

13140

13140

FORM C&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-13140

LOCALITY

State Puerto Rico*General locality* Southwest Coast*Locality* Isla De Ratones1966-71

CHIEF OF PARTY

Alfred C. Holmes, Director, ~~AMC~~

LIBRARY & ARCHIVES

DATE

DESCRIPTIVE REPORT - DATA RECORD

T -13140

OBJECT 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 (H) (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):

1:2,500 Pantographed To 1:5000

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):
HIGH WATERMEAN ~~LOW~~ EXCEPT AS FOLLOWS:

Elevations shown as (25) refer to mean high water

Elevations shown as (5) refer to sounding datum

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

REFERENCE STATION (III):

Rey, 1966

LAT.:

17°58'39.07781" 1201.4M

LONG.:

66°40'36.38536" 1070.5M

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

y = 52.411.70 Ft.

x = 415.402.80 Ft.

Puerto Rico

1

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-13140

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, 16, 1966		
PROJECTION AND GRIDS RULED BY (IV): A. Bethea		DATE Oct. 14, 1968
PROJECTION AND GRIDS CHECKED BY (IV): L. F. Van Scoy		DATE Oct. 18, 1968
CONTROL PLOTTED BY (III): Aerotriangulation Points: - B. Nicholson Triangulation Stations: - C. E. Blood		DATE Nov. 7, 1968 Dec. 6, 1968
CONTROL CHECKED BY (III): Aerotriangulation Points: - J. Steinberg Triangulation Stations: - B. Wilson		DATE Nov. 7, 1968 Dec. 6, 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: R.R. White and A. L. Shands	DATE Jan. 1969
	CONTOURS Inapplicable	DATE
MANUSCRIPT DELINEATED BY (III): C.H. Bishop		DATE March 1969
SCRIBING BY (III): C. Parker		DATE July 20, 1972
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): Compilation: C.H. Bishop Field Edit: R.J. Pate Scribing and Stick Up: F. Margiotta		DATE Mar. 4, 1969 May 28, 1969 7/72, 8/72
REMARKS: Field Edit By: - R.E. Kesselring Additional work - 1971 (see page 19B) DATE: March 1969		

DESCRIPTIVE REPORT - DATA RECORD

T-13140

CAMERA (KIND OR SOURCE) (III):

Wild RC-8 & RC-9 "L" and "M"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
66-L-(c)-8394 thru 66-L-(c)-8396	Nov. 15, 1966	10:37	1:15,000	.87

PREDICTED TIDE (III)

DIURNAL

	RATIO OF RANGES	MEAN RANGE	MEAN RANGE
REFERENCE STATION: Galveston, Texas			1.4
SUBORDINATE STATION: Playa De Ponce	0.57		0.8
SUBORDINATE STATION:			

