

13119

13119

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-13119
LOCALITY	
State	Puerto Rico
General locality	Southwest Coast
Locality	Bahia Sucia
19.66-1968	
CHIEF OF PARTY Alfred L. Holmes, RNAA Director, Atlantic Marine Center	
LIBRARY & ARCHIVES	
DATE	

DESCRIPTIVE REPORT - DATA RECORD

T 13119

PROJECT NO. (II):

PH-6708

FIELD OFFICE (II):

None

CHIEF OF PARTY

PHOTOGRAMMETRIC OFFICE (III):

Atlantic Marine Center

OFFICER-IN-CHARGE

Alfred C. 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 (III):

PUERTO RICO

VERTICAL DATUM (III): MHW

~~MEAN LOW 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 ~~MEAN LOW WATER~~

REFERENCE STATION (III):

MOLINO, 1966

LAT.:

17° 57' 24.17809"

LONG.:

67° 09' 24.80953"

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

Y =

45,297.71 ft.

X =

248,529.30 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

FIELD INSPECTION BY (II):		DATE:
None		
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):		
Air photo compilation Date of photography: November 15, 16, 1966		
PROJECTION AND GRIDS RULED BY (IV):		DATE
A. Bethea		10/18/67
PROJECTION AND GRIDS CHECKED BY (IV):		DATE
L. Van Scoy		10/19/67
CONTROL PLOTTED BY (III):		DATE
L. O. Neterer, Jr.		11/17/67
CONTROL CHECKED BY (III):		DATE
B. Barge		11/17/67
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):		DATE
I. Saperstein		10/31/67
STEREOSCOPIC INSTRUMENT COMPILATION (III): Wild B-8	PLANIMETRY R. R. White Reviewed by A. L. Shands	DATE 11/28/67 11/29/67
	CONTOURS Inapplicable	DATE
MANUSCRIPT DELINEATED BY (III):		DATE
R. R. White		1/11/68
SCRIBING BY (III):		DATE
R. E. Smith		5/31/68
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): COMPILATION FIELD EDIT SCRIBING & STICK UP		DATE C.H. Bishop & B. Wilson R. E. Smith R. J. Pate 1/16/68 4/15/68 6/10/68
REMARKS:		
FIELD EDIT BY: R. E. Kesselring 3/26/68		

DESCRIPTIVE REPORT - DATA RECORD

ERA (KIND OR SOURCE) (III):

RC-8 and RC-9

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
66M(c) 639	11/15/66	0854	1:60,000	0.3' above MLW
66M(c) 643 & 644	11/15/66	0904	1:60,000	0.3' above MLW
66L(c) 8316 & 8317	11/15/66	0944	1:30,000	0.4' above MLW
66L(c) 8325 & 8326	11/15/66	0955	1:30,000	0.4' above MLW
66L 8516R & 8517R	11/16/66	0927	1:30,000	0.3' above MLW

PREDICTED

TIDE (III)

