**FORM C&GS-504**

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

**DESCRIPTIVE REPORT**

<table>
<thead>
<tr>
<th>Type of Survey</th>
<th>Shoreline (Photogrammetric)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field No.</td>
<td>Office No. T-13120</td>
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**LOCALITY**

<table>
<thead>
<tr>
<th>State</th>
<th>Puerto Rico</th>
</tr>
</thead>
<tbody>
<tr>
<td>General locality</td>
<td>Southwest Coast</td>
</tr>
<tr>
<td>Locality</td>
<td>Pasaje De Margarita</td>
</tr>
</tbody>
</table>

**1966-1968**

**CHIEF OF PARTY**

Alfred C. Holmes, NOAA  
Director, Atlantic Marine Center

**LIBRARY & ARCHIVES**

**DATE**
**DESCRIPTIVE REPORT - DATA RECORD**

**PROJECT NO. (III):**

PH-6708

**FIELD OFFICE (III):**

None

**CHIEF OF PARTY**

OFFICER-IN-CHARGE

Atlantic Marine Center

Alfred O. Holmes, RADM

Director

**INSTRUCTIONS DATED (II) (III):**

Field - September 27, 1966  
December 14, 1967  
Office - November 14, 1967

**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 (IV):**

PUERTO RICO

**VERTICAL DATUM (III):**  
MHW  
EXCEPT AS FOLLOWS:  
Elevations shown as (2) refer to mean high water  
Elevations shown as (5) refer to sounding datum  
i.e., mean low water

**REFERENCE STATION (III):**

LLANOS, 1966

**LAT.:**

17° 58' 13.51200"

**LONG.:**

67° 05' 59.77713"

**ADJUSTED**

**UNADJUSTED**

**STATE**

Puerto Rico

**ZONE**

1

**PLANE COORDINATES (IV):**

Y = 50,198.49 ft.  
X = 268,341.34 ft.

**AN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (III) FIELD PARTY, (III) PHOTOGRAHMNETRIC 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 (III):

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):

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>A. Bethea</td>
<td>10/20/67</td>
</tr>
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### PROJECTION AND GRIDS CHECKED BY (IV):

<table>
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<tr>
<th>Name</th>
<th>Date</th>
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<tbody>
<tr>
<td>L. Van Scoy</td>
<td>10/21/67</td>
</tr>
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### CONTROL PLOTTED BY (III):

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
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<tr>
<td>B. Barge</td>
<td>11/17/67</td>
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### CONTROL CHECKED BY (III):

<table>
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<tr>
<th>Name</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>L. O. Neterer</td>
<td>11/17/67</td>
</tr>
</tbody>
</table>

### RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>I. Saperstein</td>
<td>10/31/67</td>
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### STEREOSCOPIC INSTRUMENT COMPILATION (III):

<table>
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<tr>
<th>Instrument</th>
<th>Planimetry</th>
<th>Reviewer</th>
<th>Date</th>
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<tbody>
<tr>
<td>Wild B-8</td>
<td></td>
<td>R. R. White</td>
<td>12/2/67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reviewed by A. L. Shands</td>
<td>12/1/67</td>
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### MANUSCRIPT DELINEATED BY (III):

<table>
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<tr>
<th>Name</th>
<th>Date</th>
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<tr>
<td>R. E. Smith</td>
<td>1/28/68</td>
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### SCRIBING BY (III):

<table>
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<th>Name</th>
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<tr>
<td>R. R. White</td>
<td>5/28/68</td>
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### PHOTOGRAMMETRIC OFFICE REVIEW BY (III):

<table>
<thead>
<tr>
<th>Task</th>
<th>Name</th>
<th>Date</th>
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<tbody>
<tr>
<td>Compilation</td>
<td>R. E. Smith</td>
<td>1/23/68</td>
</tr>
<tr>
<td>Field Edit</td>
<td>R. J. Pate</td>
<td>5/11/68</td>
</tr>
<tr>
<td>Scribing &amp; Stick Up</td>
<td>R. E. Smith</td>
<td>6/07/68</td>
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### REMARKS:

FIELD EDIT BY: R. E. Kesselring 3/26/68
**DESCRIPTIVE REPORT - DATA RECORD**

**MERA (KIND OR SOURCE) (III):** "L" & "M"

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>DATE</th>
<th>TIME</th>
<th>SCALE</th>
<th>STAGE OF TIDE</th>
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</thead>
<tbody>
<tr>
<td>66M(c) 637 &amp; 638</td>
<td>11/15/66</td>
<td>0854</td>
<td>1:60,000</td>
<td>0.3' above MLW</td>
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<tr>
<td>66M(c) 645</td>
<td>11/15/66</td>
<td>0904</td>
<td>1:60,000</td>
<td>0.3' above MLW</td>
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<tr>
<td>66L(c) 8313-8315</td>
<td>11/15/66</td>
<td>0944</td>
<td>1:30,000</td>
<td>0.4' above MLW</td>
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<tr>
<td>66L(c) 8327-8329</td>
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<td>1:30,000</td>
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<tr>
<td>66L 8513R-8515R</td>
<td>11/16/66</td>
<td>0927</td>
<td>1:30,000</td>
<td>0.3' above MLW</td>
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**PREDICTED TIDE (III):**

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<tr>
<th>REFERENCE STATION:</th>
<th>Galveston, Texas</th>
<th>RATIO OF RANGES</th>
<th>MEAN RANGE</th>
<th>Diurnal</th>
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<tbody>
<tr>
<td>SUBORDINATE STATION:</td>
<td>Paraguera (Isla Maguey)</td>
<td>0.4</td>
<td>0.6</td>
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**WASHINGTON OFFICE REVIEW BY (IV):** Leo F. Beugnet, Atlantic Marine Center

**DATE:** May, 1970

**NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):** 1

**RECOVERED:** 1

**IDENTIFIED:** 0

**NUMBER OF BM(S) SEARCHED FOR (II):** 0

**RECOVERED:** 0

**IDENTIFIED:** 0

**NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):** 0

**NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):** 0

**REMARKS:**

...
T-13120

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<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
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</thead>
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<tr>
<td>Alongshore Area for Hydro</td>
<td>January 1968</td>
<td>Superseded</td>
</tr>
<tr>
<td>Field Edit applied</td>
<td>April 1968</td>
<td>Superseded</td>
</tr>
<tr>
<td>Compilation Complete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrecife Margarita revised</td>
<td>November 1968</td>
<td>Superseded</td>
</tr>
<tr>
<td>Final Review</td>
<td>May 1970</td>
<td></td>
</tr>
</tbody>
</table>
OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.  | Sq. Mi. | Sheet No.  | Sq. Mi.
---        | ---    | ---        | ---
T-13118   | 9      | T-13129    | 6      
T-13119   | 9      | T-13130    | 3.5    
T-13120   | 9      | T-13133    | 3      
T-13121   | 9      | T-13134    | 3      
T-13122   | 9      | T-13135    | 3      
T-13123   | 9      | T-13136    | 3      
T-13124   | 9      | T-13137    | 3      
T-13125   | 9      | T-13138    | 3      
T-13126   | 3      | T-13139    | 3      
T-13127   | 3      | T-13140    | 3      
T-13128   | 6      | Total      | 114

JOB PH - 6708

SOUTHWEST COAST
PUERTO RICO

SHORELINE MAPPING
SCALE 1:5,000 & 1:10,000
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-13120

Shoreline survey T-13120 is one of twenty-one similar surveys in job PH-6708. The job is comprised of ten 1:5,000 and eleven 1:10,000 scale surveys located along the south coast of Puerto Rico. This survey covers the area from Arrecife Margarita northeastward to Caleta Parguera.

Field work preceding compilation consisted of pre-marking of horizontal control. There was no field inspection; the survey was field edited subsequent to compilation.

