

13130

13130

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-13130

## LOCALITY

State Puerto RicoGeneral locality Southwest CoastLocality Ensenada Las Pargas1966-1970 69

## CHIEF OF PARTY

Alfred C. Holmes, Director, AMC

## LIBRARY &amp; ARCHIVES

DATE \_\_\_\_\_

## DESCRIPTIVE REPORT - DATA RECORD

T-13130

PROJECT NO. (II): PH-6708		
FIELD OFFICE (II): 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 and Graphic		
MANUSCRIPT SCALE (III): 1:5,000	STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): 1:2,500 Pantographed To 1:5,000	
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): <del>MEAN LOW WATER</del> <b>HIGH WATER</b> 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 <del>mean low water</del>
REFERENCE STATION (III): Brea, 1966		
LAT.: 17° 55' 46.61007"	LONG.: 66° 55' 32.84831"	<input checked="" type="checkbox"/> ADJUSTED <input type="checkbox"/> UNADJUSTED
PLANE COORDINATES (IV): y = 35,190.12 Ft.      x = 328,820.90 Ft.		STATE Puerto Rico
		ZONE 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.		

## DESCRIPTIVE REPORT - DATA RECORD

T-13130

FIELD INSPECTION BY (II): None		DATE:
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): Air Photo Compilation - Date of Photography - Nov. 15, 1966		
PROJECTION AND GRIDS RULED BY (IV): A. Bethea		DATE Oct. 10, 1968
PROJECTION AND GRIDS CHECKED BY (IV): L. F. Van Scoy		DATE Oct. 14, 1968
CONTROL PLOTTED BY (III): Aerotriangulation Points: - B. Nicholson Triangulation Stations: - C. <del>Hod</del>		DATE Nov. 13, 1968 Nov. 26, 1968
CONTROL CHECKED BY (III): Aerotriangulation Points: - J. Steinberg Triangulation Stations: - A. C. Rauck, Jr.		DATE Nov. 13, 1968 Dec. 3, 1968
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): I. I. Saperstein		DATE Oct. 31, 1967
STEREOSCOPIC INSTRUMENT COMPILATION (III): Wild B-8	PLANIMETRY By: A. L. Shands Reviewed By: C. H. Bishop	DATE April 7/1969 April 7/1969
	CONTOURS Inapplicable	DATE
MANUSCRIPT DELINEATED BY (III): A. L. Shands		DATE April 24, 1969
SCRIBING BY (III): C. J. Woodson		DATE 8/12/71
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): *Compilation: R.E. Smith Field Edit: R.J. Pate Scribing and Stick Up: B.L. Barge		DATE April 29/1969 April 13/1971 Sept. 8, 1971
REMARKS: Field Edit By: - R.E. Kesselring *Refer to Form		DATE: Feb. 1969

## DESCRIPTIVE REPORT - DATA RECORD

T-13130

MERA (KIND OR SOURCE) (III):

Wild RC-8 "L"

## PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
66-L-8429 thru 66-L-8431	Nov. 15, 1966	10:53	1:15,000	0.5 ft. above MLW

## PREDICTED TIDE (III)

## DIURNAL

	RATIO OF RANGES	MEAN RANGE	<del>MEAN</del> RANGE
REFERENCE STATION: Galveston, Texas			1.4
SUBORDINATE STATION: Quanica, P.R.	0.50		0.7
SUBORDINATE STATION:			

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

DATE:  
Dec. 1972

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

1

RECOVERED:

1

IDENTIFIED:

0

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

None

RECOVERED:

None

IDENTIFIED

None

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

None

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

None

REMARKS:



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

## HISTORY OF FIELD OPERATIONS T 13130

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	Joseph K. Wilson	
2. HORIZONTAL CONTROL	RECOVERED BY Roger P. Hewitt ESTABLISHED BY na PRE-MARKED OR IDENTIFIED BY na	May, 1970
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 LOCATED (Field Methods) BY none IDENTIFIED BY	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input checked="" type="checkbox"/> SPECIFIC NAMES ONLY BY Roger P. Hewitt <input type="checkbox"/> NO INVESTIGATION	May, 1970
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY Roger P. Hewitt	May, 1970
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY na	

