**Diag. Cht. No. 903.**

**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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field No.</td>
<td>Ph-6403</td>
</tr>
<tr>
<td>Office No.</td>
<td>T-11884</td>
</tr>
</tbody>
</table>

**LOCALITY**

<table>
<thead>
<tr>
<th>State</th>
<th>Puerto Rico</th>
</tr>
</thead>
<tbody>
<tr>
<td>General locality</td>
<td>San Juan to Loiza Aldea</td>
</tr>
<tr>
<td>Locality</td>
<td>Isla De Cabras</td>
</tr>
</tbody>
</table>

**1964-65**

**CHIEF OF PARTY**

J.C. Bull, Atlantic Marine Center

**LIBRARY & ARCHIVES**

**DATE**

March 1968
**DESCRIPTIVE REPORT - DATA RECORD**

**PROJECT NO. (III):**

21415 PH-6403

**FIELD OFFICE (III):**

Norfolk Regional

**CHIEF OF PARTY:**

J. C. Bull, Director, Atlantic

**PHOTOMMETRIC OFFICE (III):**

OFFICER-IN-CHARGE

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

September 22, 1964

November 17, 1964

**METHOD OF COMPILATION (III):**

Kelegh

**MANUSCRIPT SCALE (III):**

1:5,000

**STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):**

1:3,000

**DATE RECEIVED IN WASHINGTON OFFICE (IV):**

**DATE REPORTED TO NAUTICAL CHART BRANCH (IV):**

**APPLIED TO CHART NO.:**

**DATE:**

**DATE REGISTERED (IV):**

**GEOGRAPHIC DATUM (III):**

Puerto Rico

**VERTICAL DATUM (III):**

MEAN SEALEVEL EXCEPT AS FOLLOWS MHW

Elevations shown as (2) refer to mean high water

Elevations shown as (1) refer to sounding datum

i.e., mean low water or mean lower low water

**REFERENCE STATION (III):**

ACADEMY, 1964

**LAT.:**

18° 28' 36.738' (1112.26m) 66° 08' 22.635' (661.09m)

**LONG.:**

**ADJUSTED**

**UNADJUSTED**

**PLANE COORDINATES (IV):**

\[ y = 233,700.87 \text{ FT} \]

\[ x = 601,766.72 \text{ FT} \]

**STATE:**

**ZONE:**

FUERTO RICO

**ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (I) FIELD PARTY, (II) 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

<table>
<thead>
<tr>
<th>Field Inspection by (II):</th>
<th>Date:</th>
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<tbody>
<tr>
<td>None</td>
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<table>
<thead>
<tr>
<th>Mean High Water Location (III) (State Date and Method of Location):</th>
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</thead>
</table>

**Air photo compilation - Date of photographs Feb. 17, 1964**

<table>
<thead>
<tr>
<th>Projection and Grids Ruled by (IV):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. E. Roundtree</td>
<td>Oct. 29, 1964</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Projection and Grids Checked by (IV):</th>
<th>Date:</th>
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<tr>
<td>P. Hawkins</td>
<td>Oct. 29, 1964</td>
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<table>
<thead>
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<th>Control Plotted by (III):</th>
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</thead>
<tbody>
<tr>
<td>B. Barnes</td>
<td>Nov. 24, 1964</td>
</tr>
<tr>
<td>H. Cordell</td>
<td></td>
</tr>
<tr>
<td>K. Boyle</td>
<td></td>
</tr>
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<table>
<thead>
<tr>
<th>Control Checked by (III):</th>
<th>Date:</th>
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<tbody>
<tr>
<td>R. Smith</td>
<td>Nov. 25, 1964</td>
</tr>
<tr>
<td>R. Wagner</td>
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<table>
<thead>
<tr>
<th>Radial Plot or Stereoscopic Control Extension by (III):</th>
<th>Date:</th>
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</thead>
<tbody>
<tr>
<td>H. P. Eichert (W.S.C.)</td>
<td>Nov. 12, 1964</td>
</tr>
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</table>

<table>
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<tr>
<th>Stereoscopic Instrument Compilation (III):</th>
<th>Date:</th>
</tr>
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<tbody>
<tr>
<td>R. E. Smith</td>
<td>Dec. 1964</td>
</tr>
<tr>
<td>Reviewed by R. R. Wagner</td>
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</table>

<table>
<thead>
<tr>
<th>Contours:</th>
<th>Date:</th>
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<tbody>
<tr>
<td>Inapplicable</td>
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<table>
<thead>
<tr>
<th>Manuscript Delineated by (III):</th>
<th>Date:</th>
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<td>R. E. Smith</td>
<td>Dec. 1964</td>
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<th>Scribing by (III):</th>
<th>Date:</th>
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<tbody>
<tr>
<td>B. Barge</td>
<td>Sept. 1965</td>
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</table>

