

13137

13137

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-13137</u>
LOCALITY
State <u>Puerto Rico</u>
General locality <u>Southwest Coast</u>
Locality <u>Arrecife Unitas</u>
<u>1966-1969</u>
CHIEF OF PARTY
<u>Alfred C. Holmes, Director, AMC</u>
LIBRARY & ARCHIVES
DATE _____

DESCRIPTIVE REPORT - DATA RECORD

T-13137

PROJECT 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

OFFICE AMENDMENT 1 Dec. 9, 1968

METHOD OF COMPILATION (III):

Wild B-8 Plotter

MANUSCRIPT SCALE (III):

1:5,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

1:2500 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):

MEAN ~~LOW~~ ^{HIGH 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):

None

LAT.:

LONG.:

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

Y =

X =

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-181c (3-66)		U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION COAST AND GEODETIC SURVEY		
DESCRIPTIVE REPORT - DATA RECORD T-13137				
CAMERA (KIND OR SOURCE) (III): U.S.C.&G.S. Type "L"&"M" Wild RC-8 & RC-9				
PHOTOGRAPHS (III)				
NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
66-L-8402 thru 66-L-8404	15 Nov. 1966	1037	1:15,00	0.75' above MLW
PREDICTED TIDE (III)				
			RATIO OF RANGES	MEAN RANGE
REFERENCE STATION: Galveston, Texas				1.4
SUBORDINATE STATION: Playa De Ponce, P.R.			0.57	0.8
SUBORDINATE STATION:				
WASHINGTON OFFICE REVIEW BY (IV): Bernard Kurs, AMC			DATE: Jan. 1973	
PROOF EDIT BY (IV):			DATE:	
NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): None		RECOVERED: None	IDENTIFIED: None	
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:				

4

T-13137

COMPILATION RECORD

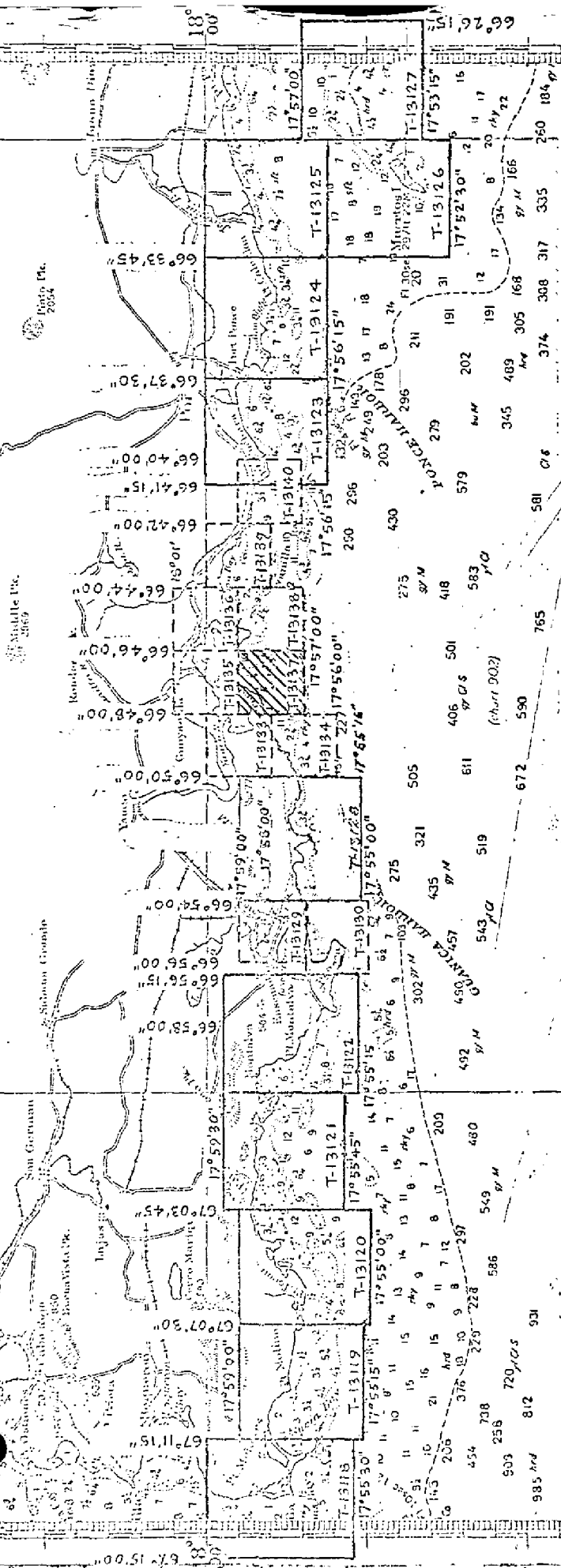
COMPLETION DATE

REMARKS

Alongshore Area For Hydro.	Feb. 1969	Superseded
Field Edit Applied	March 1969	Superseded
Final Review	Jan. 1973	