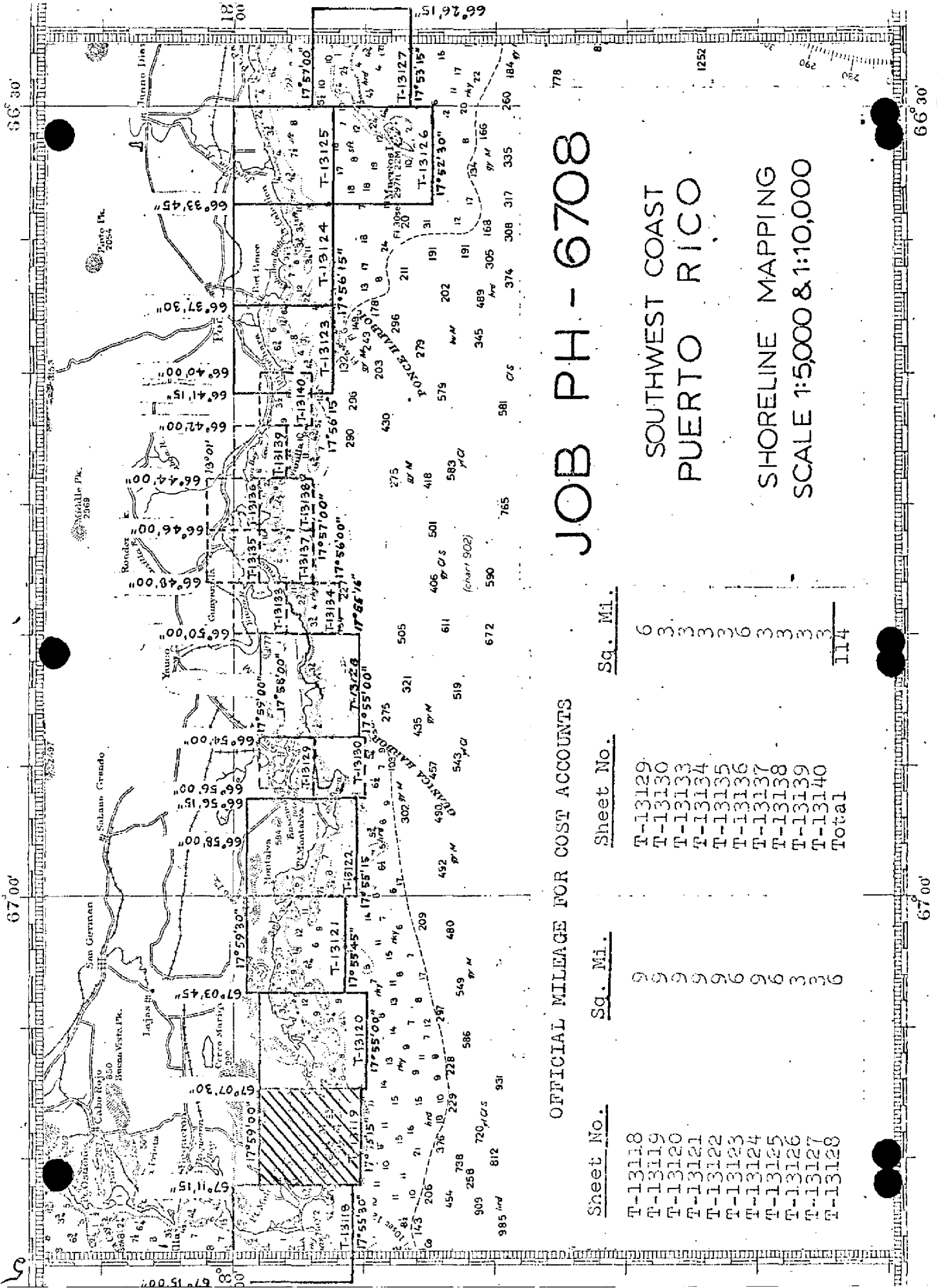
Diurnal

		RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION:	Galveston, Texas			1.4
SUBORDINATE STATION:	Paraguera (Isla Maguey)	0.4		0.6
SUBORDINATE STATION:				
WASHINGTON OFFICE REVIEW BY (IV):		DATE:		
Leo F. Beugnet, Atlantic Marine Center		May 1970		
PROOF EDIT BY (IV):		DATE:		
NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):	2	RECOVERED: 2	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-13119

COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore area for Hydro	January 1968	Superseded
Field Edit applied Compilation complete	April 1968	Superseded
Final Review	May 1970	



OFFICIAL MILEAGE FOR COST ACCOUNTS

JOB PH - 6708

SOUTHWEST COAST
PUERTO RICO
SHORELINE MAPPING
SCALE 1:5000 & 1:10,000

Sheet No.	Sq. Mi.	Sheet No.	Sq. Mi.
T-13118	67.00	T-13129	63.33
T-13119	66.30	T-13130	63.33
T-13120	66.30	T-13131	63.33
T-13121	66.30	T-13132	63.33
T-13122	66.30	T-13133	63.33
T-13123	66.30	T-13134	63.33
T-13124	66.30	T-13135	63.33
T-13125	66.30	T-13136	63.33
T-13126	66.30	T-13137	63.33
T-13127	66.30	T-13138	63.33
T-13128	66.30	T-13139	63.33
		T-13140	63.33
		Total	114

6

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-13119

Shoreline survey T-13119 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 Cabo Rojo eastward to Punta Pita~~h~~ayo.

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-13119

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-W-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.