<table>
<thead>
<tr>
<th>Photogrammetric Office Review by (III):</th>
<th>Date:</th>
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</thead>
<tbody>
<tr>
<td>R. E. Smith</td>
<td>Jan. 1966</td>
</tr>
</tbody>
</table>

**Remarks:** *Field edit: D. Rich, Mar 1965*
# Descriptive Report - Data Record

**Camera (Kind or Source)**:

WM Camera

## Photographs (III)

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 W 3208</td>
<td>Feb. 17, 1964</td>
<td>1515</td>
<td>1:15,000</td>
<td>0.1 Above MLW</td>
</tr>
<tr>
<td>3209</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64 W 3204</td>
<td></td>
<td>1518</td>
<td>1:30,000</td>
<td>0.2</td>
</tr>
<tr>
<td>64 W 3326</td>
<td></td>
<td>1637</td>
<td>1:10,000 COLOR</td>
<td>0.2 Below</td>
</tr>
<tr>
<td>3329</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3249</td>
<td></td>
<td>1631</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3251</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64 W 3138</td>
<td></td>
<td>0934</td>
<td>1:15,000 COLOR</td>
<td>0.6 above</td>
</tr>
<tr>
<td>3139</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tide (III)**: 

- Reference Station: SAN JUAN, PUERTO RICO
- Subordinate Station:
- Subordinate Station:

**Final Washington Office Review By (IV)**: Atlantic Marine Center

**Date**: Sept 1964

**Proof Edit By (IV)**

**Number of Triangulation Stations Searched For (II)**: ?
- Recovered: 4
- Identified: 4

**Number of BM(5) Searched For (II)**:
- Recovered: --
- Identified: --

**Number of Recoverable Photo Stations Established (III)**: None

**Number of Temporary Photo Hydro Stations Established (III)**: None

**Remarks**: 

---

USC&MDC 16276C-P61
<table>
<thead>
<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alongshore area for hydro</td>
<td>Jan 1965</td>
<td>Superseded</td>
</tr>
<tr>
<td>Alongshore area revised from field edit</td>
<td>Sept. 1965</td>
<td></td>
</tr>
</tbody>
</table>

*SEE ITEM #18 REPORT.*
PROJECT 21415
SHORELINE MAPPING
PUERTO RICO
SAN JUAN TO LOIZA ALDEA
1:5,000 & 1:10,000 SCALES

OFFICIAL MILEAGE FOR COST ACCOUNTS

Project 21415 - North Coast Puerto Rico

<table>
<thead>
<tr>
<th>Sheet Number</th>
<th>Area Sq.Mi.</th>
<th>Lin.Mi. of Shoreline</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-11884</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>T-11885</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>T-11886</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>T-11887</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>T-11888</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>T-11889</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>T-11890</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>T-12607</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>T-11891</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>48</strong></td>
<td><strong>91</strong></td>
</tr>
</tbody>
</table>
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11884

Shoreline manuscript T-11884 is one of six 1:5,000 scale manuscripts in Ph-6403 (San Juan to Loiza Alde, Puerto Rico), which also contains three 1:10,000 scale manuscripts. The sketch on page 5 of this report shows the position of this manuscript in the project.

This is a stereo-instrument project in advance of hydrographic surveys of the area. 1:15,000 scale and 1:30,000 scale panchromatic photographs were taken with the W camera; which was also used for 1:10,000 scale and 1:15,000 scale color photographs. All the photographs were taken on February 17, 1964. The stereo bridge was run and adjusted to field identified control in the Washington Office. Compilation was done with the Kelsh Plotter. Ratio prints, at 1:5,000 scale were processed, and provided for photo-hydro support.

Field work preceding compilation consisted of control identification only; no inspection was provided for compilation. The manuscript was field edited in conjunction with photo-hydro support.