67°00'

66°30'



OFFICIAL MILEAGE FOR COST ACCOUNTS

JOB PH-6708

778

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
9
9
9
9
9
9
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

67°00'

66°30'

SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORT

T-13137

Shoreline survey T-13137 is one of twenty-one similar surveys in project PH-6708. The project is on the south shore of Puerto Rico and extends from Cabo Rojo to Cayo Berberia. This survey covers part of Punto Verraco, part of Puerto de Guanilla and also Arrecife Guanilla and also Arrecife Unitas.

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

Compilation was by B-8 plotter using November, 1966 photography. The compilation was at 1:5,000 scale. (see item 31 of the compilation report) A copy of the incomplete manuscript along with 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 two minutes in longitude by two minutes in latitude. Final review was at AMC in January, 1973. A negative and a cronaflex of the final reviewed survey are forwarded for record and registry.

FIELD INSPECTION REPORT

PH-6708

T-13137

There was no field inspection prior to compilation.

8

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.

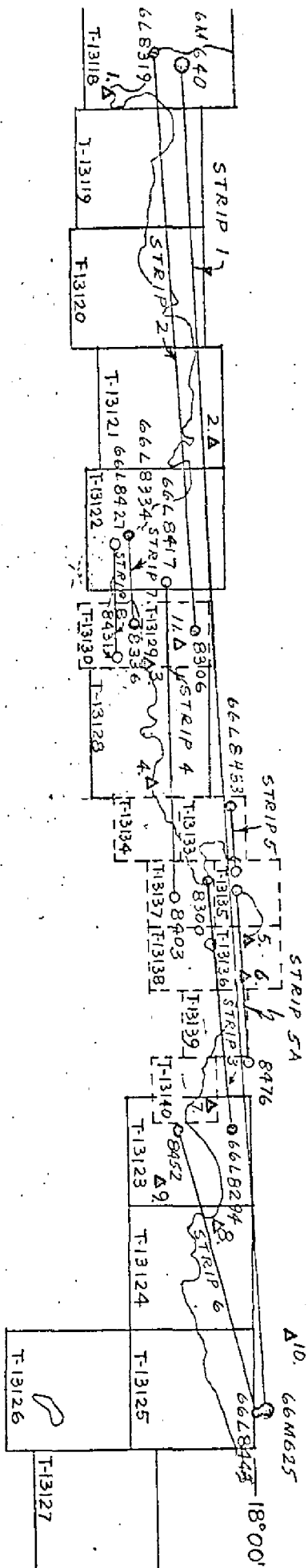
Respectfully submitted


I. I. Saperstein

Approved and Forwarded


Henry P. Eichert, Chief
Aerotriangulation Section

66°30'



1. CABO ROJO (USAF) 1966
2. CERO VERTERO 2 (USGS) 1934
3. EUSENADA, 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 MAST, 1966
PONCE BAY FRONT & REAR RANGE LTS. 1966
9. CAÑADA 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 (")

COMPILATION REPORT

PH-6708

T-13138

31. DELINEATION

Refer to Photogrammetric Plot Report - Job PH-6708, Puerto Rico, dated Oct. 31, 1967. Specifically Item 25 - Photography, paragraph 2.

In order to use Strip 3 to compile T-13137 thru T-13140, it was necessary to plot controls and compile on worksheets at 1:6,000 scale and photographically enlarge to 1:5,000 scale (see Amendment I. to office instructions, dated Dec. 9, 1968).

The enlargement ratio required to compile at 1:5,000 scale from 1:30,000 scale bridge strip 3 with the B-8 plotter was not possible. It was, therefore considered more expedient to compile T-13135 thru T-13140 at 1:6,000 scale, drop shoreline pass points common to both the 1:15,000 photos and the 1:30,000 models, and then enlarge photographically to 1:5,000 scale, at a ratio of $1 = 1.2$.

This enlargement was then transferred to the 1:5,000 manuscripts and the 1:5,000 scale ratio prints processed for hydro. support data.