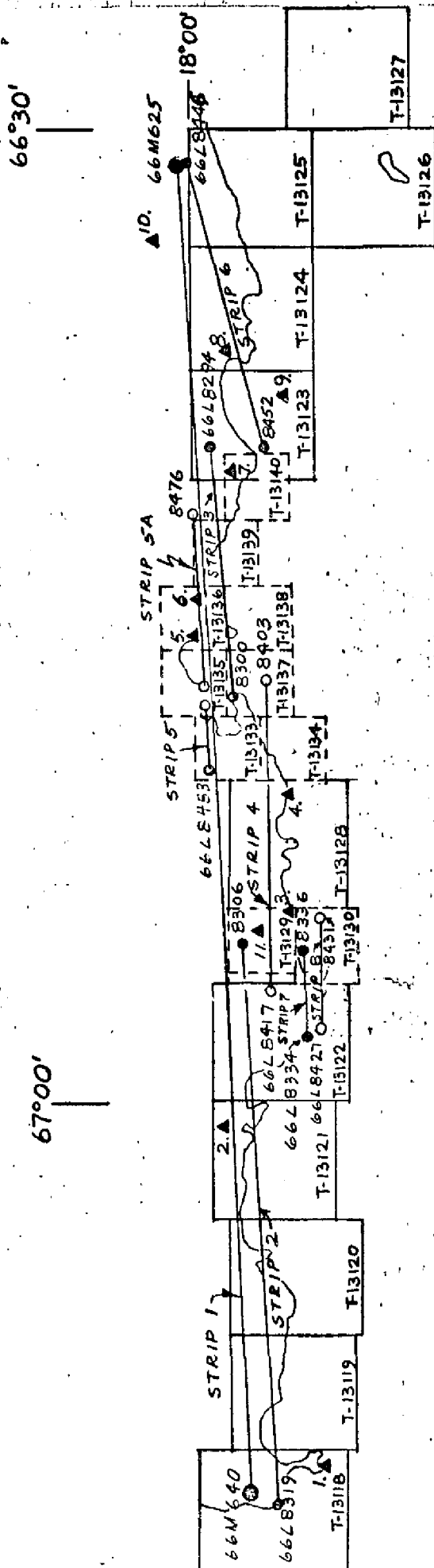
Several points were transferred to ratio print 66-L-8394 in order that a reef on T-13140 may be compiled graphically.

Respectfully submitted


I. I. Saperstein

Approved and Forwarded


Henry V. Eichert, Chief
Aerotriangulation Section



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 (") |

1. CABO ROJO (USAF) 1966
2. CERRO VERTERO 2 (USGS) 1934
3. ENSENADA, SOUTH P.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 L.T.S. 1966
9. CARDONA ISLAND L.M. 1900
10. PONCE, DON Q RUM CO. STACK, 1966
11. BAHIA DE GUANICA RANGE FRONT
& REAR L.T.S. 1966

MAP T-13119...

PROJECT NO. PH-6708

SCALE OF MAP..... 1:10,000

SCALE FACTOR

None

[illegible]

1 FT. = 3048006 METER

COMPUTED BY: A. C. Rauck, Jr.

DATE Nov. 14, 1967

CHECKED BY: C. Blood

DATE Nov. 16, 1967

COMM-DC-57845

COMPILATION REPORT
PH-6708
T-13119

31. DELINEATION:

The Wild B-8 plotter and color photographs taken at 0.4 ft. above mean low water were used for delineation. 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 accurately. See Notes for the Hydrographer.

37. LANDMARKS AND AIDS:

None

38. CONTROL FOR FUTURE SURVEYS

None.

39. JUNCTIONS

Junctions are in agreement with T-13118 to the west and T-13120 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 CABO ROJO, P. R., scale 1:20,000, dated 1957. The two are in fair agreement.

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

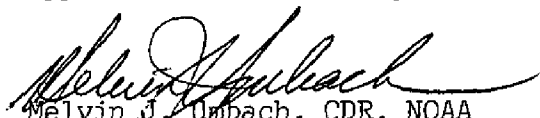
None.

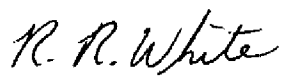
ITEMS TO BE CARRIED FORWARD

None.


Approved for forwarding:

Submitted:


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


R. R. White
Cartographic Aid

Approved:


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

September 9, 1970

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6708 (Puerto Rico)

T-13119

Arrecife Margarita
Bahia Sucia

Cabo Rojo

Mar Caribe

Pole Ojea

Punta Molino

Punta Pitahaya

Roca Ola

Approved-by:

A. J. Wraight
A. Joseph Wraight
Chief Geographer

Prepared by:

Frank W. Pickett
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.