The compilation manuscript was a vinylite sheet 2 minutes, 00 seconds in latitude, and 2 minutes 7 1/2 seconds in longitude. The smooth manuscript was on cronaflex for review. One cronar positive and one cronar negative are furnished for registry and record after final review.
FIELD INSPECTION REPORT

There was no field inspection prior to Compilation.
<table>
<thead>
<tr>
<th>STATION*</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR $\phi$-COORDINATE</th>
<th>LONGITUDE OR $\lambda$-COORDINATE</th>
<th>DISTANCE FROM ORIGIN, OR PROJECTION LINE IN METERS (FORWARD)</th>
<th>DATUM CORRECTION</th>
<th>NA-1927-Datum DISTANCE FROM GRID OR PROJECTION LINE IN METERS (FORWARD)</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS (FORWARD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATANO FRONT RANGE LIGHT, 1939</td>
<td>G.P. 71</td>
<td>Puerto Rico</td>
<td>18° 27' 24.208&quot;</td>
<td>66° 07' 49.390&quot;</td>
<td>714.3 (1100.4)</td>
<td>1149.2 (311.0)</td>
<td>Pl. by LON checked by R. Wilson</td>
<td></td>
</tr>
<tr>
<td>CANUELO, 1899</td>
<td>G.P. 68</td>
<td></td>
<td>18° 28' 06.069&quot;</td>
<td>66° 08' 12.276&quot;</td>
<td>186.6 (1658.0)</td>
<td>360.2 (1400.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POINT, 1899</td>
<td></td>
<td></td>
<td>18° 28' 21.438&quot;</td>
<td>66° 07' 31.033&quot;</td>
<td>751.3 (1093.3)</td>
<td>910.5 (869.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUND, 1899</td>
<td>G.P. 70</td>
<td></td>
<td>18° 28' 26.311&quot;</td>
<td>66° 08' 05.760&quot;</td>
<td>808.9 (1035.8)</td>
<td>169.0 (1591.3)</td>
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<td></td>
</tr>
<tr>
<td>STEP, 1899</td>
<td></td>
<td></td>
<td>18° 28' 17.348&quot;</td>
<td>66° 07' 30.580&quot;</td>
<td>533.1 (1311.5)</td>
<td>897.2 (863.2)</td>
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<td></td>
</tr>
<tr>
<td>FORT CANUELO, 1939</td>
<td>G.P. 73</td>
<td></td>
<td>18° 28' 06.014&quot;</td>
<td>66° 08' 11.917&quot;</td>
<td>184.9 (1659.7)</td>
<td>319.6 (1140.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CARIOCA STACK, 1939</td>
<td></td>
<td></td>
<td>18° 27' 37.990&quot;</td>
<td>66° 08' 46.383&quot;</td>
<td>1168.0 (676.7)</td>
<td>1360.9 (399.5)</td>
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</tr>
<tr>
<td>ACADEMY, 1964</td>
<td></td>
<td></td>
<td>$y=233,700.87$ Ft.</td>
<td>$x=603,776.72$ Ft.</td>
<td></td>
<td></td>
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</tbody>
</table>

1 FT = 0.3048006 METER

COMPUTED BY: LON
DATE: Nov. 25, 1964
CHECKED BY: BHB
DATE: 12-2-64
Photogrammetric Plot Report

Project 21415

Puerto Rico

December, 1964

21. Area Covered

This report covers an area of the northern coast of Puerto Rico in the vicinity of San Juan and Babia de San Juan.

22. Method

Analytic aerotriangulation methods were used; to bridge three strips of photography at the scale of 1:15,000 and one strip at the scale of 1:30,000. The attached sketch of strips bridged shows both field and office identified control used in the adjustments. Closures to control have been tabulated.

23. Adequacy of Control

Horizontal control identified and required to adjust strips 1 and 3 could at best be called "sub-standard".

A complete examination and evaluation of I.B.M. output data forced the reduction of Strip No. 1 from 12 models to 5 models. The three sheets (1:10,000, east of 66° 03’ 45") could not have been compiled to meet National Standards of Map Accuracy, hence that portion of this project has been delayed pending reidentification of control.

Strip #3 was originally to have been bridged and adjusted using four field identified stations. However, the field identification was not positive for two of the four required stations. The strip was bridged and adjusted using Carioca Stack, 1939 and Cement Mill Stack, 1939 as terminals; with one field identified point, two office identified points, and six tie points from strips 3 and 4 as a check to our adjustment. This adjustment proved unsuccessful, indicating an error which became increasingly greater as we approached Cement Mill Stack, 1939. Consequently, this point was discarded. The final adjustment was based upon Carioca Stack, 1939 and office identified station Catand Church Steeple, 1934.
Four landmarks were located and their positions furnished to the Chart Maintenance Section at their request.

24. **Supplemental Data**

None

25. **Photography**

Photography was adequate with regard to coverage, overlap and definition.