The use of the 1:30,000 scale models from strip 3, enabled the compiler to adequately cover all inshore areas and much of the offshore areas of shoal, coral reefs, small islands and etc., which would not have been possible with the 1:15,000 offshore photos which were not bridged.

The alongshore and shoreline features of the mainland were further refined with the models set utilizing the 1:15,000 scale inshore plates: - 66L(c) 8475 thru 8484.

32. CONTROL

See Photogrammetric Plot Report dated October 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 mean high water line and shallow lines were delineated from office interpretation of the photographs. There are no cultural features adjacent to or extending from the shoreline.

36. OFFSHORE DETAILS

All shallow, shoal, submerged coral and Island limits were delineated from office interpretation of the photographs.

37. LANDMARKS AND AIDS

Appropriate copies of Forms 567 have been forwarded to the Washington Office.

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

Junctions are in agreement with T-13135 to the North, T-13133 to the West and T-13138 to the East. There is no contemporary survey to the South.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with USGS Quadrangle PUNTA VERRACO, PR, scale 1:20,000, dated 1958.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Chart 928, Bahia de Guayanilla scale 1:10,000, 5th Edition, dated October 18, 1965.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted:



A. L. Shands
Cartographic Technician

Approved:



Alfred C. Holmes
RADM, NOAA
Director, AMC

December 11, 1972

GEOGRAPHIC NAMES

FINAL NAME SHEETS

Ph-6708 (Puerto Rico)

TP-13137

Arrecife Guayanilla

Arrecife Unitas

Mar Caribe

Punta Verraco

Puerto de Guayanilla

Approved:

A. J. Wraight

A. Joseph Wraight
Chief Geographer

Prepared by:

Charles E. Harrington

Charles E. Harrington
Cartographer

T-13137

49. NOTES FOR THE HYDROGRAPHER:

None

PHOTOGRAMMETRIC OFFICE REVIEW

T-13137

1. PROJECTION AND GRIDS CHB	2. TITLE CHB	3. MANUSCRIPT NUMBERS CHB	4. MANUSCRIPT SIZE
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY XX	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) XX		7. PHOTO HYDRO 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
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE CHB	13. LOW-WATER LINE XX	14. ROCKS, SHOALS, ETC. CHB	15. BRIDGES XX
16. AIDS TO NAVIGATION XX	17. LANDMARKS XX	18. OTHER ALONGSHORE PHYSICAL FEATURES CHB	19. OTHER ALONGSHORE CULTURAL FEATURES XX
PHYSICAL FEATURES			
20. WATER FEATURES XX		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 XX
CULTURAL FEATURES			
27. ROADS CHB	28. BUILDINGS XX	29. RAILROADS XX	30. OTHER CULTURAL FEATURES XX
BOUNDARIES			
31. BOUNDARY LINES XX		32. PUBLIC LAND LINES XX	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES CHB	34. JUNCTIONS CHB		35. LEGIBILITY OF THE MANUSCRIPT CHB
36. DISCREPANCY OVERLAY CHB	37. DESCRIPTIVE REPORT CHB	38. FIELD INSPECTION PHOTOGRAPHS XX	39. FORMS CHB
40. REVIEWER Charles H. Bishop		SUPERVISOR, REVIEW SECTION OR UNIT A. C. Rauck, Jr. <i>Albert C. Rauck, Jr.</i>	
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 C.H. Bishop Reviewed By: R.E. Smith		SUPERVISOR A. C. Rauck, Jr. <i>Albert C. Rauck, Jr.</i>	
43. REMARKS Field Edit Applied From: Field Edit Ozalid Color Contact Photos 66-L-8300, 8402 thru 8404, and 8482 Matte Ratio Print 66-L-8483			

FIELD EDIT REPORT
SOUTHWEST COAST OF PUERTO RICO
JOB PH-6708
MAP T-13137

52. ADEQUACY OF COMPILATION

Compilation was adequate. A few minor shoreline changes were recommended and the bluff delineation revised in some areas. A mangrove area was omitted and two or three unimportant bare rocks were overlooked. The trails shown on this sheet are private. One area of fast shoreline was omitted; it was delineated on the photo and cross referenced to the field edit ozalid. The compilation of the shoals and reefs will be discussed under side heading 58 below.

54. RECOMMENDATIONS

There are no recommendations.

55. EXAMINATION OF PROOF COPY

Sr. Oscar Padilla, Urb. Estella Box 28, Guayanilla, Puerto Rico, will be happy to examine a proof copy of the map. Sr. Padilla is the senior harbor pilot of Bahía de Guayanilla.

56. GEOGRAPHIC NAMES

The authorities listed below agree that the names on this map are correct, complete and in current local use.