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

DATE:
Feb. 1973

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): 4

RECOVERED:
2IDENTIFIED:
1

NUMBER OF BM(S) SEARCHED FOR (II): None

RECOVERED:
NoneIDENTIFIED
None

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

1

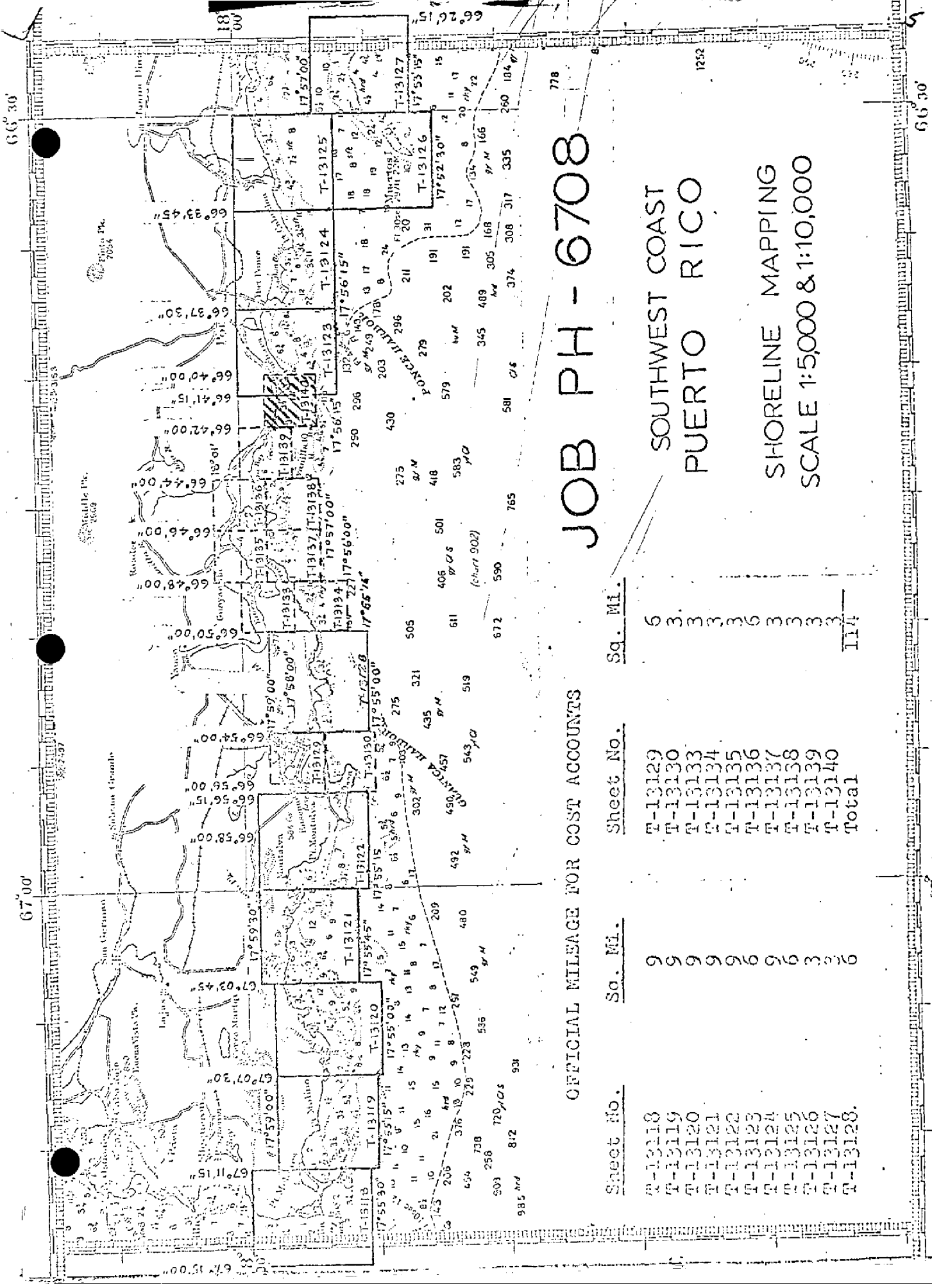
NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

None

REMARKS:

T-13140

COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore Area For Hydro.	March 1969	Superseded
Field Edit Applied; Com- pilation Complete	May 1969	Superseded
Additional Field Edit Applied Dated March 1971	July 1971	Superseded
Field Edit <i>Final Review</i>	Feb. 1973	



JOB PH - 6708

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
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	3	Total	114

SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORT

T-13140

Shoreline survey T-13140 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 extends from Penon de Ponce to most of Laguna de las Salinas.

There was no field work preceding the compilation of this manuscript.

Compilation was at 1:5,000 scale by B-8 plotter using November, 1966 photography. (See item 31 of compilation report) 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 in longitude by 2 minutes in latitude. The first field edit was done in 1969. In 1971 the field editor made some extensive changes to the original field edit. These were applied in 1971. (See portion of field edit report of 13123 attached to 1969 field edit) After the latest field edit was applied the manuscript was scribed, stuck-up and reproduced on cronaflex. Final review was at AMC in February, 1973. One cronaflex and negative of the final reviewed survey are being forwarded for record and registry.