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

PHOTOGRAMMETRIC OFFICE REVIEW

T-13119

1. PROJECTION AND GRIDS BW	2. TITLE BW	3. MANUSCRIPT NUMBERS BW	4. MANUSCRIPT SIZE BW
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY BW	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 XX	11. DETAIL POINTS Wild B-8
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE CHB	13. LOW-WATER LINE CHB	14. ROCKS, SHOALS, ETC. BW	15. BRIDGES XX
16. AIDS TO NAVIGATION XX	17. LANDMARKS XX	18. OTHER ALONGSHORE PHYSICAL FEATURES CHB BW	19. OTHER ALONGSHORE CULTURAL FEATURES CHB BW
PHYSICAL FEATURES			
20. WATER FEATURES CHB BW		21. NATURAL GROUND COVER CHB	22. PLANETABLE CONTOURS XX
23. STEREOSCOPIC INSTRUMENT CONTOURS XX	24. CONTOURS IN GENERAL XX	25. SPOT ELEVATIONS XX	26. OTHER PHYSICAL FEATURES CHB BW
CULTURAL FEATURES			
27. ROADS CHB BW	28. BUILDINGS CHB BW	29. RAILROADS XX	30. OTHER CULTURAL FEATURES CHB BW
BOUNDARIES			
31. BOUNDARY LINES XX		32. PUBLIC LAND LINES XX	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES CHB BW		34. JUNCTIONS CHB BW	35. LEGIBILITY OF THE MANUSCRIPT CHB BW
36. DISCREPANCY OVERLAY CHB	37. DESCRIPTIVE REPORT CHB BW	38. FIELD INSPECTION PHOTOGRAPHS XX	39. FORMS CHB BW
40. REVIEWER <i>B. Wilson</i> 1/16/68 C.H. Bishop & B. Wilson		SUPERVISOR, REVIEW SECTION OR UNIT <i>Albert C. Rauck, Jr.</i> A. C. Rauck, Jr.	
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 <i>B. Wilson</i> B. Wilson 4/11/68 Reviewed by R.E. Smith 4/15/68		SUPERVISOR <i>Albert C. Rauck, Jr.</i> A. C. Rauck, Jr.	
43. REMARKS Field edit applied from 1 ozalid, 2 matte ratio photos (66-L-8316 & 8318) 3 color transparent photos (66-L-8324, 8326, 8327.			

FIELD EDIT REPORT

T-13119

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. No shoreline changes were noted. One rock, a fairly important one, was not compiled and several unimportant ones were overlooked.

No bluffs were compiled. Recommended bluffs are on Cabo Rojo and east of Punta Molino. They were indicated on the field edit ozalids and cross-referenced to the photographs.

54. Recommendations.

None.

55. Examination of proof copy.

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

56. Landmarks and non-floating aids to navigation.

There are no non-floating aids to navigation on this map.

One landmark, FIVE TANKS, is contained on this sheet. It was reported on Form 567 and the original and two copies are enclosed with this report. One copy was transmitted to the hydrographer.

57. Reefs, shoals, rocks and foul areas.

There is only one reef on this map. It is a submerged coral reef with a large coral rock, called Roca Ola, at the northerly end of it. The southerly end of this reef is sand and should be called a shoal.

Several shoals are indicated in Bahia Sucia. The water may, indeed, be shallower in these areas than in the surrounding area, but it is believed that these areas are bottom vegetation and not shoals. The hydrographer will make further confirmation.

57(cont.).

Rock delineation was good. Several rocks, in the vicinity of Cabo Rojo and Punta Molino, were overlooked. One submerged rock was deleted. Heights of compiled rocks were indicated on the field edit ozalid and rocks, extant but not mapped were located on the photographs.

There is only one foul area on this map. It is at the northeast tip of Cabo Rojo and appears to be a submerged rock ledge with scattered bare rocks throughout. These bare rocks are very small. This area is referred to under this same heading in the report on T-13118.

Other areas labeled as foul on this sheet are actually shallows and should be so classed.

58. Drainage and flooded areas.

There is no noteworthy drainage on this map.