Compilation was at 1:10,000 scale by Wild B-8 Plotter using the photography of November 1966. A copy of the incomplete manuscript along with specially prepared photographs and ozalid prints were furnished for preparation of the boat sheet, location of photo-hydro signals and field edit use.

The compilation manuscript was a vinylite sheet 3 minutes, 45 seconds in latitude by 3 minutes 45 seconds in longitude. After application of field edit the manuscript was scribed, stuck-up and reproduced on cronaflex. Final review was in the Atlantic Marine Center in May 1970. One cronaflex copy and a negative of the final reviewed manuscript are forwarded for record and registry.
FIELD INSPECTION REPORT
Job PH-6708
T-13120

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 5 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

[Signature]

I. I. Saperstein

Approved and Forwarded

[Signature]

Henry F. Elchert, Chief
Aerotriangulation Section
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>LATITUDE OR X-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLANOS, 1966</td>
<td>Geodesy Pad 27041</td>
<td>17° 58' 13.51200&quot;</td>
<td>415.4 (1429.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P.R.</td>
<td>61° 05' 59.77713&quot;</td>
<td>1758.8 (6.6)</td>
<td></td>
</tr>
</tbody>
</table>

1 ft = 0.03048006 meter

COMPILATION REPORT
T-13120

31. **DELINEATION:**

   The shoreline and all other features were compiled using the Wild B-8 stereoplotter and color photographs taken at 0.6 ft. above mean low water. The infrared photographs were used as a check on the shoreline compilation. There was no field inspection.

32. **CONTROL:**

   See Photogrammetric Plot Report attached.

33. **SUPPLEMENTAL DATA:**

   None

34. **CONTOURS AND DRAINAGE:**

   Contours are inapplicable. Drainage was delineated from office interpretation.

35. **SHORELINE AND ALONGSHORE DETAILS:**

   See Paragraph #31. No low water line was delineated. The shallow and foul limits were delineated using the Wild B-8 and from office interpretation of the photographs.

36. **OFFSHORE DETAILS:**

   Since there was no prior field inspection and due to penetration over water areas, underwater features and hazards to navigation could not be delineated with any accuracy. See Notes for the Hydrographer.

37. **LANDMARKS AND AIDS:**

   None

38. **CONTROL FOR FUTURE SURVEYS:**

   None
39. **JUNCTIONS**

Junctions are in agreement with T-13119 to the west, and T-13121 to the east. There are no contemporary surveys to the north or south.

40. **HORIZONTAL AND VERTICAL ACCURACY**

No statement.

46. **COMPARISON WITH EXISTING MAPS:**

A comparison has been made with USGS Quadrangle PARQUERA, P. R., scale 1:20,000, dated 1957.

47. **COMPARISON WITH NAUTICAL CHARTS:**

A comparison has been made with USC&GS Chart #901, scale 1:100,000, 9th edition, dated March 1, 1965.

**ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY**

None.

**ITEMS TO BE CARRIED FORWARD**

None.

Approved for forwarding:

[Signature]

Melvin J. Umback, CDR, NOAA
Chief, Photogrammetry Division, AMC

Submitted:

R. R. White
Cartographic Aid

Approved:

[Signature]

Alfred C. Holmes, RADM, NOAA
Director, Atlantic Marine Center
September 9, 1970

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6708  (Puerto Rico)

T-13129

Arrecife Laurel
Arrecife Margarita
Atravesado
Caleta Parguera
Cayo Vieques
El Palo
Isla Cueva
Isla Guayacan
Mar Caribe
Pasaje de Margarita
Punta Cueva de Ayala
Punta Guayacan
Punta Tocon
San Cristobal

Approved by:  
A. Joseph Wright
Chief Geographer

Prepared by:  
Frank W. Pickett
Cartographic Technician
49. NOTES FOR THE HYDROGRAPHER