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED none		2. VERTICAL CONTROL IDENTIFIED none	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
3. PHOTO NUMBERS (Clarification of details) 66 L 8429, 66 L 8430, 66 L 8431			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED none			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE		6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE	
7. SUPPLEMENTAL MAPS AND PLANS Field Ozalid			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division) 1 Field Edit Report 1 Form 526			

T-13130

COMPILATION RECORD	COMPLETION DATE	REMARKS
Compilation Complete, Pending Field Edit	April 1969	Superseded
Field Edit Applied	April 13, 1971	Superseded
Final Review	Dec. 1972	

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  
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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

67° 00'

66° 30'

SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT T-13130

Shoreline survey T-13130 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 covers from just east of Punta Manglillo to just west of entrance of the Bahia De Guanica.

There was no field work prior to the compilation of the manuscript.

Compilation was at 1:5,000 scale by B-8 plotter, using photography of November, 1966. A copy of the manuscript, classified "incomplete" 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.

The manuscript was a vinylite sheet 2 minutes 15 seconds longitude by 2 minutes 00 seconds latitude. After field edit was applied the manuscript was scribed, stuck-up and reproduced on cronaflex. Final review was at AMC in December, 1972. One cronaflex and negative of the final reviewed survey are being forwarded for record and registry.

Field Inspection Report

PH-6708

T-13130

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

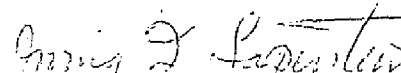
The definition and quality of the RC-9 "M" and RC-8 "L" color photography was fair and good respectively. Smoke covers parts of some photographs on Strips 3 and 5A, but should not hinder compilation of the shoreline.

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.

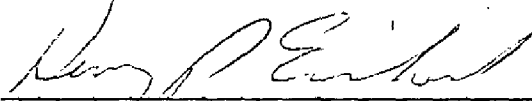
Ratio prints have been ordered for the 1:30,000 and 1:15,000 scale photographs to compilation scale, on black and white base.

