12160

Original

12160

12160

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey SHORELINE

Field No. *Office No.* T-12160

LOCALITY

State PUERTO RICO

General locality EAST COAST

Locality RIO HUMACAO TO PLAYA DE GUAYANES

1959 - 1962

CHIEF OF PARTY

M. L. Olivier, Photo Party 708
V.Ralph Sobieralski, Tampa District Office

LIBRARY & ARCHIVES

DATE 1 JUL 1968

USCOMM-DC 5087

FORM 181
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T-12160

Project No. (II): PH-6106 Quadrangle Name (IV):

Field Office (II): Puerto Rico Chief of Party: M. L. Olivier

Photogrammetric Office (III): Tampa, Fla. Officer-in-Charge: V. R. Sobieralski

Instructions dated (II) (III): Field & Office: Aug. 30, 1961 Copy filed in Division of Photogrammetry (IV)

AMENDMENT: Field & Office - Jan 15, 1962 *

* Interior planimetry restricted to those features useful to photo hydro support.

Method of Compilation (III): Kelsh Plotter

Manuscript Scale (III): 1:10,000 Stereoscopic Plotting Instrument Scale (III): 1:6,000

Scale Factor (III): Pantographed to 1:10,000

Date received in Washington Office (IV): APRIL 13, 1968 Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date: Date registered (IV):

Publication Scale (IV): Publication date (IV):

Geographic Datum (III): Puerto Rico Vertical Datum (III): MHW

~~Mexico datum~~ 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): GUAYANES 2, 1923

Lat.: 18°03'48.111(1479.1 m) Long.: 65°48'22.554(663.3 m) Adjusted ~~unadjusted~~

Plane Coordinates (IV): State: Puerto Rico Zone: 1

Y= 83,898.29 X= 717,803.44

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

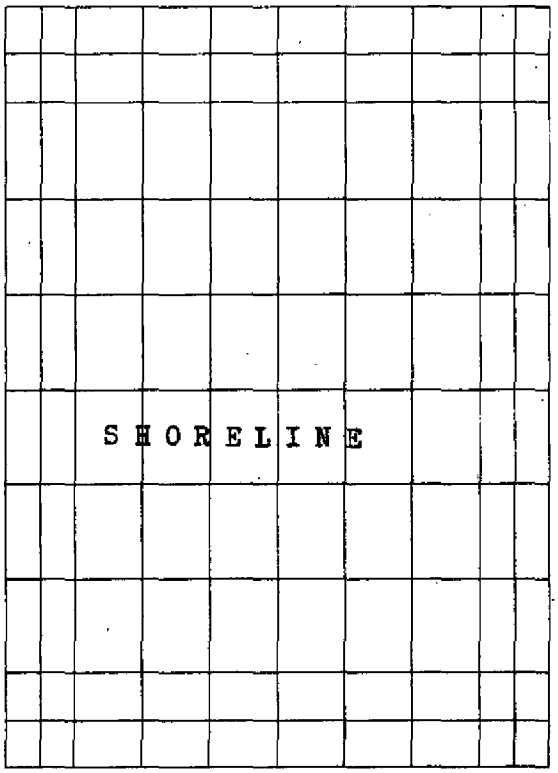
When entering names of personnel on this record give the surname and initials, not initials only.

COMM-DC-57842

FORM 181a
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD



Areas contoured by various personnel
(Show name within area)
(II) (III)
Inapplicable

FORM 181b
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): M. L. Olivier — Date: Oct. 1961

Planetable contouring by (II): Inapplicable — Date:

Completion Surveys by (II): G.F.Wirth — Date: Sept. 1962

Mean High Water Location (III) (State date and method of location): Field Inspection Oct. 1961

Projection and Grids ruled by (IV): A. R. (W.O.) — Date: Nov. 1961

Projection and Grids checked by (IV): A.R. (W.O.) — Date: " "