There are no photo hydro stations or recoverable topographic stations within the limits of this sheet.
All reefs, shoals, shallow areas, foul areas, and submerged rocks are from office interpretation of the color photographs.
There was considerable penetration on the color photography; due to this and without the aid of any prior shoreline inspection, these offshore features have been shown only as aid to the hydrographer.
They may be only bottom changes, coral, or marine vegetation. The delineation of all these features should be verified, and if any exist that are not shown they should be located. Also, any that are shown that do not exist should be deleted.
If landmarks or non-floating aids to navigation exist in the area, please locate and submit Form 567.
See notes on the FIELD EDIT OZALID.
PHOTOGRAMMETRIC OFFICE REVIEW  
T-13120

<table>
<thead>
<tr>
<th>1. PROJECTION AND GRIDS</th>
<th>2. TITLE</th>
<th>3. MANUSCRIPT NUMBERS</th>
<th>4. MANUSCRIPT SIZE</th>
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<tbody>
<tr>
<td>RES</td>
<td>RES</td>
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**CONTROL STATIONS**

<table>
<thead>
<tr>
<th>5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY</th>
<th>6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations)</th>
<th>7. PHOTO HYDRO STATIONS</th>
</tr>
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<tbody>
<tr>
<td>RES</td>
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**BENCHMARKS**

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<thead>
<tr>
<th>8. BENCHMARKS</th>
<th>9. PLOTTING OF SEXTANT FIXES</th>
<th>10. PHOTOGRAMMETRIC PLOT REPORT</th>
<th>11. DETAIL POINTS</th>
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<tbody>
<tr>
<td>XX</td>
<td>XX</td>
<td>Bridge (W.O.)</td>
<td>Wild B-8</td>
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**ALONGSHORE AREAS (Nautical Chart Data)**

<table>
<thead>
<tr>
<th>12. SHORELINE</th>
<th>13. LOW-WATER LINE</th>
<th>14. ROCKS, SHOALS, ETC.</th>
<th>15. BRIDGES</th>
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<tbody>
<tr>
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**AIDS TO NAVIGATION**

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<thead>
<tr>
<th>16. AIDS TO NAVIGATION</th>
<th>17. LANDMARKS</th>
<th>18. OTHER ALONGSHORE PHYSICAL FEATURES</th>
<th>19. OTHER ALONGSHORE CULTURAL FEATURES</th>
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</thead>
<tbody>
<tr>
<td>XX</td>
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**PHYSICAL FEATURES**

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<thead>
<tr>
<th>20. WATER FEATURES</th>
<th>21. NATURAL GROUND COVER</th>
<th>22. PLANETARY CONTOURS</th>
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<tbody>
<tr>
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**Stereoscopic Instrument Contours**

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<th>23. STEREOGRAPHIC INSTRUMENT CONTOURS</th>
<th>24. CONTOURS IN GENERAL</th>
<th>25. SPOT ELEVATIONS</th>
<th>26. OTHER PHYSICAL FEATURES</th>
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**CULTURAL FEATURES**

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<thead>
<tr>
<th>27. ROADS</th>
<th>28. BUILDINGS</th>
<th>29. RAILROADS</th>
<th>30. OTHER CULTURAL FEATURES</th>
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**BOUNDARIES**

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<th>32. PUBLIC LAND LINES</th>
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**MISCELLANEOUS**

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<tr>
<th>33. GEOGRAPHIC NAMES</th>
<th>34. JUNCTIONS</th>
<th>35. LEGIBILITY OF THE MANUSCRIPT</th>
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**DISCREPANCY OVERLAY**

<table>
<thead>
<tr>
<th>36. DISCREPANCY OVERLAY</th>
<th>37. DESCRIPTIVE REPORT</th>
<th>38. FIELD INSPECTION PHOTOGRAPHS</th>
<th>39. FORMS</th>
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**REVIEWER**

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>SUPERVISOR, REVIEW SECTION OR UNIT</th>
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<tbody>
<tr>
<td>R. E. Smith 1/29/68</td>
<td>A. C. Rauck, Jr.</td>
</tr>
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**REMARKS**

Field Edit applied from Field Edit osalid, color transparencies Nos. 66-L-8313, 8327, 8328, and 8329.
FIELD EDIT REPORT
T-13120
Job PH-6708
Southwest Coast of Puerto Rico

Field edit was performed in accordance with Instructions - PHOTO-HYDRO SUPPORT AND FIELD EDIT - Job PH-6708, dated December 14, 1967, and with Photogrammetry Instructions concerning field edit.

