 SCALE FACTOR None

//

## COMPILATION REPORT

T-13123

31. DELINEATION

Delineation was by Wild B-8 methods using the color photography of November 16, 1966 supplemented by offshore color photography of November 15, 1966 and infrared photography of November 16, 1966.

The area to the West of longitude  $66^{\circ}40'00''$  was transferred from a reduction of T-13140 scale 1:5,000.

The photography was of good quality. There was no field inspection prior to compilation.

32. CONTROL

See Photogrammetric Plot Report dated Oct. 31, 1967.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

Contours are inapplicable. Drainage was compiled from office interpretation of the photos.

35. SHORELINE AND ALONGSHORE DETAILS

The mean high water line and all alongshore details were delineated from office interpretation of the photo.

36. OFFSHORE DETAILS

All islands and offshore reefs were compiled graphically.

37. LANDMARKS AND AIDS

Copies of form 567 for two Landmarks and two Aids to Navigation have been forwarded to the Washington Office.

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

A Junction was made with T-13140 scale 1:5,000 to the West and T-13124 scale 1:10,000 to the East. There is no contemporary survey to either the North or South.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

41. FIELD EDIT

The field edit data ~~was~~ to the point and was easily understood while applying it to the manuscript.

In a few instances information was not furnished. Form 567 for two landmarks were incomplete in that their elevations were not shown. There were no 567's for two fixed aids. Signal numbers were in error for three Sextant fixes involving a shoreline change in the vicinity of Punta Cucharas.

46. COMPARISON WITH EXISTING MAPS

A comparison was made with USGS Quadrangle PUNTA CUCHARA, PR scale 1:20,000 dated 1958.

47. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with Chart 927 BAHIA DE PONCE and APPROACHES, scale 1:20,000, 7th Edition dated July 13, 1964.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted:

*Richard R. White*

Richard R. White  
Cartographic Technician  
November 12, 1970

Approved:

*Alfred C. Holmes*

Alfred C. Holmes  
RADM, NOAA  
Director, Atlantic Marine Center

December 8, 1972

GEOGRAPHIC NAMES  
FINAL NAMES SHEETS  
Ph-6708 (Puerto Rico)

TP-13123

Arrecife Cardona  
Arrecife Ratones  
Bajo Cardona  
Cayo Arenas  
Cayo Viejo  
El Balneario  
Isla de Cardona  
Isla de Ratones  
Laguna de las Salinas  
Las Hojitas  
Mar Caribe  
Playa de Ponce  
Punta Cucharas  
Rio Matilde

Approved:

*A. J. Wraight*

A. J. Wraight

Chief Geographer

Prepared by:

*Charles E. Harrington*

Charles E. Harrington  
Cartographer

T#13123

49- NOTES FOR THE HYDROGRAPHER

None

FORM C&GS-1002 (9-66)		U.S. DEPARTMENT OF COMMERCE ESSA COAST AND GEODETIC SURVEY	
PHOTOGRAMMETRIC OFFICE REVIEW T. 13123			
1. PROJECTION AND GRIDS LFB	2. TITLE LFB	3. MANUSCRIPT NUMBERS LFB	4. MANUSCRIPT SIZE LFB
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY		6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) XX	7. PHOTO HYDRO STATIONS XX
8. BENCH MARKS LFB	9. PLOTTING OF SEXTANT FIXES RJP	10. PHOTOGRAMMETRIC PLOT REPORT LFB	11. DETAIL POINTS LFB
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE LFB	13. LOW-WATER LINE LFB	14. ROCKS, SHOALS, ETC. LFB	15. BRIDGES LFB
16. AIDS TO NAVIGATION LFB	17. LANDMARKS LFB	18. OTHER ALONGSHORE PHYSICAL FEATURES LFB	19. OTHER ALONGSHORE CULTURAL FEATURES LFB
PHYSICAL FEATURES			
20. WATER FEATURES LFB		21. NATURAL GROUND COVER LFB	22. PLANETABLE CONTOURS XX
23. STEREOSCOPIC INSTRUMENT CONTOURS XX	24. CONTOURS IN GENERAL XX	25. SPOT ELEVATIONS XX	26. OTHER PHYSICAL FEATURES LFB
CULTURAL FEATURES			
27. ROADS LFB	28. BUILDINGS LFB	29. RAILROADS LFB	30. OTHER CULTURAL FEATURES LFB
BOUNDARIES			
31. BOUNDARY LINES XX		32. PUBLIC LAND LINES XX	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES LFB		34. JUNCTIONS RJP	35. LEGIBILITY OF THE MANUSCRIPT LFB
36. DISCREPANCY OVERLAY LFB	37. DESCRIPTIVE REPORT LFB	38. FIELD INSPECTION PHOTOGRAPHS RJP	39. FORMS RJP
40. REVIEWER Leo F. Beugnet		SUPERVISOR, REVIEW SECTION OR UNIT <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr.	
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 L.L. Graves July 23, 1971 Reviewed By: R.J. Pate July 1971		SUPERVISOR <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr.	
43. REMARKS Field Edit Applied From: Field Edit Ozalid, Photo No. 66-L-(c)-8347 & 66-L-(c)-8348			