Respectfully submitted:

[Signature]

George M. Ball

Approved and forwarded:

[Signature]

Henry P. Eichert
Acting Chief, Aerotriangulation Section

Jan. 7, 1965
Strip #1

ROIG, 1964

SS #1 (-0.9, +0.3)
SS #2 (-6.7, -0.6)

Sheraton, 1964

SS #1 (-0.3, +4.0)
SS #2 (-3.3, -0.1)

Power House Stack, 1939 (office identified)

(-4.4, -3.7)

Pier - PAA, 1961

SS #1 (-3.5, -0.9)
SS #2 (-4.2, 0.0)

Puntilla Point Light, 1939 (office identified)

(+2.0, +1.1)

Catano Church Steeple, 1934 (office identified)

(+2.0, +1.1)

St. Augustine Church Cupola, 1927

(-13, -5.2)

Caseta 38 PAA 1961

(+7.3, 0.0)

Morro Lighthouse, 1900

(+3.3, -17.8)

Fort Canuelo, 1939

(+0.9, -1.2)

Academy 1964

(-0.4 +0.4)

Carioca Stack 1939

(+0.4, -3.7)

Catano Rear Range, 1934

(+1.4, -0.1)
Catano Front Range Light, 1939
(+4.4, -3.8)

Strip #2

ROIG, 1964

SS #1 (+2.1, -0.2)
SS #2 (-0.1, +0.4)

Sheraton, 1964

SS #1 (+6.4 +10.5)
SS #2 (-1.2 +1.6)

Power House Stack, 1939 (office identified)
(-0.8, -0.5)

Pier FAA, 1961

SS #1 (+0.2, -1.7)
SS #2 (-2.5, -0.6)

Puntilla Point Light, 1939 (office identified)
(+4.9 +7.5)

Carioca Stack, 1939
(-1.1, -1.0)

Catano Rear Range, 1939
(+0.8, +2.2)

Catano Front Range Light, 1939 (office identified)
(-0.2, +2.7)

Strip #3

11311 (0.0, 0.0)

Fort Canuelo, 1939 (-2.2, +3.1)

Carioca Stack, 1939
(0.0, 0.0)

Catano Rear Range Light, 1939
(0.0, 0.0)
Catano Front Range Light, 1939 (office identified)
(+3.3, +3.4)

Strip #4
Capital Cupola (office identified)
(+2.0, +0.2)
Caseta #38 PAA, 1961
(-0.4, -1.0)
St. Augustine Cathedral Cupola, 1927
(+3.4, +0.2)
Power House Stack, 1939 (office identified)
(-0.1, +1.7)

Pier PAA, 1961
SS #1 (-2.8, -1.6)
SS #2 (-5.9, -3.2)
Sheraton, 1964
SS #1 (+0.5, -1.1)
SS #2 (0.0, +2.7)
ROIG, 1964
SS #1 (-0.1, -0.4)
SS #2 (+3.9, +6.3)
Notes to Compilation Office

Puerto Rico

As has been our practice only those passpoints marked in red on the diapositives, the so called zero points (11310, 11320, 11330, etc.), should be plotted on the manuscripts for compilation purposes. These have been re-drilled to a size of 180 microns.

Strip No. 1 is usable for the present only from photographs 09 thru 13. Models 11-12 and 12-13 should be set in place of model 20-21 of Strip No. 4 for compilation in T-11885. Model 11-12 of Strip No. 1 is also needed to complete details on T-11888.

As is evident from the readouts ties between strips were very satisfactory. These points need not be plotted as they are not needed for compilation purposes.

Henry P. Eichert
November 12, 1964
COMPILATION REPORT
T-11884

PHOTOGRAMMETRIC PLOT REPORT
Submitted with this report.

31. Delineation

Compilation was done by the Kelsh plotter. Color photography
was used as an aid in delineation of rocks and other offshore features.

In the vicinity of Isla de Cabras and Pta del Morro there was no
1:15,000 stereoscopic coverage. It was necessary, therefore, to
compile these areas using the 1:30,000 scale photography, using direct
plotting without the pantograph. Refer to Item 49 of this report.

There was no field inspection.

32. Control

See Photogrammetric Plot Report

33. Supplemental Data

None

34. Contours and Drainage

Inapplicable

35. Shoreline and Alongshore Details

There was no shoreline inspection.

Shallow areas, breakers, and foul areas were delineated from
office interpretation.

No low water line was shown.
36. OFFSHORE DETAILS

See Item 49

37. LANDMARKS AND AIDS

These are to be ascertained during the hydrographic survey.