Authorities consulted are listed below.

- I. Sr. Oscar Padilla
Urb. Estella Box 28
Guayanilla, Puerto Rico

Sr. Padilla is the senior harbor pilot of Bahía de Guayanilla and has been a resident for 64 years.

- II. Sr. Gilberto Castro Pérez
Bo Playa
Guayanilla, Puerto Rico

Sr. Castro is a boat operator and has been a local resident for nine years.

- III. Sr. Daniel Santiago
Bo Playa
Guayanilla, Puerto Rico

Sr. Santiago is a harbor pilot and has been a local resident for three years. He is retired from the U.S. Merchant Service.

IV. Sr. Faustino Allongo
R.F.D. 2 639 H
Ponce, Puerto Rico

Sr. Allongo is a contractor and has been a local resident and fisherman for twenty years.

V. Sr. Ramon Torres Echevarria
Ext. Mariani A-110
Ponce, Puerto Rico

Sr. Torres is a mechanical engineer and prominent local sports fisherman. He has been a resident for 36 years.

The harbor pilots mentioned above are licensed by the Puerto Rican Pilot Service.

57. LANDMARKS AND NONFLOATING AIDS TO NAVIGATION

There are no landmarks or fixed aids to navigation within the limits of this map.

58. ROCKS, REEFS, SHOALS AND FOUL AREAS

There are only three or four unimportant rocks on this map. These, where omitted, were indicated on the field photographs and cross referenced to the field edit ozalid. The reefs, for the most parts, were correctly delineated with the exception of the northeasterly end of the Arrecife Unidas. Corrections were inked on the color contact prints and depths were given where practical. Awash areas were also noted and times of observation were noted, both on the photograph and the field edit ozalid. These reefs are coral, or at least the leading or offshore portion of them is coral. The coral portions were indicated on the photos and field edit ozalid.

Offshore from the highest part of these reefs, it is generally foul with submerged coral formations. These areas were outlined on the photos where they were discernable.

Shoals are numerous. A good half of this map being composed of shoals and shallow areas. One large shoal was classified as a shallow area. Many areas, near the westerly limit of the map, were designated as shoal. These may be shallower than the surrounding bottom, but they were too deep for the field editor to determine. A number of small shoals were overlooked in the northerly part of the map near Punta Verraco. These were indicated on the field edit ozalid and cross referenced to the appropriate photograph.


The shallow limits on this sheet were difficult to determine. The entire area comprises one huge flat which is covered with marine vegetation. The limits on the sheet were revised where possible and an approximate limit inked where no definite line of demarkation was visible. Areas awash were indicated, when they were visible, on the photographs.

59. PHOTOGRAPHY

Photography consisted of 1:5000 black and white copies of the color photography and 1:15,000 and 1:30,000 color contact prints. The color prints were more amendable to the work on the reefs and shallow areas.

60. DISPOSITION OF DATA

All data was forwarded to the Photo Branch, Atlantic Marine Center. Copies of the Field edit, Form 567's and form 526's were transmitted to the ship Whiting.


Richard E. Kesselring
Surveying Technician

REVIEW REPORT

SHORELINE

T-13137

61. GENERAL STATEMENT

See summary which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED SURVEYS

A visual comparison was made with a copy of registered survey No. 2468, 1:20,000 scale dated 1900. The only portion of this sheet that appears on the registered survey is Punta Verraco which is in general agreement.

Survey T-13137 supersedes registered survey No. 2468 and is to be used for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A visual comparison was made with USGS Punta Verraco, PR quadrangle, 1:20,000 dated 1958. The Punta Verraco shoreline is in general agreement. The offshore features were taken from an obsolete copy of Chart 928. See item 64.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with H-9031, 1:5,000 scale and dated 11/1/72. This was sounding overlay #2 which had its shoreline from advance manuscript T-13137. Consequently there were no differences in the shoreline. However, there were many gaps in reef areas and submerged coral areas. These blank areas are supplemented by a Photo-Bathymetric Overlay.

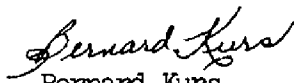
65. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Chart No. 928, dated March 4, 1972, at 1:10,000 scale. The chart is in general agreement with this survey except for natural changes in shoreline. Differences are noted on the comparison print in red.