## FIELD EDIT REPORT

T-13123

Job PH-6708

Southwest Coast of Puerto Rico

(1971)

52. ADEQUACY OF COMPILATION.

Compilation was adequate. Some changes in the HWL have occurred since photography and fixes and measurements were obtained to correctly delineate the changes. Two small piers have been added that were not on the photographs and one compiled pier has been reclassified, as a pier in ruins. A trail on the map manuscript has been reclassified a ddl and extended in length, and a second trail was delineated. Some rock reefs were overlooked by the compiler and notes on the field edit ozalid show the extent to which they should be compiled.

54. RECOMMENDATIONS.

None

56. GEOGRAPHIC NAMES.

Many of the names on this map are in dispute with the common local usage for the area. All disputed names on the map manuscript are listed below with explanations.

Disputed Name  
and Reference

Balnearion  
T-13123

In local nautical usage, this swimming resort is referred to as El Balneario.



Punta Cuchara T-13123	This has been misspelled and should be <u>Punta Cucharas</u> .
Cayo Ratones (T-13140 overlap)	This name on the T-sheet refers to two islands south of Punta Cucharas. The local mariners and fishermen interviewed say that this island, along with many others along this coast, were possibly once referred to as Keys or "Cayo", maybe before the mangrove became stable and they were just sand covered reefs. Most of these mangrove covered reefs are now referred to as islands, and thus the common local name for this island is <u>Isla de Ratones</u> .
Cayo Cardona T-13123	The local name in common usage at this time is <u>Isla de Cardona</u> . See Cayo Ratones for explanation of this change.
Arrecife Cardona New Name	This name is in common local usage and refers to the reef around Isla de Cardona but more particularly to that part of the reef extending northeast from the east end of the island.
Bajo Cayo Cardona Chart 927	This name was shown on chart 927 extending southeast from Isla de Cardona. It is in local usage as <u>Bajo Cardona</u> , omitting the word Cayo.
Escollo Hojas T-13123 USGS Quad.	This name was unknown by the people interviewed. This reef is locally referred to as <u>Cayo Viejo</u> which is the name on chart 927.

Arrecife Cayito  
USGS Quad.

This name, which was on the USGS Quad., but not on the T-sheet was unknown to the local people. This area is locally referred to as Las Hojitas which is the charted name for this area on chart 927.

Local Authorities Consulted Were:

- I. Luis A. Armstrong is a local buisnessman who has resided in Ponce, Puerto Rico for 46 years. He is a very well known sports fisherman and was considered to be the best authority for nautical names in this area by all the people interviewed.
- II. Enrique Petrovich is the Commadore of the Ponce Yacht and Fishing Club and has been a resident of Ponce for 36 years.
- III. Dr. Andy Lang is the Vice Commadore of the Ponce Yacht and Fishing Club and a resident of the area for 20 years.
- IV. Rafail D. Mercado M.D., is the Rear Commadore of the Ponce Yacht and Fishing Club and a local resident for 42 years.
- V. Dr. Raul Pov is the Director of the Ponce Yacht and Fishing Club and a local resident for 45 years.
- VI. Capt. Juan P. Barcia is a local businessman and a boat owner, and has been a local resident for 47 years.
- VII.. Frank Bonnin is a local businessman and the official USC&GS Chart Agent for Ponce, Puerto Rico.

VIII. Ronald J. Wirshing is a large coastal land owner in area and a boat owner. He has been a local resident for 27 years.