Control plotted by (III): V. P. Cackowski — Date: Dec. 1961

Control checked by (III): I. I. Saperstein — Date: Dec. 1961

[redacted] Stereoscopic
Control extension by (III): Washington Office — Date: Nov. 1961

Planimetry R. J. Pate — Date: Dec. 1961

Stereoscopic Instrument compilation (III):
[redacted] — Date:

Manuscript delineated by (III): R. J. Pate — Date: Dec. 1961

Photogrammetric Office Review of compilation by (III): M. M. Slavney — Date: Dec. 1961

Elevations on Manuscript
checked by (II) (III): Inapplicable — Date:

COMM-DC-57842

FORM 181c
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): Wild "S"

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
59-S-3931	Apr. 18, 1959	11:25	1:30,000	Tidal BM nearby gives 0.4 ft. for M.H.W. so tide seems negligible
" " 3932	" " "	11:26	"	
" 3933	" " "	"	"	
" 3934	" " "	11:27	"	
62.S(C)224 - 229	Feb 15 1962	0945 - 0946	1:10,000	"
" " 239 - 241	" " "	0952 - 0953	"	"
" " 9750 - 9751	" 6 "	1615	"	"
" " 9766 - 9767	" " "	1622	"	"

Tide (III)

Reference Station: Nearest sub-ordinate station is at Bahia Mulas, Isla de Vieques, about 21 miles away. See "Stage of Tide" above.

Subordinate Station:

Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range

Atlantic Marine Center
~~Washington Office~~ Review by (IV): M. M. Shamy Date: March 1968

Final Drafting by (IV): J. Honick (Tampa District Office) Date: Nov. 1962

Final Drafting Reviewed by: W. H. Shearouse (Tampa) Nov. 1962

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III):

Shoreline (More than 200 meters to opposite shore) (III): 7.6 Linear St. Miles

~~Shoreline (less than 200 meters to opposite shore) (III):~~

Control Leveling - Miles (II): 0

Number of Triangulation Stations searched for (II): 2* Recovered: 2* Identified: 2

Number of BMs searched for (II): 0 Recovered: Identified:

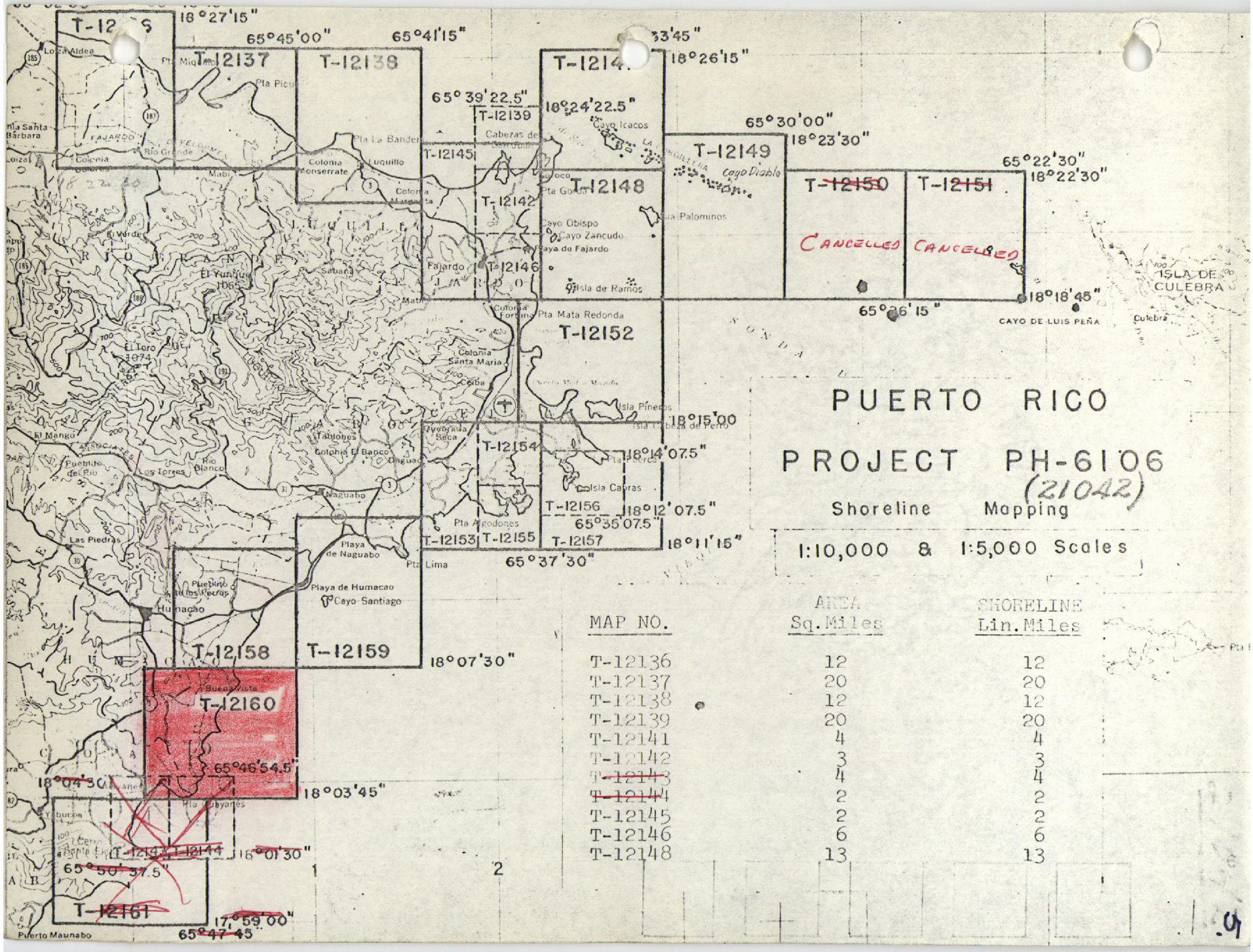
Number of Recoverable Photo Stations established (III): 1

Number of Temporary Photo Hydro Stations established (III): 0

Remarks: * A third station that falls in T-12161 which joins this map on the south, was searched for and recovered.

Field edited by G.F. Wirth - Sept. 1962

COMM-DC-57842



MAP NO.	AREA Sq. Miles	SHORELINE Lin. Miles
T-12136	12	12
T-12137	20	20
T-12138	12	12
T-12139	20	20
T-12141	4	4
T-12142	3	3
~~T-12143~~	4	4
~~T-12144~~	2	2
T-12145	2	2
T-12146	6	6
T-12148	13	13

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-12160

Shoreline manuscript T-12160 is one of sixteen 1:10,000 scale maps in Ph-6106, Puerto Rico, which also contains eight 1:5,000 scale maps. The sketch on page 5 of this report shows the position of this map in the project. It is noted that five maps of this project are now cancelled; 1:5,000 scale maps T-12143 and T-12144, and 1:10,000 scale maps T-12150, T-12151, and T-12161.

The delineation of T-12160 was carried about 15" (seconds) south of its prescribed southern border with T-12143, T-12144 and T-12161 to provide shoreline control in the area offshore Playa de Guayanes. This seemed desirable during compilation and is retained on this map for registry in view of the cancellation of the three maps south of T-12160. 1962 color photographs, 1:10,000 scale, were used for some revisions and additions south of latitude 18° 05' during final review. Photographs were 62-S(c)-224 thru 229, 239 thru 241, 9750, 9751, 9766 and 9767.

This is a stereo instrument project in advance of hydrographic surveys of the area. Field work preceding compilation consisted of control identification on contact prints and field inspection on 1:10,000 ratio prints of the 1:30,000 scale April 18, 1959 "S" panchromatic photographs. The stereo bridge was run in the Washington Office. Compilation was by Kelsh Plotter using diapositives of the April 18, 1959 photographs. Ratio prints at 1:10,000 scale were processed and furnished for hydrographic support.