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

Respectfully submitted

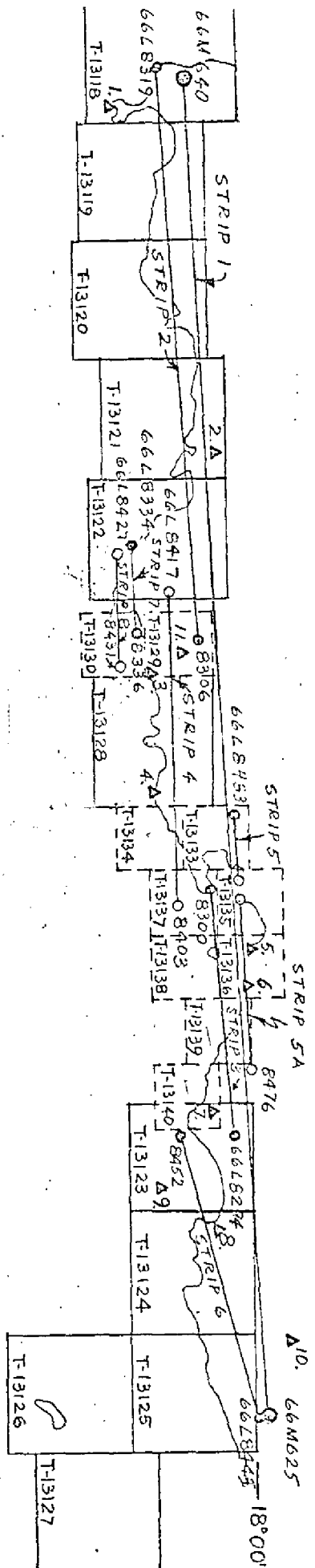
  
I. I. Saperstein

Approved and Forwarded

  
Henry P. Eichert, Chief  
Aerotriangulation Section

67.00

66.30



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

# AEROTRIANGULATION

PUERTO RICO  
Southwest Coast

PH-6708

Oct. 1967

LEGEN D

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





## Compilation Report

T-13130

31. DELINEATION

The Wild B-8 was used for delineation of photographs 66-L-8429 and 8430 (west of Long.  $66^{\circ}55'15''$ ). The area east of long.  $66^{\circ}55'15''$  covered by photo 66-L-8431 could not be orientated with the Wild B-8 (center too far out in the water); therefore this area was compiled graphically, using identifiable bridge points and shoreline pass points located from model 8429-8430, and 8413-8414 (from manuscript T-13129), and additional pass points located graphically. The small area of submerged coral (CORONA LA LAJA) was located with the vertical projector from T-13128 scale 1:10,000.

32. CONTROL

See Photogrammetric Plot Report, dated Oct. 31, 1967.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

Drainage was delineated from office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS

The MHWL and all alongshore details were delineated from office interpretation of the photographs.

36. OFFSHORE DETAILS

All rocks and reefs as well as all mangrove Islets were delineated from office interpretation. Shallow areas were shown only as an aid to the hydrographer and are from office interpretation of the photographs.

37. LANDMARKS AND AIDS

None

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

Junctions are in agreement with 1:10,000 scale sheets T-13122 to the west and T-13128 to the east and with T-13129 (1:5,000) to the north. There is no contemporary survey to the south.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

A comparison has been made with USGS quadrangle "GUANICA, PR, scale 1:20,000, dated 1956.

47. COMPARISON WITH NAUTICAL CHARTS

A comparison has been made with Chart 929, scale 1:10,000, 3rd Edition, dated Feb. 8, 1965.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted:

*A. L. Shands*

A. L. Shands  
Cartographic Technician  
4-22-69

Approved:

*Alfred C. Holmes*

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

December 11, 1972

GEOGRAPHIC NAMES

FINAL NAME SHEETS

Ph-6708 (Puerto Rico)

TP-13130

Corona La Laja

Ensenada Las Paldas

Fronton de La Brea

Mar Caribe

Punta Brea

Punta Manglillo

Salinas Las Paldas

Approved:

A. J. Wraight  
A. Joseph Wraight  
Chief Geographer

Prepared by:

Charles E. Harrington  
Charles E. Harrington  
Cartographer

49. NOTES FOR THE HYDROGRAPHER

None

FORM C&GS-1002 (9-66)		U.S. DEPARTMENT OF COMMERCE E55A COAST AND GEODETIC SURVEY	
<b>PHOTOGRAMMETRIC OFFICE REVIEW</b> T-13130			
1. PROJECTION AND GRIDS  RES	2. TITLE  RES	3. MANUSCRIPT NUMBERS  RES	4. MANUSCRIPT SIZE  RES
<b>CONTROL STATIONS</b>			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY  RES		6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations)  XX	
8. BENCH MARKS  XX	9. PLOTTING OF SEXTANT FIXES  XX	10. PHOTOGRAMMETRIC PLOT REPORT  Bridge (W.O.)	11. DETAIL POINTS  Wild B-8
<b>ALONGSHORE AREAS (Nautical Chart Data)</b>			
12. SHORELINE  RES	13. LOW-WATER LINE  XX	14. ROCKS, SHOALS, ETC.  RES	15. BRIDGES  XX
16. AIDS TO NAVIGATION  RJP	17. LANDMARKS  RJP	18. OTHER ALONGSHORE PHYSICAL FEATURES  RES	19. OTHER ALONGSHORE CULTURAL FEATURES  XX
<b>PHYSICAL FEATURES</b>			
20. WATER FEATURES  RES		21. NATURAL GROUND COVER  RES	
22. PLANETABLE CONTOURS  XX			
23. STEREOSCOPIC INSTRUMENT CONTOURS  XX	24. CONTOURS IN GENERAL  XX	25. SPOT ELEVATIONS  XX	26. OTHER PHYSICAL FEATURES  XX
<b>CULTURAL FEATURES</b>			
27. ROADS  RES	28. BUILDINGS  RES	29. RAILROADS  XX	30. OTHER CULTURAL FEATURES  RES
<b>BOUNDARIES</b>			
31. BOUNDARY LINES  XX		32. PUBLIC LAND LINES  XX	
<b>MISCELLANEOUS</b>			
33. GEOGRAPHIC NAMES  RES		34. JUNCTIONS  RES	
35. LEGIBILITY OF THE MANUSCRIPT  RES			
36. DISCREPANCY OVERLAY  RES	37. DESCRIPTIVE REPORT  RES	38. FIELD INSPECTION PHOTOGRAPHS  RJP	39. FORMS  RES
40. REVIEWER  R.E. Smith,		SUPERVISOR, REVIEW SECTION OR UNIT  Albert C. Rauck, Jr. <i>Albert C. Rauck, Jr.</i>	
41. REMARKS (See attached sheet)			
<b>FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT</b>			
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.			
COMPILED Field Edit: R.J. Pate Apr. 13/71 Reviewed By: R.J. Pate Apr. /1971		SUPERVISOR <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr.	
43. REMARKS  Field Edit Applied From: Field Edit Ozalid and Field Photos: 66-L-8429, 66-L-8430, 66-L-8431.			