38. CONTROL FOR FUTURE SURVEY

None

39. JUNCTIONS

Junctions are in agreement with T-11885 to the east and T-11887 to the south. The Atlantic Ocean is to the north. There is no contemporary survey to the west.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to Photogrammetric Plot Report. Vertical control is inapplicable to this project.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with U.S.G.S. Quadrangle BAYAMON, P.R. scale 1:20,000 dated 1957. Changes noted were to be expected due to the passage of time.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with chart No. 908 scale 1:10,000 revised 11-19-62.
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None

ITEMS TO BE CARRIED FORWARD:

None

Approved & forwarded:

J. Bull
Director, Atlantic Marine Center

R. E. Smith
Cartographer
48. GEOGRAPHIC NAME LIST

ARRECIFE BAJIOS
ATLANTIC OCEAN
BAHIA DE SAN JUAN
BAJO COLNAS
BAJO STA ELENA
EL CANUELO
ENSENADA DE BOCA VIEJA
ISLA DE CABRAS
LAS CABRITAS
PALO SECO (Town)
PALO SECO (Area)
PTA DEL MORRO
PTA PALO SECOS
PTA TOCONES
RIO DE BAYAMON

NOTE: * Not on namelist of A. J. Wright
Arrecife Bajios
-Bahía de San Juan
-Bajo Colnas
-Bajo Sta Elena
-El Camuelo
-Ensenada de Boca Vieja
-Isla de Cabras
-Las Cabritas
-Palo Seco
-Pta del Morro
-Pta Palo Seco
-Pta Tocones

A. J. Wraight
A. J. Wraight
Geographic Names
49. NOTES FOR THE HYDROGRAPHER

Several offshore areas have been shown with a dashed line and labeled Breakers. The existence of rocks in these areas, as indicated by chart No. 908, could not be positively ascertained from the photographs and will have to be investigated by the hydrographer. Other offshore features such as rocks, piling, etc. have been shown according to office interpretation. These should be verified by the hydrographer.

Shoreline passpoints were located on the northern shore of Isla de Cabras and west shore of Pta del Morro, but are of doubtful position. There was no 1:15,000 stereoscopic photograph coverage of this area and the 1:30,000 diapositives had to be used. The 6 diameter enlargement of 1:30,000 to 1:15,000 (manuscript scale) on the Kelsh causes the images to become blurred, therefore a positive identification of passpoints could not be made. The shoreline and foreshore in this area should be checked.

Landmarks, Aids to Navigation and azimuths of lights, and Daybeacons have not been shown and will have to be furnished by the hydrographer. See Project Instruction dated September 22, 1964 Par 6.06.

One light in Bahia de San Juan could be seen and was located by the Kelsh. This was done as an aid to the hydrographer. This should also be verified, as chart 908 indicates no aid in this location.

Features believed to be of landmark value have been shown, but their visual or navigational value should be verified.

A discrepancy ozalid with notes for verification to the hydrographer and/or Field editor is being forwarded with this data.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<tr>
<td>Control Stations</td>
<td>RES</td>
<td>6. Recoverable Horizontal Stations of Less Than Third-Order Accuracy (Topographic Stations) XXX</td>
<td>RES</td>
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<tr>
<td></td>
<td>XXX</td>
<td>7. Photo Hydro Stations</td>
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<td>XXX</td>
<td>8. Bench Marks</td>
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<td>9. Plotting of Sextant Fixes</td>
<td>Bridge (W.O.)</td>
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<tr>
<td></td>
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<td>10. Photogrammetric Plot Report</td>
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<td>11. Detail Points</td>
<td>Kels H</td>
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| Alongshore Areas       | RES     | 12. Shoreline          | XXX |
| (Nautical Chart Data)  |         | 13. Low-Water Line     | XXX |
|                        |         | 14. Rocks, Shoals, Etc. | XXX |
|                        |         | 15. Bridges            | XXX |
|                        |         | 16. Aids to Navigation | XXX |
|                        |         | 17. Landmarks          | XXX |
|                        |         | 18. Other Alongshore Physical Features RES |
|                        |         | 19. Other Alongshore Cultural Features RES |
| Physical Features      | RES     | 20. Water Features     | RES |
|                        |         | 21. Natural Ground Cover | RES |
|                        |         | 22. Planetable Contours | XXX |
|                        |         | 23. Stereoscopic Instrument Contours XXX |
|                        |         | 24. Contours in General | XXX |
|                        |         | 25. Spot Elevations    | XXX |
|                        |         | 26. Other Physical Features RES |
| Cultural Features      | RES     | 27. Roads              | RES |
|                        |         | 28. Buildings          | XXX |
|                        |         | 29. Railroads          | XXX |
|                        |         | 30. Other Cultural Features RES |
| Boundaries             | XXX     | 31. Boundary Lines     | XXX |
|                        |         | 32. Public Land Lines  | XXX |
| Miscellaneous          | RES     | 33. Geographic Names   | RES |
|                        |         | 34. Junctures          | RES |
|                        |         | 35. Legibility of the Manuscript XXX |
|                        |         | 36. Discrepancy Overlay | RES |
|                        |         | 37. Descriptive Report | RES |
|                        | XXX     | 38. Field Inspection Photographs RES |
|                        | XXX     | 39. Forms              | RES |
|                        |         | 40. Field Completion Additions and Corrections to the Manuscript - Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted in remarks on reverse side. |