52. Adequacy of compilation.

Compilation was adequate. A few minor shoreline changes along the mangrove were recommended and a foul area was changed to shallow. A few mangrove bushes were compiled which do not exist and these were deleted.

One small bluff, for proposed chart 948, was recommended.

Considering that there was no field inspection, compilation was not merely adequate, it was excellent.

54. Recommendations.

A concise definition of the term shallow is needed.

55. Examination of proof copy.

Dr. Luis R. Almodovar of La Parguera, Lajas, Puerto Rico, will be happy to examine a proof copy of this map.

56. Landmarks and non-floating aids to navigation.

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

57. Reefs, shoals, rocks and foul areas.

Numerous coral reefs are contained on this map. They were, for the most part, correctly identified and delineated. Most of these reefs were awash or bare to an average of one foot at the time of observation. No effort was made to inspect them at predicted low water. Times and heights visible at observation were indicated on the field edit ozalid and cross-referenced to the photographs. The majority of these reefs are probably bare or awash at the sounding datum and should be shown with the coral symbol. The steep, offshore edge of these reefs is generally foul with submerged coral formations. The inshore edge is usually smooth and sandy, with approximately four to five feet of water within fifty feet of the coral. A few soundings were taken and indicated on the ozalids and the photographs.
57 (cont.)

Submerged reefs were noted as such on the field edit ozalid. One or two shoals were mistaken for reefs and vice versa.

Numerous shoals were delineated on this map. Some were too deep to be verified by the field editor and will be confirmed or deleted by the hydrographer. Others appear to be bottom vegetation and were deleted.

Rock delineation was good. Several submerged rocks were deleted. The submerged rocks on the reefs, or at least those so noted, should be shown as awash.

One foul area was deleted and one added. The shallow limit lines on the offshore edges of the reefs are, more properly, foul limits. This should, however, be further confirmed by the hydrographer.

58. Drainage and flooded areas.

There is no drainage of note on this map.

For notes pertaining to this heading, see the report for T-13118.

59. Geographic names.

The majority of the names on this map are in undisputed local usage. There are two undisputed new names and two disputed names, one of which falls partially on T-13121.

The two new names are:

ATRAVESADO - which means crossed, and refers to this reef's generally north-south direction as opposed to the east-west trend of the majority of the reefs.

SAN CRISTOBAL - meaning St. Christopher.

Both of these names were unanimously agreed upon by the included authorities, who stated that the names have been in use for at least twenty to twenty-five years.

The disputed names are:

EL PALO - which is charted as ARRECIFE LAUREL.

ARRECIFE LAUREL - which is charted as ARRECIFE CORAL.

Five of the six included authorities, as well as numerous other local residents, agree on these names. They are, however, well established on the charts and maps of the area under the charted names. Whether these names are more important to the inhabitants or to navigation is difficult to determine. Offhand, they are
probably more important to local residents, the majority of whom make their living from the sea and who know the reefs and waters intimately. There is very little shipping, perhaps none, in the area. International freighters and tankers stand well offshore, so that the names of these reefs, other than the fact that they are reefs, is of little value to them.

Local authorities consulted were:

Dr. Luis R. Almodovar of La Parguera, 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 ten years and is a well known local sport fisherman.

Mr. Victor M. Rosado of La Parguera, Lajas, Puerto Rico. Mr. Rosado is a research assistant at the Institute of Marine Science and has been a resident of La Parguera for thirty years.

Mr. Juan J. Irizarry of La Parguera, Lajas, Puerto Rico. Mr. Irizarry is a research assistant at the Institute of Marine Science and has been a resident of La Parguera for thirty-four years.