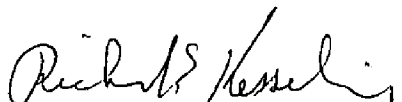
Flooded areas are as compiled. For more complete notes under this heading, see the report for T-13118.

59. Geographic names.

The names on this sheet are all recognized and in use by local residents.

60. Photography.

Photography was generally excellent. The majority of the field edit was done on the color transparencies which leave little to be desired in definition and clarity.


Richard E. Kesselring
Surveying Technician
March 26, 1968

REVIEW REPORT T-13119
SHORELINE
May 4, 1970

61. GENERAL STATEMENT

See Summary which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED SURVEYS

Comparison was made with a copy of Registered Survey No. 2475, 1:20,000 scale, made in 1899. Changes in the shoreline have occurred since 1899. The most noticeable of these are in the mangrove areas along the north shore of Bahia Sucia and in the vicinity of Punto Pitahaya. The difference in the shoreline of the two surveys has been noted on the comparison print in blue.

Shoreline survey T-13119 supersedes the prior registered survey for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with USGS CABO ROJO, P. R., 7 1/2 minute quadrangle, 1:20,000 scale, edition of 1957. The shoreline of the two surveys are not in good agreement. Again, the most noticeable changes are in the areas of mangrove in Bahia Sucia and the vicinity of Punto Pitahaya.

The nine submerged rocks along the westerly side of Cabo Rojo, as shown on the USGS quadrangle, are not visible on photographs of the area. This area was classified as foul by the field editor and is so shown on this survey.

A rock awash, Roca Ola, near latitude 17° 57.0', longitude 67° 10.9' is northwest of its true position. The position of the rock, on the USGS quadrangle, agrees favorably with its position on nautical chart 901.

All differences between the USGS quadrangle and T-13119 have been noted on the comparison print in brown.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with copies of boat sheets WH-10-2A-68

and WH-10-2B-68, H-8985. The shoreline of boat sheet 10-2A-68 is not in agreement with T-13119 along the northerly shore of Bahia Sucia. It was also noted that none of the mangrove islets or rocks close inshore are shown on that boat sheet.

The submerged rock, Roca Ola, near latitude $17^{\circ} 57.0'$ longitude $67^{\circ} 10.9'$ does not appear on the boat sheet.

65. COMPARISON WITH NAUTICAL CHARTS

Nautical chart 901, 1:100,000 scale, 10th edition, March 25, 1968 was used for comparison purposes. Because of the difference in scale of the two surveys, only a visual comparison was feasible.

Two submerged rocks, shown on the chart, near latitude $17^{\circ} 56.3'$ longitude $67^{\circ} 11.0'$ and $17^{\circ} 56.5'$ $67^{\circ} 11.1'$ are not visible on photographs of the area and were not noted by the field editor. They are within an area noted as foul by the field editor.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Reviewed by:

Approved for forwarding:

Leo F. Beugnet
Leo F. Beugnet
Cartographer

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

Approved:

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

Approved:

D.K. Hargrove
Chief, Photogrammetric Branch

Wesley H. Hull
Chief, Coastal Mapping Division

17° 58' 30"

Pole Ojea

y = 50,000 FT

17° 58' 00"