Signature of Reviewer: [Signature]  
Signature of Supervisor: [Signature]  
Signature of Compiler: [Signature]  

Use reverse side for remarks
Purpose:
The purpose of this report is to summarize the field edit work of
San Juan Harbor, Puerto Rico, as required by Project OPR - 423, In-
structions - Revised, dated November 6, 1964.
The areas encompassed in the field edit was all areas covered by T-
sheets for the San Juan Harbor project.

Methods:
The field editing was carried out in the following manner. Using
field photographs and the discrepancy prints, the entire shoreline
was walked, except as noted on T-11884 and all additions, deletions,
and corrections were made on the field photographs or the discrep-
ancy prints. All appropriate information was transferred to ratio
prints aboard ship. All additions, deletions, and corrections
have been cross referenced between photos and discrepancy prints.

T-11884:
No additions or corrections were needed on this sheet. Deletions
are as follows:
1. Groin - Lat. 18°27' 03" Long. 66° 08' 09"
2. Pilings - Lat. 18° 27' 42" Long. 66° 07' 46"

All questions pertaining to identification of objects have been
answered directly on the discrepancy print. All field notes for
this sheet are on the discrepancy print and/or photos 6LM3209,
6LM3219.

T-11885:
Deletions:
Light - Lat. 18° 27' 45" Long. 66° 07' 10"
Additions:

Wreck - Lat. 18° 27' 10" Long. 66° 06' 05"
(See photo 64W3239)

Corrections:

Pier #2 - Lat. 18° 27' 52" Long. 66° 06' 49"
(Pier in ruins - see discrepancy sheet)

All questions relating to identification of objects have been answered directly on the discrepancy print. All notes for this sheet are on the discrepancy print and/or photos 64W3219, 64W3220, 64W3239.

Deletions:

1. Pier - Lat. 18° 27' 22" N Long. 66° 04' 34" W
2. Dolphins - Lat. 18° 27' 37" N Long. 66° 05' 28" W
66° 05' 36" W

Additions:

* 1. Monument - Lat. 18° 27' 32" N Long. 66° 04' 48" W (fountain) (See photo 64W3223)
2. Fillings - Lat. 18° 27' 32" N Long. 66° 05' 20" W
(See discrepancy print)

Corrections:

Shoreline: Near Lat. 18° 27' 42" Long. 66° 05' 07"
(See photo 64W3222)

All questions pertaining to identification of objects have been answered directly on the discrepancy print. All field edit notes for this sheet are on the discrepancy print and/or photos 64W3222, 64W3223.

T-11887:

No deletions, additions, or corrections were needed on this sheet.

All questions pertaining to identification of objects have been answered directly on the discrepancy prints. All field notes have been made on the discrepancy print.
T-11887 (Cont.):

made on the discrepancy print.

T-11888:

Deletions:

1. Wreck - Lat. 18° 26' 45" Long. 66° 06' 40"
2. Unknown object - Lat. 18° 26' 40" Long. 66° 06' 46"
3. No visible pipeline - Lat. 18° 26' 20" Long. 66° 06' 40"

Additions:

1. Wreck - Near Lat. 18° 26' 42" Long. 66° 06' 40"

Corrections:

Shoreline near dam at Lat. 18° 26' 07" Long. 66° 05' 45"
Shoreline could not be walked because of mud. Shoreline was sketched on photo from skiff.

All questions pertaining to identification of objects have been answered directly on the discrepancy sheet.

All field edit notes have been made on the discrepancy print and/or photos 64W3211, 64W3213, 64W3239, and 64W3241.

T-11889:

Deletions:

1. Obstruction - Lat. 18° 26' 55" Long. 66° 05' 35"
2. " - Lat. 18° 26' 57" Long. 66° 05' 12"
3. " - Lat. 18° 26' 22" Long. 66° 04' 27"
4. " - Lat. 18° 26' 14" Long. 66° 04' 03"
5. " - Lat. 18° 26' 19" Long. 66° 05' 04"

No additions or corrections were needed on this sheet.
All questions pertaining to identification of objects have been answered directly on the discrepancy print.

All field edit notes for this sheet are on the discrepancy print and/or photos 64W3239, 64W3237.