Mr. Luis A. Porllila Rosorlo of La Parguera, Lajas, Puerto Rico. Mr. Porllila is a night watchman and local fisherman. He has been a resident of La Parguera for thirty-six years.

Mr. Daniel Rosado Torres of La Parguera, Lajas, Puerto Rico. Mr. Rosado is a local fisherman and has been a resident of La Parguera for thirty years.

Mr. Lindorfo Cancel of La Parguera, Lajas, Puerto Rico. Mr. Cancel is a local carpenter and a former charter boat captain. He has been a resident of La Parguera for twenty-one years.

60. Photography.

Photography was excellent. The color transparencies were used almost exclusively for the field edit and left little to be desired.

Richard E. Kesselring
Surveying Technician
March 26, 1968
61. **GENERAL STATEMENT**

   See Summary which is page 6 of the Descriptive Report.

62. **COMPARISON WITH REGISTERED SURVEYS**

   Comparison was made with copies of Registered Surveys No. 2469, 1:20,000 scale, dated 1900 and No. 2475, 1:20,000 scale dated 1899.

   These two surveys do not show any of the offshore reefs or any rocks within the limits of T-13120. The most noticeable change is in the placement of the apparent shoreline along the mangrove. The areas of the larger changes have been noted on the comparison print in blue.

   Registered Surveys Nos. 2469 and 2475 are superseded by T-13120 for nautical chart construction purposes.

63. **COMPARISON WITH MAPS OF OTHER AGENCIES**

   Comparison was made with USGS PARGUERA, P. R., 1:20,000 scale, 7 1/2 minute quadrangle, dated 1957. The difference in the shoreline of the two surveys has been noted on the comparison print in brown.

   The reefs as shown on the USGS quadrangle are not in good agreement with those of this survey.

   Three submerged rocks on the USGS quadrangle at latitudes and longitudes $17^\circ\ 56'\ 11" - 67^\circ\ 05'\ 19"; \ 17^\circ\ 57'\ 30" - 67^\circ\ 04'\ 29"$ and $17^\circ\ 58'\ 01" - 67^\circ\ 03'\ 53"$ are not visible on photographs of the area. These rocks and the reefs have also been noted on the comparison print in brown.

64. **COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS**

   Comparison was made with copies of boat sheets WH-10-1A-68 (H-8984) and WH-10-2B-68 (H-8985). The shoreline on the boat sheets is not complete. The shoreline that is on the boat sheets appears to have been obtained from T-13120.

   The boat sheets contain no rocks or any of the offshore coral reefs within the limits of this survey.
65. **COMPARISON WITH NAUTICAL CHARTS**

A visual comparison was made with chart 901, 1:100,000 scale, 10th edition, March 25, 1968. The two surveys are in fair agreement.

The only rocks on the chart are those which define the reefs. A submerged wreck on the westerly end of Arrecife Margarita near latitude 17° 55' 12" longitude 67° 07' 27" is not identifiable on photographs that cover the area.

66. **ADEQUACY OF RESULTS AND FUTURE SURVEYS**

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

67. **OFFSHORE FEATURES**

The reefs on this survey shown with reef symbol and noted as coral reef awash were obtained from infrared photographs 66L-8513 through 66L-8515 and 66L-8525 through 66L-8527. Only the area believed to be awash at mean low water was delineated with the reef symbol.

Approved for forwarding:

[Signature]

Melvin J. Umbach, CDR, NOAA
Chief, Photogrammetry Division, AMC

Reviewed by:

[Signature]
Leo F. Beugnet
Cartographer

Approved:

[Signature]

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

Approved:

[Signature]

Chief, Photogrammetric Branch

Chief, Coastal Mapping Division
Rocks located by field editor

Brown dashed area is reef from USGS PARGUERA quadrangle

T-13120
NOTE: The predicted tide range is 0.6 ft. Therefore no distinction has been made for rocks or coral awash at M.H.W. or M.L.W. All are indicated as awash.

Brown dashed areas are reef from USGS PARGUERA Quadrangle

Sand and shell