FIELD EDIT REPORT  
SOUTHWEST COAST OF PUERTO RICO  
JOB PH-6708  
MAP T-13130

Field edit was performed in accordance with Instructions-PHOTO-HYDRO SUPPORT AND FIELD EDIT - Job PH-6708, dated December 14, 1967 and Supplement I of these instructions dated 13 March 1970, and with Photogrammetry Instructions concerning Field Edit with the exception of a complete investigation of geographic names.

52. ADEQUACY OF COMPILATION

Compilation was adequate. Coral limits were correct and verified by the hydrographer except where noted on Photos (cross referenced on field ozalid). Many of the submerged rocks and rocks awash, so delineated, are coral heads and are labeled as such on the photos and cross-referenced on field ozalid. All bluffs shown except 2 are prominent and should be charted; heights are shown on photos and field ozalid.

A sand exporting operation has started on Punta Brea since the photos were taken. The trail marked "ddl private" has been graded to accommodate dump trucks and extended along the shoreline past the pond to the beach noted on Photo 66L 8429 (shown approximately).

Distances to MHWL are shown at photo points on all three photos (66L 8429, 8430, 8431).

54. RECOMMENDATIONS

See Field Edit Report T 13129 as to clarification of term "landmark value."

56. GEOGRAPHIC NAMES

The majority of the names on this map are in undisputed local usage with the exception of the following:

MONTALVA - refers to a district farther west than the area covered on the map and is not in local use for the land labeled so. LAS PARDAS AND PUNTA BREA are the local references to the land so labeled and are shown on the field ozalid.

CORONA LA LAJA - was incorrectly labeled BAJA LA LAJA.

CAÑO AZUL - refers to a channel behind a mangrove islet to the west of Punta Manglillo. The channel is often used by small boats to wait out a storm at sea.

Local authorities consulted were:

Dr. Luis R. Almodovar of La Parqueria, Lajas, Puerto Rico. Dr. Almodovar is a professor at the Institute of Marine Science of the University of Puerto Rico. He has been a resident for 12 years and is a well known local sport fisherman.

Sr. Juan J. Irizarry of La Parqueria, Lajas, Puerto Rico. Sr. Irizarry is a research assistant at the Institute of Marine Science and has been a resident of the area for 36 years.

Sr. Oscar Padilla of Guanica, Puerto Rico. Sr. Padilla is the senior harbor pilot for Bahias de Guayanilla and Guanica and has been a resident of Guanica for 65 years.

#### 57. LANDMARKS AND NONFLOATING AIDS TO NAVIGATION

There are no landmarks or nonfloating aids to navigation on this map.

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

Of the two reefs shown on Chart 929, but not compiled, one, in Ensenada Las Pargas, is nonexistent; the other, west of Fronton de la Brea is there and is shown on Photo 66L 8430. The reef off Punta Manglilla was compiled incorrectly, according to the hydrographer and is shown correctly on Photo 66L 8430. The submerged coral area on the western side of the coral awash, in the middle of Ensenada Las Pargas, is actually foul with numerous isolated coral heads. The shallow and foul areas were delineated correctly.