FIELD INSPECTION REPORT

PH-6708

T-13140

There was no field inspection prior to compilation.

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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.

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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

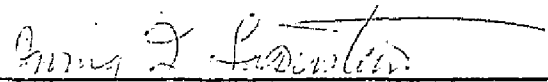
The definition and quality of the RC-9 "M" and RC-8 "L" color photography was fair and good respectively. Smoke covers parts of some photographs on Strips 3 and 5A, but should not hinder compilation of the shoreline.

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.

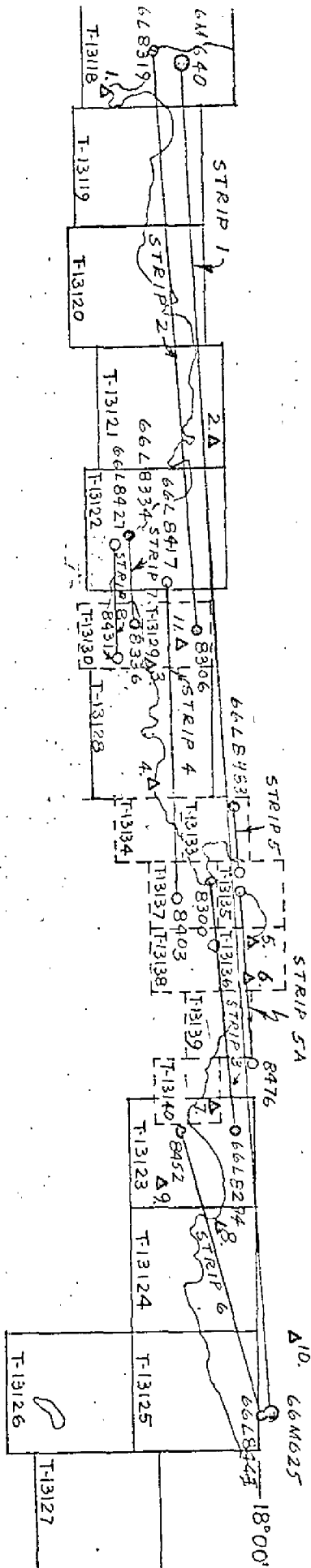
Respectfully submitted


I. I. Saperstein

Approved and Forwarded


Henry P. Eichert, Chief
Aerotriangulation Section

66°30'



1. CABO ROSO (USAF) 1966
2. CERO VERTERO 2 (USAS) 1934
3. ENSENADA, 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. KEY, 1966
8. PONCE, RADIO STATION WELO MAST, 1966
- PONCE BAY FRONT & REAR RANGE LTS. 1966
9. CARBOÑA 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

- A Control used in Adjustment

DESCRIPTIVE REPORT CONTROL RECORD

MAP T- 13140

PROJECT NO. PH-6708

SCALE OF MAP 1:5,000

SCALE FACTOR

None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (1 Ft. = 3048006 meter)	
				FORWARD	(BACK)
Rey, 1966	Geodesy Pad 77089	Puerto Rico	17° 58' 39.07781"	1201.4	(643.2)
			66° 40' 36.38536"	1070.5	(694.8)
Cave 2, 1966	" 27088	"	17° 58' 54.14686"	1664.6	(180.0)
			66° 41' 55.62179"	1636.4	(128.9)
COMPUTED BY A.C. Rauck, Jr.	DATE Nov. 18, 1968	CHECKED BY C. Blood	DATE Nov. 21, 1968		

COMPILATION REPORT

MAP MANUSCRIPT T-13140

PROJECT PH-6708

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.

No drainage, other than ponds was delineated.

35. SHORELINE AND ALONGSHORE DETAILS

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

36. OFFSHORE DETAILS

Coral limits, shallow limits, islands and all other offshore details were delineated from office interpretation of the photographs. Cayo Ratones, Arrecife Ratones, and the shallow area around these features were compiled graphically after photo centers were located.