66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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


Reviewed by:


Bernard Kurs
Cartographer

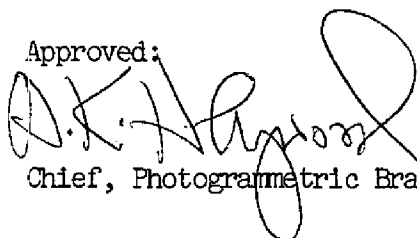

Approved for forwarding:


Melvin J. Ambach
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

Guayanilla

de

Puerto

58'45"

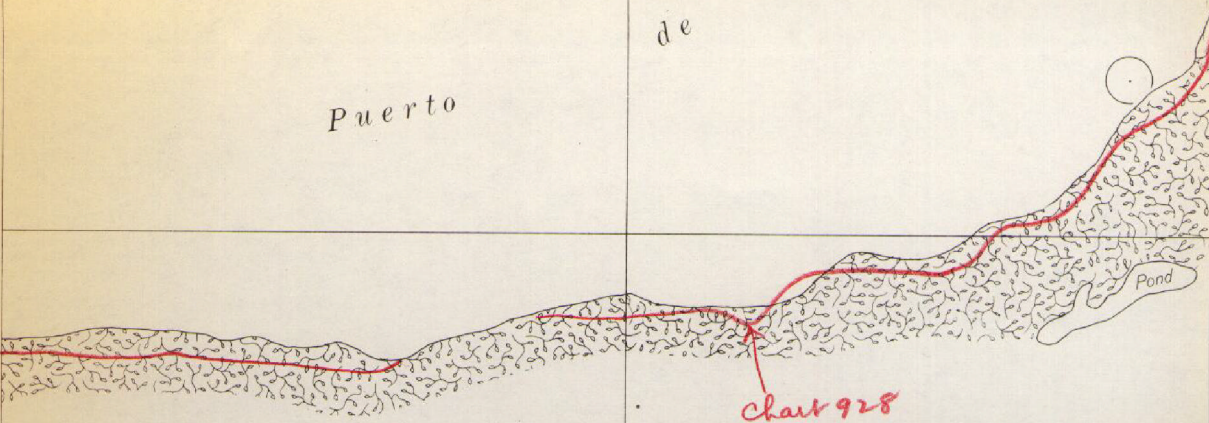


Chart 928

Road (Priv)

Trail (Priv)

y=52,000 FT.

58'30"

PUNTA VERDE

66°48'

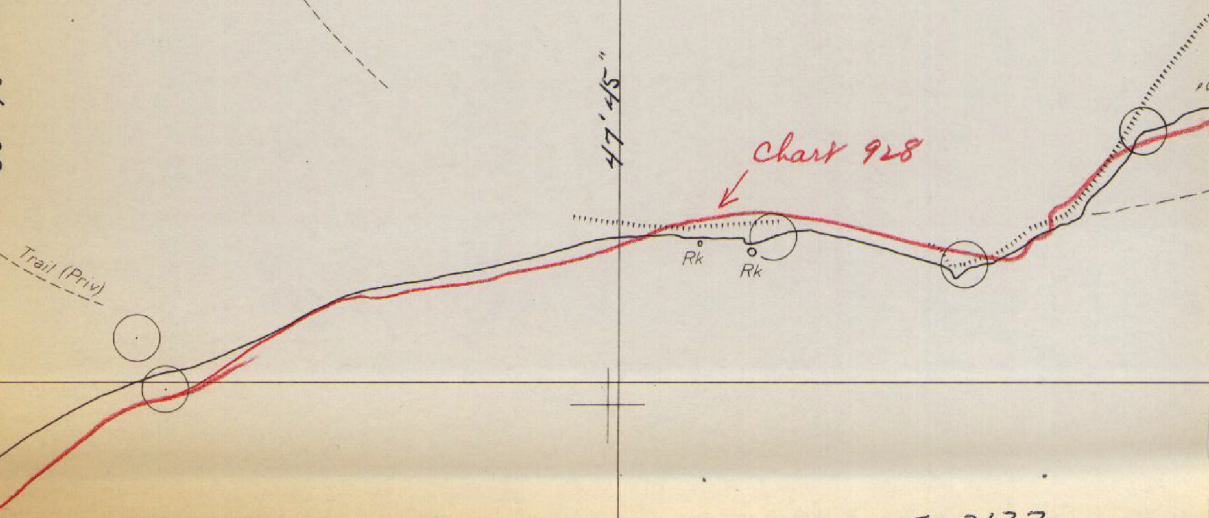
47°45"

Chart 928

Trail (Priv)

58'15"

y=50,000 FT.



T-13137

47'30"

x=376,000 FT.

47'15"

x=378,000 FT.

66° 47'

23