*Roger P. Hewitt*  
Roger P. Hewitt  
ENS/USESSA



T 13130  
Photo-Hydro Signals

- T 13130 01 Northwest point of brush on west side of  
brush and rock point  
02 White rock between 2 patches of brush on  
rocky point  
03 inside right angle of brushy patch on rocky  
point  
04 south corner of grassy patch on rocky point  
05 seaward point of brush  
06 Northwest corner of brush at rock  
07 Apex of "V" of rocks into brush  
08 NW corner of large boulder  
09 Center of rock  
10 Small lone palm tree  
11 Center of rock  
12 Intersection of 2 foot paths  
13 Rock point (south tip)

REVIEW REPORT

SHORELINE

T-13130

61. GENERAL STATEMENT

See summary which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED SURVEYS

Comparison was made with a copy of registered survey No. 2474 dated 1900, scale 1:10,000. There is only fair agreement between the two. There is a datum difference and many discrepancies in the shoreline, reefs, and mangrove islands. The date of the chart along with the improved methods of surveying techniques account for the differences. The differences in the shoreline and reefs are noted on the comparison print in blue.

Registered survey No. 2474 is superseded by T-13130 for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A visual comparison was made with USGS GUANICA, PR quadrangle 1956 1:20,000 scale. Only a general comparison could be made. The reefs alongshore and offshore are only symbolized by rock awash symbols. Only pertinent rock awash symbols are carried on the comparison print in brown. All discrepancies were resolved by comparison with the boat sheet and the field edit notes.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with Boat Sheet H-9719, 1:10,000 scale. The shoreline on this boat sheet appears to be made from the incomplete manuscript T-13130. The main changes were the two reefs around Punta Manglillo. The depth readings on the south end of these reefs necessitated the narrowing of the boundaries. All differences appear on the comparison print in purple.


65. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Chart 929, 1:10,000 scale dated May 1, 1970. They agree only in a general sense. Discrepancies are noted on the comparison print in red.

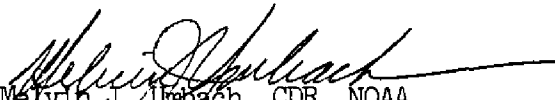
66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Reviewed by:

  
Bernard Kurs  
Cartographer

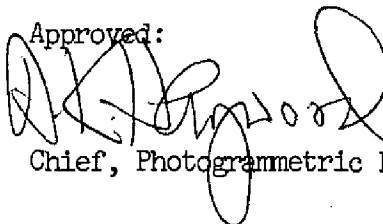
Approved for forwarding:


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

Approved:

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

Approved:

  
Chief, Photogrammetric Branch

  
Chief, Coastal Mapping Division

AB

66° 56'

55' 45"

21

17° 56' 45"

Trail

Co awash  
Co awash  
Rk awash

Reg. Survey  
2474

CHART  
929

Boat Sheet  
H-9719

Pardas

Subm Co

Subm Co

Co awash

56' 30

ENSENADA

Sand

Rk  
(3)

Trail

Trail

Trail

56' 15"

(2)  
(6)

Co awash  
Rk  
for station  
(2)