Adequacy of Compilation:
Compilation of these sheets for the most part was adequate and complete.

Map Accuracy:
No problems were encountered in horizontal positioning. Control of T-sheets was very rigid.

Submitted By:

Donald R. Rich, ENS.
USCG&GS Ship EXPLORER

Approved By:

Marvin T. Paulson,
Capt., CGS, Comdg.
USCG&GS Ship EXPLORER
The purpose of this report is to recommend that a number of objects in San Juan, Puerto Rico, be charted as landmarks on Chart # 908. All positions of the recommended landmarks were scaled from the "Incomplete" manuscripts for San Juan Harbor which were dated January 1965.

NOTES: for landmarks plotted on the enclosed chart sections.

1) The twin stacks are very prominent landmarks. They are easily visible from sea. OK.

2) The building and the tower are recommended for charting. The building is good for ship masters approaching the piers in this area for loading and unloading grain. The tower itself is very prominent for the entire harbor.

   Sketch: 
   ![Sketch of building and tower](image)

3) Grain elevator. This is a prominent landmark for ships approaching this area. OK.

4) A group of three buildings along wharf. They are good aids to ships approaching the wharf. In the immediate area are three stacks and four more under construction. All are too close together to be individual landmarks. They may be valuable as a group upon completion of construction. NO, BLEDS MAPPED, LANDMARKS NOT

5) Tower is toward the front and center building. Building itself would be of no aid due to the shrubbery and trees. Tower is very prominent.

   Sketch: 
   ![Sketch of tower](image)

6) Airport control tower. It is a very good aid day and night.

7) A warehouse that would be a good landmark for ship masters approaching the wharf. It was the only building in the vicinity.
Respectfully submitted:

Donald R. Rich
Ens. USESSA

Approved:

Marvin T. Paulson
Capt. USESSA
Commanding Officer
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

September 4, 1965

I recommend that the following objects which have (have not) been inspected from seaward to determine their value as landmarks be charted on (deleted from) the charts indicated. The positions given have been checked after listing by Capt. Trinidad Menéndez.

Capt. Marvin T. Pursley
Chief, Party

<table>
<thead>
<tr>
<th>STATE</th>
<th>STARTING NAME</th>
<th>DESCRIPTION</th>
<th>SIGNAL NAME</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>METHOD OF LOCATION AND SURVEY No.</th>
<th>DATE OF LOCATION</th>
<th>CHART AFFECTED</th>
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</thead>
<tbody>
<tr>
<td>Puerto Rico</td>
<td>STACKS</td>
<td>Twin Stacks 175 ft. high, 186 ft. above MSL</td>
<td>-</td>
<td>18°27'</td>
<td>66°08'</td>
<td>Puerto Rico</td>
<td>1965</td>
<td>903 908</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>TOWER</td>
<td>Grain Storage Elevator 245 ft. high, 225 ft. above MSL</td>
<td>IVY</td>
<td>18°26'</td>
<td>153°5'</td>
<td>F-1898</td>
<td>908</td>
<td></td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>BUILDING</td>
<td>Grain Storage &amp; Elevator, 10 meters wide (chart outline)</td>
<td>NE Cor.</td>
<td>18°26'</td>
<td>153°5'</td>
<td>F-1898</td>
<td>908</td>
<td></td>
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<tr>
<td>Puerto Rico</td>
<td>BUILDING</td>
<td>Grain Elevator (chart outline)</td>
<td>S.E. Cor.</td>
<td>18°26'</td>
<td>153°5'</td>
<td>F-1898</td>
<td>908</td>
<td></td>
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<tr>
<td>Puerto Rico</td>
<td>BUILDING</td>
<td>Warehouse along new wharf (chart outline) 32 meters wide</td>
<td>BR NE Cor.</td>
<td>18°25'</td>
<td>154°30'</td>
<td>F-1898</td>
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<tr>
<td>Puerto Rico</td>
<td>BUILDING</td>
<td>Warehouse along new wharf (chart outline) 39 meters wide</td>
<td>NE Cor.</td>
<td>18°25'</td>
<td>154°30'</td>
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<td>908</td>
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<tr>
<td>Puerto Rico</td>
<td>BUILDING</td>
<td>Warehouse along new wharf (chart outline) 68 meters wide</td>
<td>BED Northeast</td>
<td>18°25'</td>
<td>154°30'</td>
<td>F-1898</td>
<td>908</td>
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</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 300 to 304. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED — STRIKE OUT ONE

I recommend that the following objects which have (have not) been inspected from seaward to determine their value as landmarks be (be not) deleted from the charts indicated.