The manuscript was field edited in September 1962 in conjunction with hydro-support. The field edit was done on a cronaflex "T" sheet, which was to be returned to the ship. An ozalid print was made from the field edit "T" sheet and the field editor's notes were underscored in red; this print was used in final review.

The compilation manuscript was a vinylite sheet 4 minutes in latitude, and 4 minutes and 45 seconds in longitude. The smooth manuscript was extended to 4 minutes of latitude, and is on cronaflex for registry and record after final review.

2. AREAL FIELD INSPECTION

These shoreline sheets are located on the southeasterly side of Puerto Rico. The area is rural except for two beach resorts. The shoreline area is very undeveloped.

Field inspection was performed on photographs 59-S-3925 through 59-S-3937. The photographs contained some clouds but were otherwise of good quality. No difficulty was encountered in the interpretation in the field. Some shoreline areas around the mouths of streams had changed since photography. These changes are shown on the photographs in violet ink.

A large amount of rainfall fell during field inspection making it very difficult to reach some of the interior features. Some of the marsh and swamp areas may have to be clarified by the field editor.

3. HORIZONTAL CONTROL

All Coast and Geodetic Survey control stations except one were searched for. No attempt was made to recover SAN, 1901 because this station is located on an island used as a breeding ground for monkeys. Nobody is allowed on the island. One might possibly obtain permission to visit the island if contact is made with the Laboratory of Perinatal Physiology, Post Office Box 5095, San Juan, Puerto Rico.

Only those stations as specified on the project diagram were photo-identified. To meet this requirement some United States Geological Survey control was used. The following U. S. G. S. control stations were recovered and photo-identified: HUMACAO PLAYA CHURCH, 1934; COLON, 1941; and NAGUABO CHURCH, 1934.

The following Coast and Geodetic Survey control stations were searched for but not recovered: YEGUAS, 1901; BARBACOA, 1901; LIMA 3, 1941; and RON ROIG LARGE RED STK., 1901.

4. VERTICAL CONTROL

All tidal bench marks in the area were searched for but only one was recovered.

5. CONTROL AND DRAINAGE

Contours were not a part of the work requirements for this project.

Drainage is mostly perennial and can be distinguished on the photographs.

6. WOODLAND COVER

Woodland cover has been classified in accordance with the requirements for topographic maps. Wooded areas are adequately covered by the field inspection photographs. Most of the swamp areas were designated as mangrove.

7. SHORELINE AND ALONGSHORE FEATURES

The mean high water line was inspected by walking along the beach and by examination from strategic points.

The shoreline, in places, was visited at low water. The distance from the mean low water line to the mean high water line was given at these points.

The foreshore is steep in some areas and flat in other areas.

Docks, wharves, piers, etc. are covered on the photographs.

There are no submarine cables.

8. OFFSHORE FEATURES

Some offshore rocks were visited and their heights above water and the time and date have been noted on the photographs. Other heights of rocks were determined from shore. There are a few areas where it appears on the photographs that the water is breaking over an underwater growth or submerged rocks. These places will require investigation by the hydrographic party.

9. LANDMARKS AND AIDS

Landmarks and aids to navigation located by photogrammetric methods are shown on the contact prints. All others were located previously by triangulation and have not been disturbed.

Quite a few landmarks were selected, and since all were not inspected from seaward, the hydrographic party may need to delete those not thought to be of landmark value. All heights of new landmarks to be charted were determined. Heights of existing landmarks were determined and verified where possible.

All landmarks and aids to be charted and deleted are adequately covered by Form 567.

10. BOUNDARIES, MONUMENTS, AND LINES

Boundaries were excluded by the project instructions.

11. OTHER CONTROL

Existing objects that are suitable for photo hydro control were identified on the field inspection photographs. These are shown on the photographs by three digit numbers beginning with 100. Not many objects were selected because of the scarcity of such. Many of the landmarks and aids will be suitable for photo hydro control.