37. LANDMARKS AND AIDS

None

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

A satisfactory junction was made with T-13139 to the West. There are no contemporary surveys to the North and South and no contemporary survey at 1:5,000 scale to the East.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

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

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with CHART 902, South Coast of Puerto Rico, scale 1:100,000, 8th Edition, dated March 15, 1965.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted:

Charles H. Bishop

Charles H. Bishop
Cartographer
March 5, 1969

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-13140

Arrecife Ratones

Cayo Arenas

El Balneario

Isla de Ratones

Laguna de las Salinas

Mar Caribe

Penon de Ponce

Punta Cucharas

Approved:

A. J. Wright

A. Joseph Wright
Chief Geographer

Prepared by:

Charles E. Harrington

Charles E. Harrington
Cartographer

T-13140

49. NOTES FOR THE HYDROGRAPHER:

None

FORM C&GS-1002
(9-66)U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

T.13140

1. PROJECTION AND GRIDS CHB	2. TITLE CHB	3. MANUSCRIPT NUMBERS CHB	4. MANUSCRIPT SIZE CHB
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) XX		7. PHOTO HYDRO STATIONS XX
8. BENCH MARKS XX	9. PLOTTING OF SEXTANT FIXES RJP	10. PHOTOGRAMMETRIC PLOT REPORT CHB	11. DETAIL POINTS CHB
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE CHB	13. LOW-WATER LINE CHB	14. ROCKS, SHOALS, ETC. CHB	15. BRIDGES CHB
16. AIDS TO NAVIGATION RJP	17. LANDMARKS RJP	18. OTHER ALONGSHORE PHYSICAL FEATURES CHB	19. OTHER ALONGSHORE CULTURAL FEATURES CHB
PHYSICAL FEATURES			
20. WATER FEATURES		21. NATURAL GROUND COVER X	22. PLANETABLE CONTOURS XX
23. STEREOSCOPIC INSTRUMENT CONTOURS XX	24. CONTOURS IN GENERAL XX	25. SPOT ELEVATIONS XX	26. OTHER PHYSICAL FEATURES CHB
CULTURAL FEATURES			
27. ROADS CHB	28. BUILDINGS CHB	29. RAILROADS CHB	30. OTHER CULTURAL FEATURES CHB
BOUNDARIES			
31. BOUNDARY LINES XX		32. PUBLIC LAND LINES XX	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES RJP		34. JUNCTIONS RJP	35. LEGIBILITY OF THE MANUSCRIPT CHB
36. DISCREPANCY OVERLAY CHB	37. DESCRIPTIVE REPORT RJP	38. FIELD INSPECTION PHOTOGRAPHS RJP	39. FORMS RJP
40. REVIEWER Charles H. Bishop 3/4/69		SUPERVISOR, REVIEW SECTION OR UNIT Albert 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 R.E. Smith 5/20/69		SUPERVISOR Albert C. Rauck, Jr. <i>Albert C. Rauck, Jr.</i>	
Reviewed By: R.J. Pate 5/28/69			
43. REMARKS Field Edit Applied From: Field Edit Ozalid; Field Edit Report (For Buildings) Color Contact Photographs: Nos. 66-L-8393, 8394, & 8396; Matte Ratio Photographs Nos. 66-L-8393 thru 8396. 1971 Field Edit: 66-L-8347			

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FIELD EDIT REPORT
SOUTHWEST COAST OF PUERTO RICO
JOB PH-6708
MAP T-13140

1969

52. ADEQUACY OF COMPIATION

Compilation was adequate. Some minor shoreline changes were recommended, one change was relatively more important, and attention was called to several mangrove bushes in the water. Two "piers in ruins" were omitted and the classification was changed on two of the compiled piers. Bluff delineation was adequate and accurate. The ponds in the vicinity of Laguna de las Salinas were reclassified as intermittent, as were the bays along the westerly shore of this lake.