IX. Capt. William Suárez Williams is the Capt. of Port, Puerto Rico Ports Authority, Ponce, Puerto Rico.

All of the above people can be contacted through the Ponce Yacht and Fishing Club, Ponce, Puerto Rico.

57. LANDMARKS AND NONFLOATING AIDS TO NAVIGATION.

On this map manuscript there are two landmarks and two nonfloating aids to navigation recommended as they exist on current charts 927, 902, and 920.

58. ROCKS, REEFS, SHOALS, AND FOUL AREAS.

The reef and shoreline around Cayo Arenas has been incorrectly compiled and should be shown as compiled on the overlapping sheet T-13140 (1:5,000 Advance Manuscript).

The area Arrecife Ratones was studied by both the field editor and the hydrographer. It is felt that neither the compilation on this sheet (T-13123) nor the compilation on Advance T-13140 containing the 1969 field edit for the same area, show the correct compilation for the area. The delineation shown on photo 66L8347 was checked by the hydrographer with fixes and is considered the best representation of the area in question.

Two submerged coral reefs off El Tuque, a submerged rock reef at  $66^{\circ}39'35''$  -  $17^{\circ}58'30''$ , and a system of rock reefs and ledges parrelling the shoreline east of the above rock

reef were overlooked by the compiler and should be delineated as indexed on the field edit ozalid. The rock reefs and ledge are composed of a solid rock conglomerate of sand and small shells and are not coral.

Submerged coral reefs at  $66^{\circ}39'00''$  -  $17^{\circ}57'40''$  and  $66^{\circ}38'30''$  -  $17^{\circ}58'00''$  have changes in delineation as verified by hydrographer and indexed on the field edit sheet. Any rocks in these areas will be located by the hydrographer.

The shallow limit north of Isla de Cardona has been deleted as the hydrographer has sounded the area.

59. MISCELANEOUS.

All times on the field edit ozalid refer to G.M.T., and not local time.

All fixes shown on the field edit ozalid use the hydrographers signals and all numbered signals are the same numbers as on the hydrographic sheet. A list of signals and their positions is included for the area covered by this map manuscript.



Richard D. Olson

LTJG NOAA

## LIST OF SIGNALS

for

T-13123

<u>Signal No.</u>	<u>N-Latitude</u> <u>Deg-Min-Meters</u>	<u>W-Longitude</u> <u>Deg-Min-Meters</u>	<u>Located By</u> <u>(Method)</u>
✓310 ✓	17-58 0231.5 ✓	66-40 0770.2 ✓	Topo
311	17-58 1664.6 ✓	66-41 1636.4 ✓	△
✓312 ✓	17-58 1201.4 ✓	66-40 1070.5 ✓	△
✓313 ✓	17-57 0964.5 ✓	66-38 0220.4 ✓	△
✓320 ✓	17-59 0142.0 ✓	66-39 1426.6 ✓	△
✓325 ✓	17-58 1840.4 ✓	66-38 0919.7 ✓	Sextant
✓330 ✓	17-59 1553.3 ✓	66-38 0451.6 ✓	△
✓340 ✓	17-59 0832.2 ✓	66-37 1409.3 ✓	△
✓350 ✓	17-58 1786.7 ✓	66-37 1392.7 ✓	△
✓360 ✓	17-59 1416.7 ✓	66-37 0867.6 ✓	△
✓370	17-59 1765.4 ✓	66-36 1609.3 ✓	△
✓380	17-59 0066.0 ✓	66-37 0353.6 ✓	△
✓390	17-58 1640.2 ✓	66-37 0426.0 ✓	△
✓430 ✓	17-58 0951.9 ✓	66-41 0150.3 ✓	Photo
✓440 ✓	17-58 1005.5 ✓	66-40 1454.9 ✓	Photo
✓450 ✓	17-58 0658.8 ✓	66-40 1058.7 ✓	Photo
460 *			Sextant
✓470 ✓	17-57 0623.3 ✓	66-40 1559.8 ✓	Photo
✓500	17-58 1623.8 ✓	66-36 1448.8 ✓	△

\* Note: Position was not available from hydrographer at the time the field edit was completed. This signal is not necessary for plotting of field edit fixes.