12. OTHER INTERIOR FEATURES

All buildings and roads have been classified in accordance with project instructions dated 30 August 1961. It will be noted by looking at the photographs covering sugar cane areas that many open spaces appear to be roads. Only those open spaces that seemed permanent and well traveled were classified as roads.

Clearances were determined for the following bridges and are listed: (See photo 59-S-3927 for names of rivers)

Bridge	Hor. Clearance	Vert. Clearance	Time	Date
Río Santiago	17.3 ft.	4.7 ft.	10:25 AST	10-6-61
Río Blanco	26.9 ft.	5.1 ft.	10:30 AST	10-6-61
Río Anton Ruíz	26.9 ft.	5.2 ft.	10:43 AST	10-6-61
Boca Prietā	18.9 ft.	5.5 ft.	10:50 AST	10-6-61

13. GEOGRAPHIC NAMES

An investigation of geographic names was not required by the project instructions. Some discrepancies in the names of rivers were found. The names of rivers are shown correctly on the photographs.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

Contact photographs and horizontal control data was forwarded to the Washington Office 3 October 1961.

Submitted
24 October 1961

Michael L. Olivier
Chief, Photo Party 708

PHOTOGRAMMETRIC PLOT REPORT
PUERTO RICO, EAST COAST
PROJECT PH-6106
March, 1962

21. Area Covered:

T-12136 through T-12139; T-12141 through T-12146; T-12148; T-12152 through T-12161.

22. Method:

Five stereoplanigraph bridges were run in order to provide pass points for Kelsh compilation of the project.

Strip #4 was adjusted on a linear basis. All other strips were adjusted on a least-squares basis on the IBM 650 computer. Satisfactory adjustments were obtained for all strips in the project.

23. Adequacy of Control:

The horizontal control provided complied with project instructions, and was adequate. The following control failed to hold in bridging:

Δ PINERITA 2, 1941-SUB.PT. 2. This station had been designated as a poor image pt. at the time of bridging, and may safely be disregarded due to the proximity of other control that held in bridging.

24. Supplemental Data:

None

25. Photography:

The photography was adequate for the needs of aerotriangulation.

Submitted by:

R. E. Fuechsel

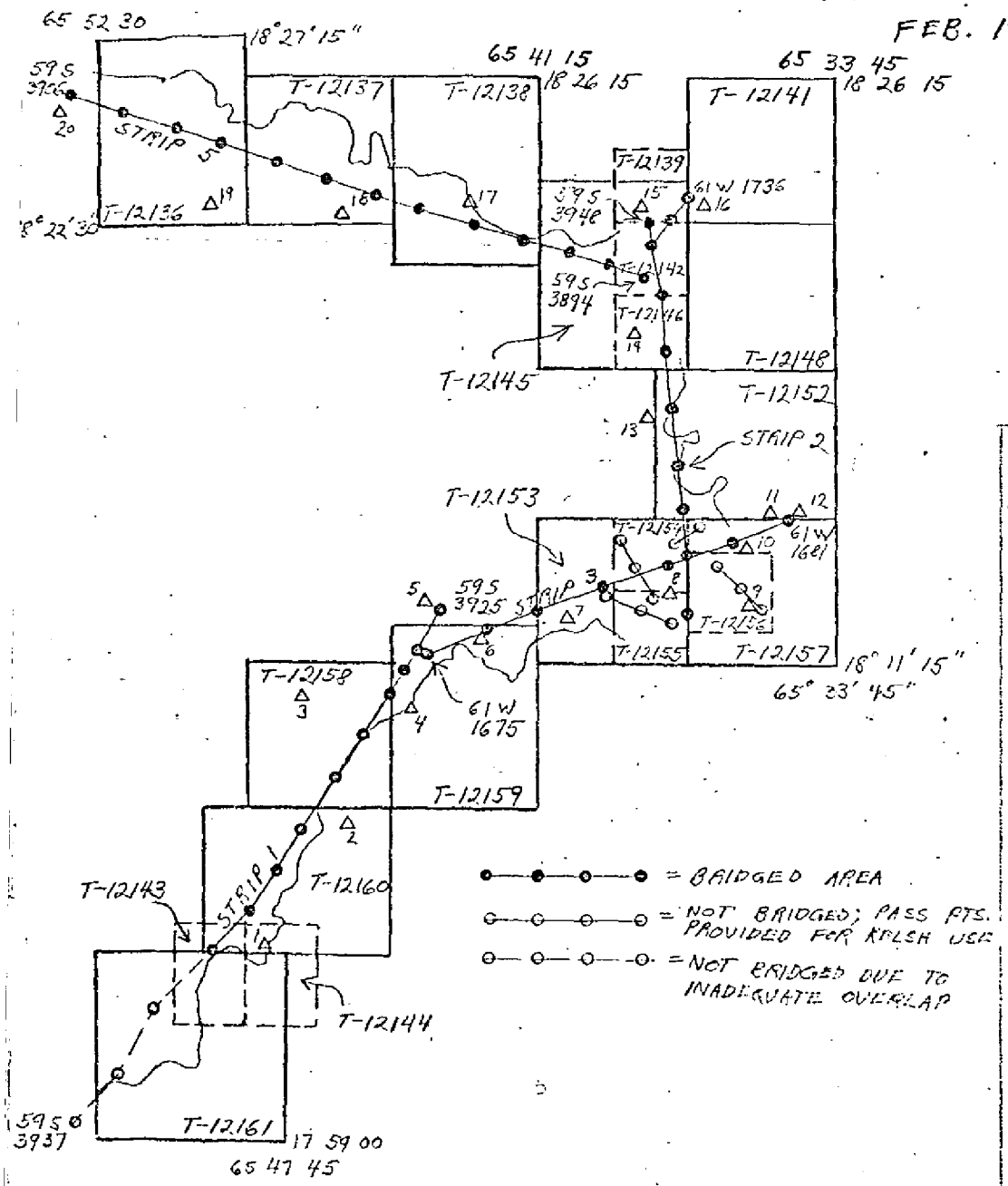
R. E. Fuechsel

Approved:

E. H. Ramey

E. H. Ramey, Chief
Aerotriangulation Section

PUERTO RICO - EAST COAST
PROJECT PH-6106
FEB. 1962



TRIANGULATION LIST

1. GUAYANES 2, 1923 - SUB. 1+2
2. BATATA, 1901 - SUB. 1+2
3. PASTO VIEJO EASTERN SUGAR ASS'N. WA. CON. STACK, 1941
4. HUMACAO PLAYA CH., (USGS) 1934
5. NAGUABO CH. (USGS) 1934
6. COLON (USGS) 1941 - SUB. 1+2
7. LOMA 1941 - SUB. 1+2
8. HONDA 1941 - SUB. 1+2
9. CABRAS IS. LT., 1941
10. MUNOZ, 1926 - SUB. 1+2
11. PINERITA 2, 1941 - SUB. 1+2
12. CABEZA DE PERRO LT., 1923
13. FENEDO, 1941 - SUB. 1+2
14. CENTRAL FAJARDO NORTH STACK, 1941
15. CAFE, 1901 - SUB. 1+2
16. CAPE SAN JUAN LIGHT HOUSE, 1900
17. LUQUILLO CH. (USGS) 1934
18. PALMER (USGS) 1939 - SUB. 1+2
19. RIO GRANDE CHURCH (USGS) 1934 - SUB. 1+2
20. SANTA INEZ, 1902 - SUB. 1+2