Shoreline in blue from
Registered Survey No 2475

Mangrove islets are not on
Boat sheet

Shoreline in brown from
USGS CABO ROTO quadrangle

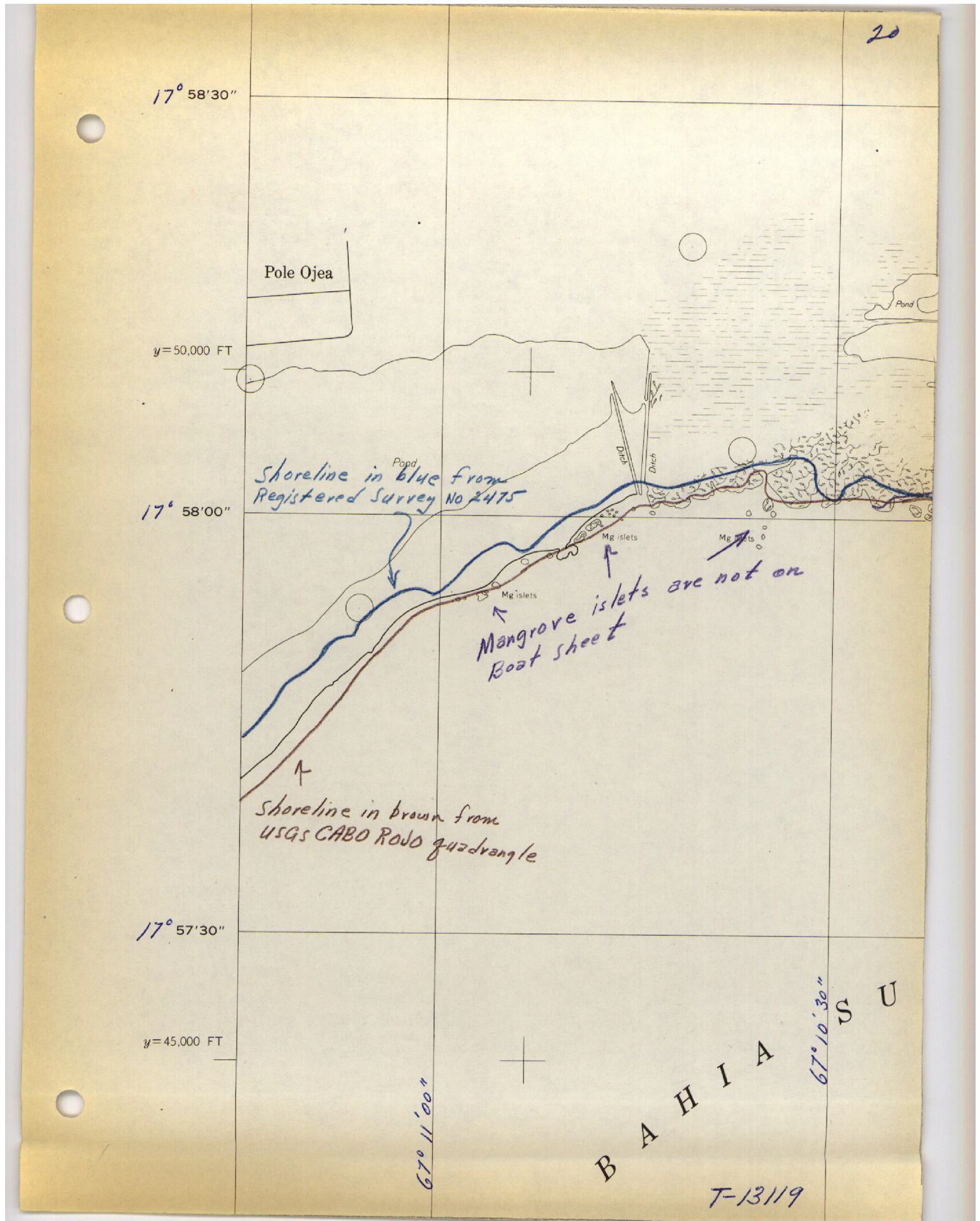
17° 57' 30"

y = 45,000 FT

67° 11' 00"

B A H I A S U
67° 10' 30"

T-13119



17° 57'00"

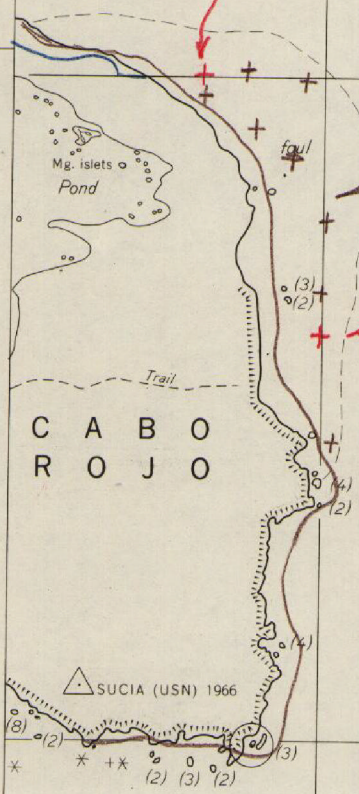
From chart 901
From USGS quadrangle

Roca Ola
Subm coral reef

Note: There is only one rock in this area

Not visible on photographs

y=40,000 FT
17° 56'30"



This entire area appears foul.