Positions given have been checked after listing by Ens Tru Menassa

Capt. Marvin T. Paulson
Chief of Pairs

<table>
<thead>
<tr>
<th>STATE</th>
<th>OBJECT</th>
<th>DESCRIPTION</th>
<th>SIGNAL NAME</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DATUM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOWER</td>
<td>Square Tower on large building, Tower at front and center of Building</td>
<td>MOP</td>
<td>18°27'</td>
<td>66°08'</td>
<td>88°30'</td>
</tr>
<tr>
<td></td>
<td>TOWER</td>
<td>Airport Control Tower</td>
<td>OFF</td>
<td>18°27'</td>
<td>66°06'</td>
<td>295°</td>
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<tr>
<td></td>
<td>BUILDING</td>
<td>Main Building in open area (Note outline)</td>
<td>LAY or M.W. Cor.</td>
<td>18°27'</td>
<td>66°05'</td>
<td>163°</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 meters wide</td>
<td>KEY or M.E. Cor.</td>
<td>18°27'</td>
<td>66°05'</td>
<td>151°</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not be altered without the concurrence of the Survey Office.
61. GENERAL STATEMENT

See summary, page 6, of this Descriptive Report.

Comparison of the field edit notes on ratio black and white photographs 64-W-3209 and 3219 with the color photographs 64-W-3137 through 3140 and 3250 through 3252 indicated that the field editor had overgeneralized the broken, rocky shoreline. He agreed with this during a visit to this office; and consequently, the final shoreline departs from the field edit when positive delineation could be done from interpretation of the photographs.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

No. 2413, 1:5,000 scale, 1899
No. 2414, 1:5,000 scale, 1899
No. 2487, 1:10,000 scale, 1900

There are changes in the size and shape of the rocky islands "Las Cabritas".

Large changes near Pta Palo Seco are probably the result of causeway construction and filling.

The "rock awash" at latitude 18°28'4, longitude 66°08' is discussed under item 65.

This map supersedes the listed prior surveys for nautical chart construction.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

BAYMON, P.R., U.S.G.S., 1:20,000, 1939-Revised 1957

There are differences in the islands of "Las Cabritas", the shoreline of the east side of "Isla de Cabras", the northern part of "Pta Palo Seco". The spoil areas between 18°27'2 and 18°27'4 are new.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

BOAT SHEET H-8848 (EX-5-1-65), 1:5000, 1965

The boat sheet shows a "sunken rock" at latitude 18°28'42, longitude 66°07'97; the field editor did not note it. Nothing
could be seen on the black and white photographs; color photographs 6H-W-3250-3251 show something there, but positive identification could not be made.

The boat sheet shoreline is superseded, see Item 61.

65. COMPARISON WITH NAUTICAL CHARTS


Differences are shown in the Comparison Print; they consist of:

The size and shape of "Las Cabritas"; the shoreline at the northwest tip of "Isla de Cabras".

The "rock awash" at latitude 18°28'1.4, longitude 66°08'4. is shown on the chart as a small island. The "rock awash" classification was discussed with the field editor, who persisted in this classification.

The chart shows an unlabelled rectangular area paralleling the shoreline at latitude 18°27'1.8, longitude 66°08'1.35. Nothing could be discerned on black and white photographs, 6H-W-3208, 3209 or the color photographs 6H-W-3139 and 3140. The area was not questioned on the discrepancy print and the field editor did not note it.

The field editor did not note the "cable area" across the Rio de Bayamon at longitude 66°08'1.5 and no evidence could be seen on the photographs.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

No accuracy tests have been run in the field. This map meets the National Standards of Map Accuracy and Bureau requirements.

Approved by: 

[Signature]
Director, Atlantic Marine Center

Reviewed by: 

[Signature]
M. M. Slavney

[Signature]
Chief, Photogrammetric Branch

[Signature]
Chief, Photogrammetry Division

[Signature]
Chief, Marine Chart Division
Please see the Comparison Print and Items 61, 64, and 65 of this report.
INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.  
1. Letter all information.  
2. In “Remarks” column cross out words that do not apply.  
3. Give reasons for deviations, if any, from recommendations made under “Comparison with Charts” in the Review.

<table>
<thead>
<tr>
<th>CHART</th>
<th>DATE</th>
<th>CARTOGRAPHER</th>
<th>Adequate Remarks</th>
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<td>6 Aug 74</td>
<td>WARREN HAUSEN</td>
<td>Full Part Before After Verification Review Inspection Signed Via Drawing No.</td>
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<td>25670</td>
<td>JAY SHERMAN</td>
<td>Full Part Before After Verification Review Inspection Signed Via Drawing No.</td>
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FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.