## REVIEW REPORT

## SHORELINE

T-13123

61. GENERAL STATEMENT

See summary which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED SURVEYS

Comparison was made with registered surveys Nos. 2415, 1:10,000, scale dated 1899 and 2468, 1:20,000 dated 1900 both surveys are in very good agreement with this contemporary one. There is a datum change and natural changes which account for the differences. The only real change is in the western shoreline of Punta Cuchara which is of a flat sandy character. This difference, although not too significant, is shown in blue on the discrepancy print.

Registered surveys Nos. 2415 and 2468 are superseded by T-13123 for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with USGS Quadrangle Punta Cuchara, 1962 at 1:20,000 scale. The only significant differences are the western shoreline of Punta Cuchara due to natural causes, and the location of Isla de Ratones and Cayo Arenas. This could be because of the change in datum and the improved methods of surveying and cartography used today. These differences are noted on the ~~discrepancy~~ print in brown. *Comparison*

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with Boat Sheet H-9135 at 1:10,000 scale dated 1971. The shoreline was taken from the incomplete manuscript but revised in the field to agree with the field edit corrections. The only exception is the western shore of the Punta Cucha where a slight difference exists. This difference is minor and was not shown on the ~~discrepancy~~ print. *Comparison*



# 65. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with Chart 927, 1:20,000 scale, dated July 3, 1971. See item 63 of this report for remarks. The differences are noted in red on the ~~discrepancy~~ <sup>comparison</sup> print.

# 66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

This survey meets with project instructions and the National Standards of Map Accuracy.

Reviewed by:

*Bernard Kurs*  
Bernard Kurs  
Cartographer

Approved for forwarding:

*Melvin J. Umbach*  
Melvin J. Umbach, CDR, NOAA  
Chief, Coastal Mapping Division, AMC

Approved:

*Alfred C. Holmes*  
Alfred C. Holmes, RADM, NOAA  
Director, Atlantic Marine Center

Approved:

*D. K. Brown*  
Chief, Photogrammetric Branch

*Wesley V. Hull*  
Chief, Coastal Mapping Division



66-L(C)-8395

24

Submerged coral reef  
Submerged coral reef  
Submerged coral reef  
Cayo Arenas  
Shallow  
Coral reef awash  
Foul with Subm coral

66-L(C)-8347

57'30"

y=45,000 FT.

QUAD  
Shallow  
Mg islets  
Isla de Ratones  
Arrecife Ratones  
Submerged coral  
Coral reef awash  
Coral reef awash  
Mg islets

CHART  
927

17° 57'

y=40,000 FT.

66° 41' 00"

40'30"

56'30"