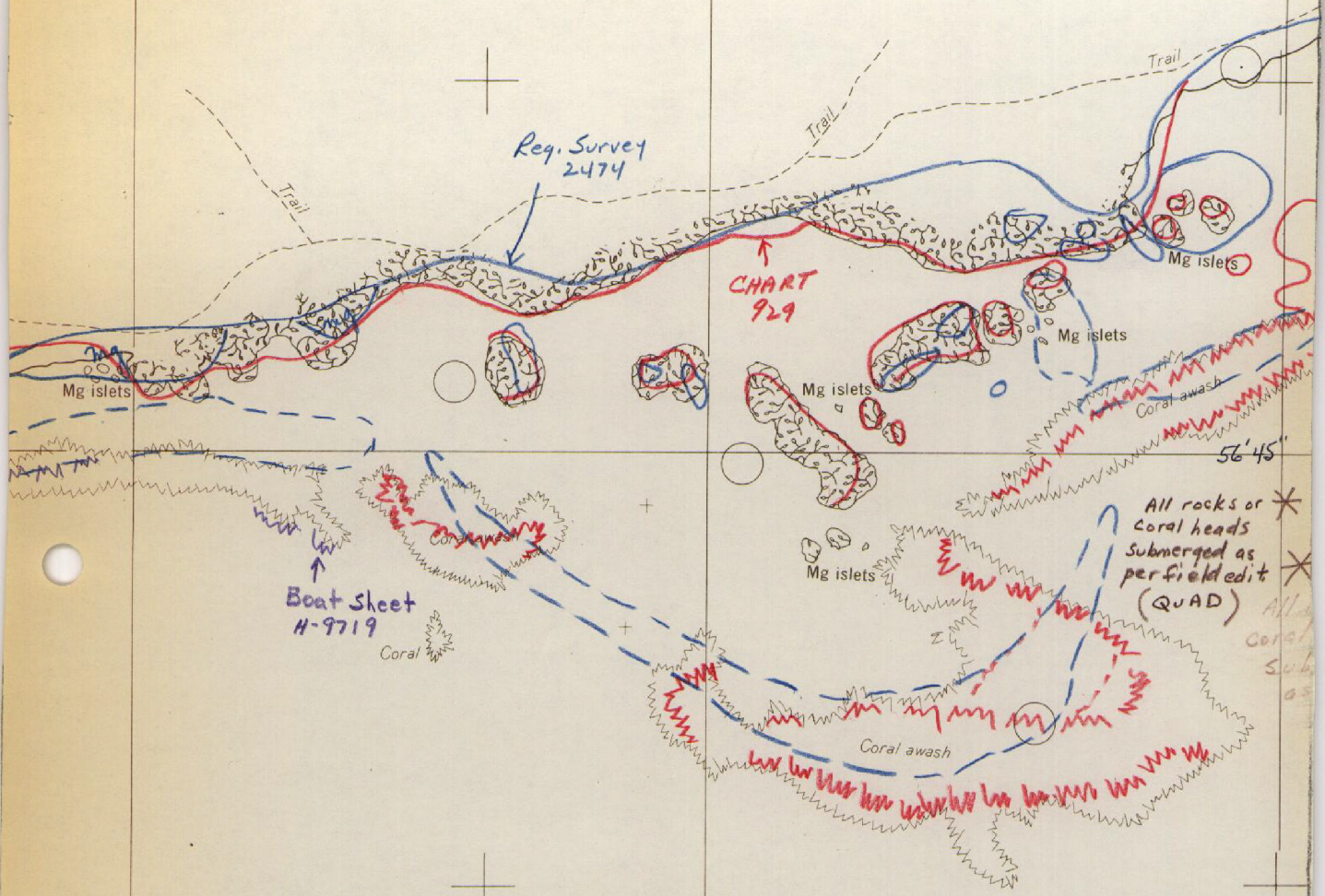
66° 55'30"

x=330,000 FT.

55'15"

1757'00"

x=332,000 FT. 55'



Subm Co

L A S P A R D A S

30 \* 30 not visible (QUAD)  
 \* on photos  
 31 \* 22 18  
 Boat sheet depths  
 in this area

56'30"



54'45" x=334.000 FT.

66° 54'30"

1737'00"

CHART  
929Reg Survey  
2474Appears as  
bottom vegetation  
on photos

QUAD

Coral awash  
Submerged coralAll rocks  
on coral hds  
Submerged as  
per field edit.

56'45"

56'30"

NOTE: The predicted tide range is less than  
1 foot therefore no distinction has  
been made for rocks or coral awash  
at M.H.W. or M.L.W. All are  
indicated as awash.

NOTE:

"The photogrammetric location and delineation of features  
offshore from the mean high-water line on this survey  
may not be complete or final. The contemporary  
reviewed hydrographic survey of the area where available,  
should be consulted for the final delineation."



56'15"

66° 56'

55'45"

17° 56'

y = 36,000 FT.