54. RECOMMENDATIONS

None.

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 Bahia de Guayanilla.

56. GEOGRAPHIC NAMES

All the geographic names on this sheet are correct. According to local authorities, one name should be included on the map. This name is BALNEARIO EL TUQUE; Balneario means bathing resort and El Tuque is a proper name.

The name PENON DE PONCE is appropriately placed. It refers, in modern times, to the hill and the highway cut on the face of it. In the early days this was a resting place on the journey from Ponce to Mayaguez and the name applied to the hill and its **rocky face**.

Local authorities consulted on geographic names are listed below.

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

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

- II. Sr. Gilberto Castro Perez
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. None of the buildings mapped are suitable for chart 902.

58. ROCKS, REEFS, SHOALS AND FOUL AREAS

see added page from 743123

No rocks were compiled on this map. A few large bare rocks, on the coral ledge along the mainland, were indicated on the field edit ozalid and appropriately cross referenced. Heights and stages of tide were given.

Reef delineation was good as far as it went. The reef around Cayo Arenas and a submerged coral reef at 17° 58.5; 66° 41.1 were omitted. These were outlined on the photos and suitable information inked on the field edit ozalid. The coral along the mainland is probably awash at mean low water and should be symbolized on the chart. This applies

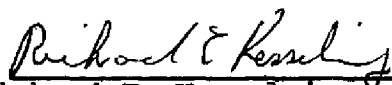
to the reef around Cayo Arenas also. The reef near Cayo Ratones is definitely submerged, except for a small area near the easterly end. Some fast shoreline and a few mangrove bushes were overlooked on this reef. Depths and times of observation were listed on the field edit ozalid for the reefs on this map.

59. PHOTOGRAPHY

Photography consisted of 1:5000 black and white copies of color photos and 1:15,000 and 1:30,000 color contact prints. The photography was good, except for the areas obscured by the sun. Most of the work on the reefs and water areas was done on the color prints. The ratio prints were used for indicating shoreline changes and etc.

60. DISPOSITION OF DATA

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


Richard E. Kesselring
Surveying Technician

field copy

T13123

(See heading 58.)

(1971)

19B

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

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

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

57. LANDMARKS AND NONFLOATING AIDS TO NAVIGATION.

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

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

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

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

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

REVIEW REPORT

SHORELINE

T-13140

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 dated 1900 at 1:20,000 scale. There is only general agreement between the two. Many natural changes have taken place to alter the shoreline and islands with reefs off the shoreline.

Registered survey No. 2468 is superseded by T-13140 for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A visual comparison was made with USGS Punta Cuchara, PR, quadrangle dated 1958 and at 1:20,000 scale. There are no essential differences except those made by natural changes.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with Boat Sheet H-9135, 1:10,000 scale, 1971. There were no significant changes in the shoreline.

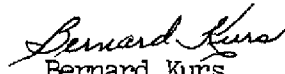
65. COMPARISON WITH NAUTICAL CHARTS

A visual comparison was made with Chart 927 1:20,000 scale dated July 3, 1971. This chart covers about 85 percent of the shoreline and is in general agreement with T-13140 with the exception of Arricife Ratonas. T-13140 is much more detailed being at 1:5,000 scale and is verified by soundings on the boat sheet. The remainder of the sheet is covered by chart 902, 1:100,000 scale and is in general agreement.


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

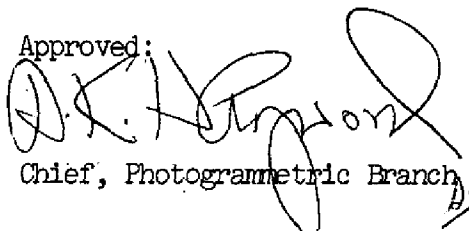
Approved for forwarding:


Melvin J. Umbach, CDR, NOAA
Chief, Coastal Mapping Division
Atlantic Marine Center

Approved:


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

Approved:


Chief, Photogrammetric Branch


Chief, Coastal Mapping Division