T-13123

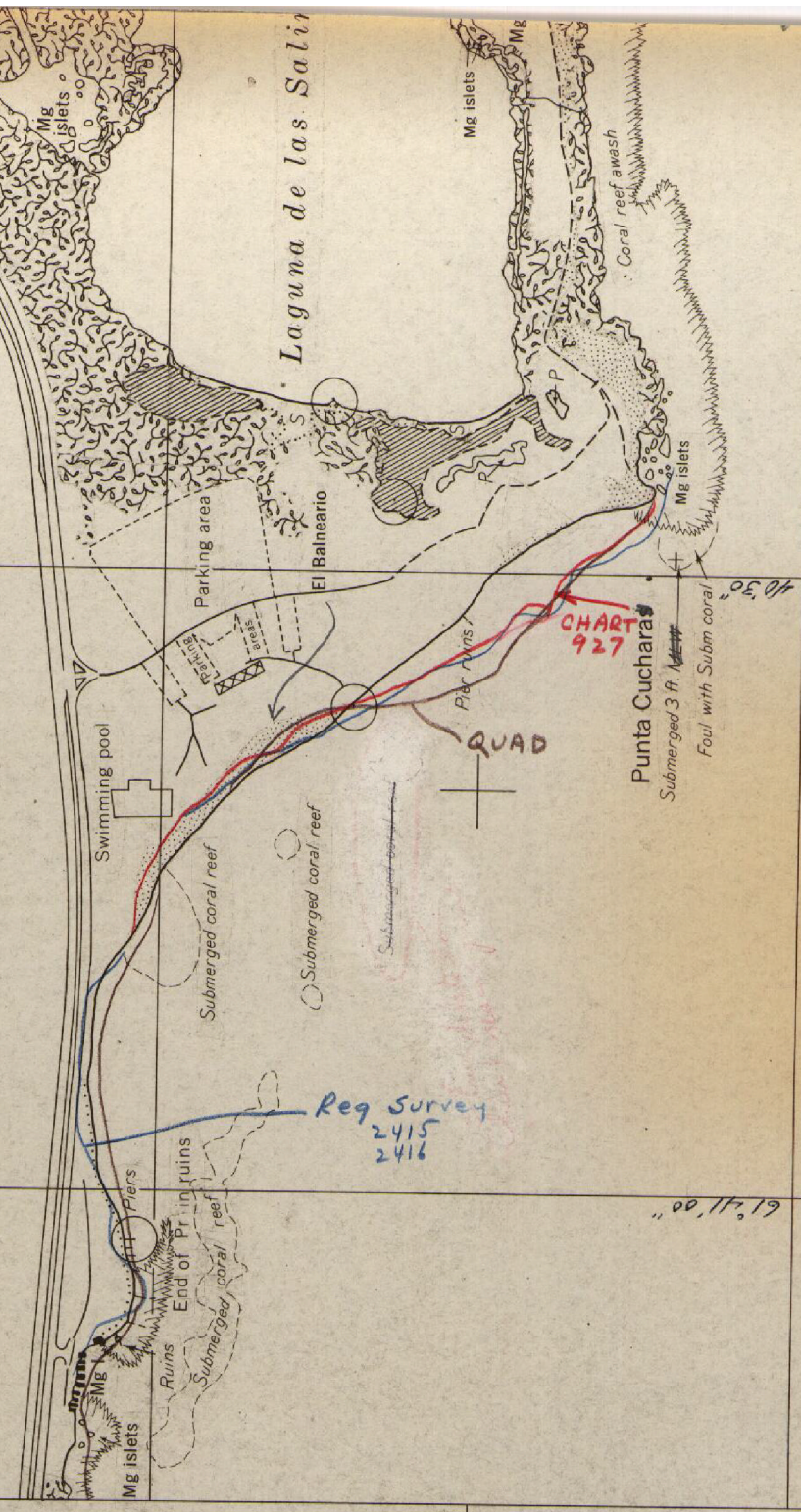


58°30"

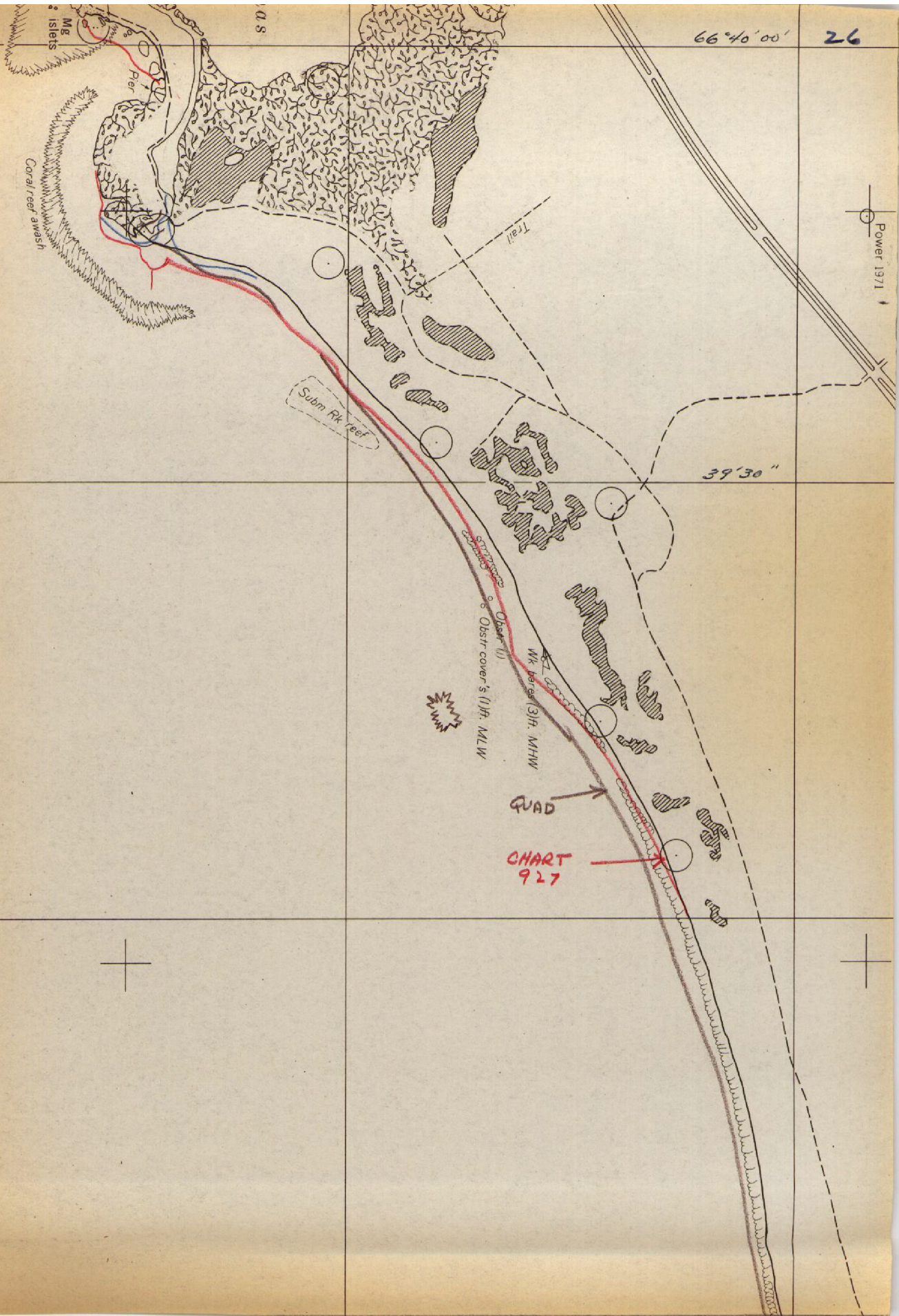
1:50,000 FT.