55'45"

Foul with coral heads and submerged Rks

Foul with Rocks

Boat Sheet  
H-9719

66-L(C) 8429

Trail

Canal

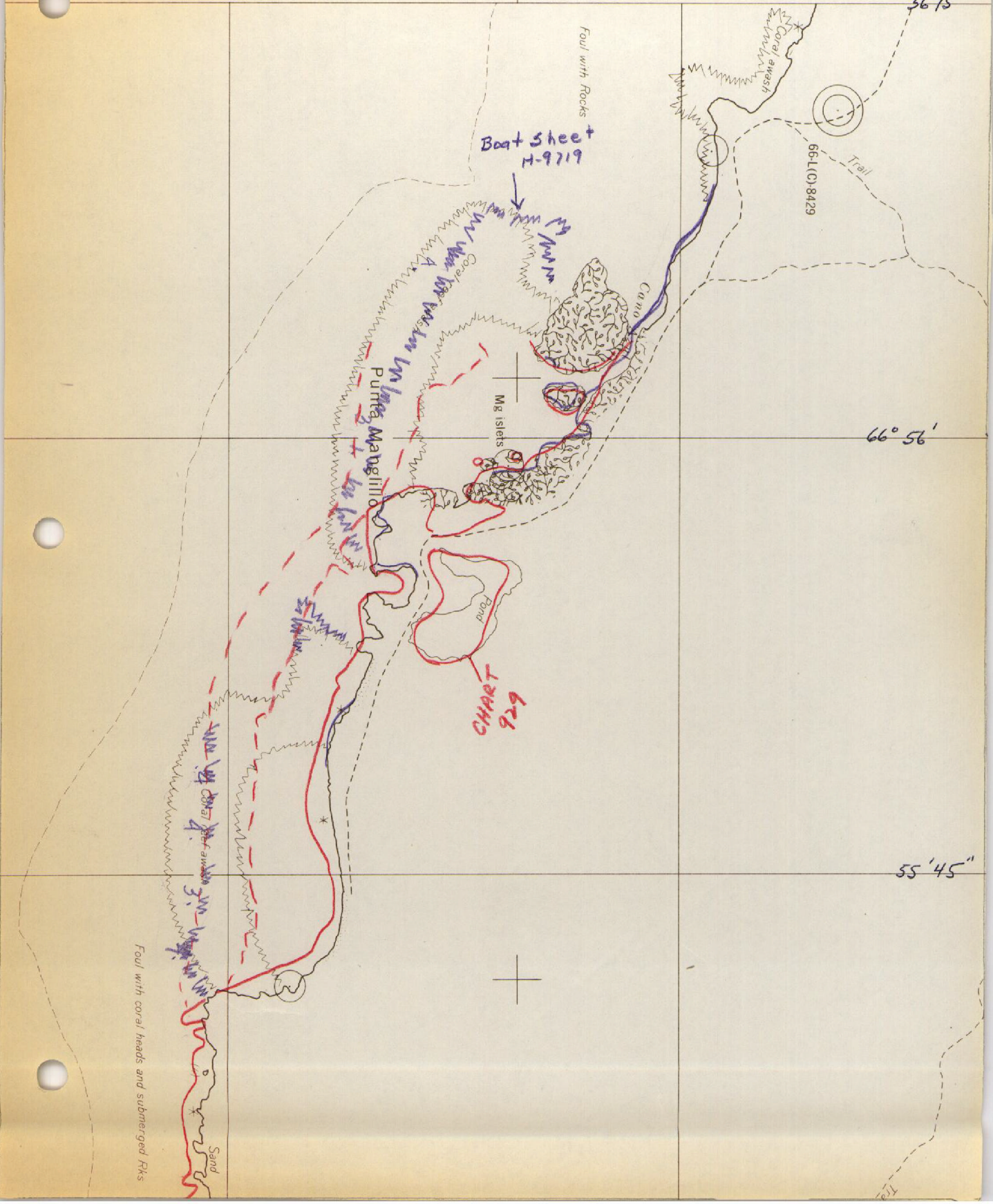
Mg islets

Punta Mangillio

CHART  
929

Pond

Sand





66° 55' 30"  
17° 56' 15"

56 15

55'