Not visible on photographs

Red- from Chart 901
Brown- from USGS CABO ROJO quad

17° 56'00"

67° 41' 15"

67° 40' 30"

y=35,000 FT

T-13119

Blue - from Registered Survey No. 2475
 Brown - from USGS Cabo Rojo quadrangle
 Purple - from Boat Sheet 10-2A-68 (H-8985)

17° 58' 00"

67° 09' 00"

Mangrove islets are
 not on Boat Sheet

66-L-8517R

66-L(C)-8317

17° 57' 30"

C I A

67° 10' 00"

Punta
 Molino

MOLINO, 1966

Rocks are not on Boat Sheet

NOTE:

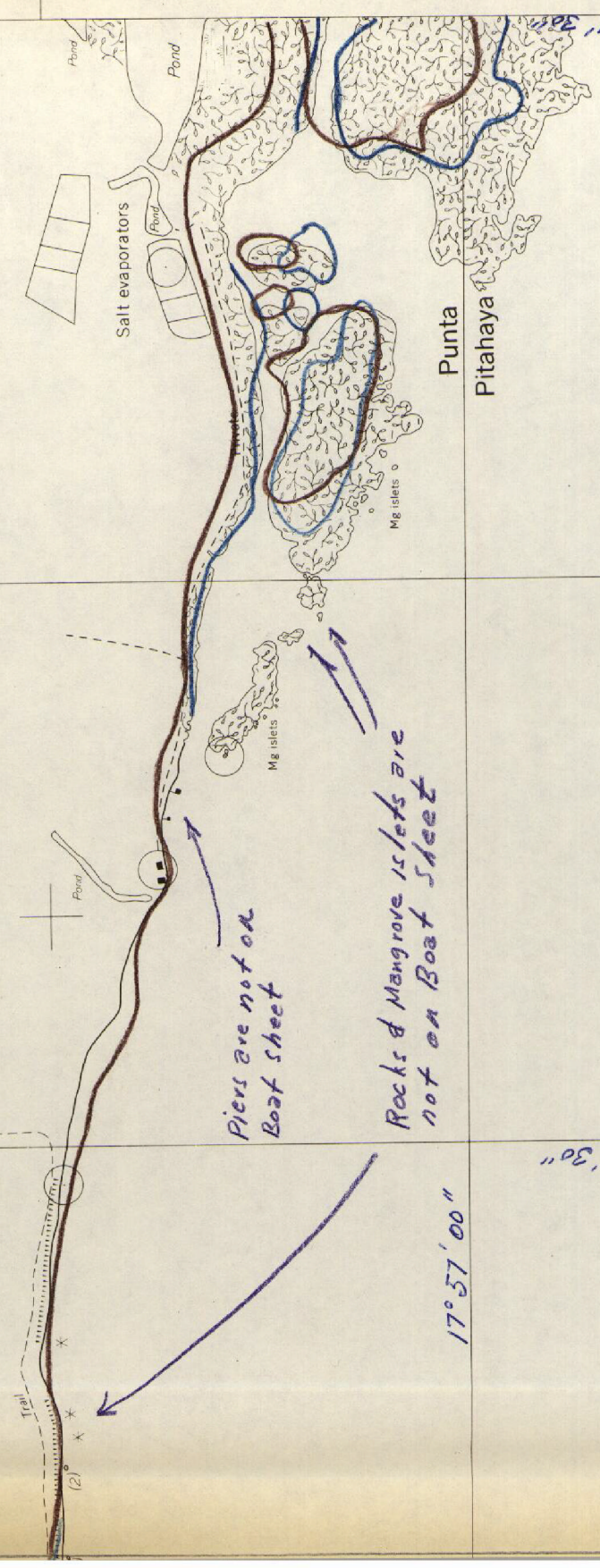
"The photogrammetric location and delineation of features
 offshore from the mean high-water line on this survey
 may not be accurate as far as the water is concerned."

F-13119

22

66-L-8516R

Blue - from Registered Survey NO. 2475
Brown - from USGS CABO ROJO quadrangle



Piers are not on
Boat sheet

Rocks & Mangrove islets are
not on Boat sheet

17° 57' 00"

67° 08' 30"

Punta
Pitahaya

Mangrove islets

Mangrove islets

Salt evaporators

Pond

Pond

y = 45,000 FT

17° 57' 30"

57' 00"

23

T-13119