17°58'

REV. 1966







T-13123



38°30"

x=430,000 FT.

38'

66°37'30" 27

18°00'00"

y=60,000 F

RADIO TOWER WISO, 1260 KHZ (PONCE,  
RADIO STATION WISO MAST, 1966)

Transmission line

Rio Matilde

Playa de Ponce

RADIO TOWER WPAB 550 KHZ (PONCE,  
RADIO STATION WPAB MAST, 1966)

Cemetery

132

y=55,000 F

59'

← CHART  
927

SEWER EXTENSION LIGHT (PONCE  
BAY SEWERAGE LIGHT 1966)

T-13123



58'30"



66-L(C)-8451

y=50,000 F



Los Hoyitos

Submerged coral reef

17° 58'

38'30"

66° 38'00"



66-L(C)-8349

37'30"

CHART  
927

Foul with Subm coral

Isla de Cardona

Pier

Coral reef  
awash

Arrecife

Cardona

CARDONA ISLAND LIGHTHOUSE ECC 1899)  
CAYO CARDONA LIGHT 1900  
(CARDONA ISLAND LIGHTHOUSE 1889)

57'30"

y=45,000 F

Bajo Cardona



☒ TO BE CHARTED  
☐ TO BE DELETED

ORIGINATING LOCATION  
NOS Atlantic Marine Center

DATE  
Nov. 1970

The following objects have (have not) been inspected from seaward to determine their value as landmarks:

ORIGINATING ACTIVITY  
☐ FIELD INSPECTION  
☐ FIELD EDIT  
☒ COMPILATION  
☐ FINAL REVIEW  
☐ QUALITY CONTROL AND REVIEW  
(See reverse for responsible personnel)

JOB NUMBER  
PH-6708

STATE: Puerto Rico

SURVEY NUMBER  
T-13123

DATUM  
Puerto Rico

METHOD AND DATE OF LOCATION  
(See instructions on reverse of this form)

CHARTS  
AFFECTED

CHARTING  
NAME

POSITION  
LATITUDE  
LONGITUDE

FIELD  
INSPECTION

COMPILATION

FIELD EDIT

CHARTS  
AFFECTED

Light  
(Cayo Cardona Light  
Cardona Island  
Lighthouse, 1899)

17° 54' 31.37281  
964.5

Triang. Rec.  
1970

66L (C) 849  
Nov. 16/66

Verif.  
Feb. 1971

927  
902

Light  
(Sewer Extension Light  
Ponce Bay Sewerage Light,  
1966)

17° 05' 58.1793  
186.7

Triang. Rec.  
1970

66L (C) 849  
Nov. 16/66

Verif.  
Feb. 1971

927  
902