(3-64)
USCOMM-DC
6659-P64

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT CONTROL RECORD

MAP T- ~~12160~~ PROJECT NO. PH-6106 SCALE OF MAP 1:10,000 SCALE FACTOR

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)
BATATA, 1901		Puerto Rico	103 669.45 729 829.69		
GUAYANES 2, 1923		Puerto Rico	83 898.29 717 803.44		
PYRAMIDAL DAY BEACON ON HILL WEST OF PUERTO YABUCOA ~~(USGS) 1941~~		Puerto Rico	833 475 710 992	(IN T-12161, TO THE SOUTH)	

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COMPUTED BY	DATE	CHECKED BY	DATE
M. M. Slavney	12/19/61	I. I. Saperstein	12/19/61

COMPILATION REPORT
T-12160

PHOTOGRAMMETRIC PLOT REPORT

Stereo bridge was run in the Washington Office, pages 8 & 9.

31. DELINEATION

The Kelsh Plotter was used. The field inspection was generally adequate, and no difficulty was encountered in the interpretation of the photographs with the exception of the areas mentioned in Item 36.

Numerous shoreline pass points have been dropped as an aid to the photo-hydro party.

32. CONTROL

See Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

Perennial and some intermittent streams and main ditches were shown.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline, low-water line and alongshore details were delineated in accordance with characteristic areas shown by the field inspection, which was generally adequate.

36. OFFSHORE DETAILS

Rocks and rocky areas lie offshore from Morro de Humacao south to Playa de Guayanes. Some were noted by the field inspector, others that were positively seen on the plotter are shown. Some areas are noted for investigation by the hydrographer.

37. LANDMARKS AND AIDS

No
~~One~~ non-floating aids were ~~was~~ located. ~~and a form 567 is submitted.~~ One landmark, TOWER (on Cayo Batata) is submitted for "deletion" on Form 567.

Ink changes by dgf 1-3-62.

38. CONTROL FOR FUTURE SURVEYS

One (1) photo-hydro station was identified by the field inspector and located by the compiler. It is listed under Item 49.

39. JUNCTIONS

Junctions have been made with T-12158 to the north and T-12161 to the south. T-12161 has not been compiled but our diapositive coverage enabled us to delineate the north 20 seconds of latitude for T-12161, which is shown on the border of T-12160. There are no contemporary surveys to the east or west.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

None available at this time.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Chart 918 scale 1:10,000 edition of Apr. 14, 1938 revised Feb. 6 1961; and with chart 923 scale 1:20,000, edition of Aug. 3 1929 revised Aug. 18, 1958.

Comparison with chart 918 reveals shoreline changes from Punta Icacos south to Rio Guayanes. Some near the mouth of Rio Guayanes seem to be changes that can be ascribed to time, but differences in the position of rocky bluff shoreline seem to be differences in the surveys. Some small rocks, just offshore on chart 918 were not noted by the field inspector and under the plotter they appeared contiguous to the shore.

Comparison with chart 923 is generally favorable, there have been some changes at the mouth of Rio Humacao.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

M. M. Shamsey
for R. J. Pate
Carto-photo Aid

APPROVED AND FORWARDED:

William A. Rasure
for V. Ralph Sobieralski
Tampa District Officer

COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore area for hydro	December 1961	superseded
Alongshore area revised from field edit	November 1962	Superseded
Manuscript complete	November 1962	superseded
Some revision & additions from 1962 "S" color photographs during ~~Final Review~~	March 1968	

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June 3, 1968

GEOGRAPHIC NAMES
FINAL NAME SHEET
PH-6106 (Puerto Rico)
T-12160

Caballo Blanco
Cayo Batata
Carribean Sea — Mar Caribe * See below
Morro de Humacao
Punta Candalero
Punta Fraile
Punta Icacos
Rio Humacao

Part of T-12161 shown on this sheet:

Cano Santiago
Playa de Guayanes
Punta Guayanes
Rio del Ingenio } T-12160
Rio Guayanes }

Approved by:
A. Joseph Wraight
A. Joseph Wraight
Chief Geographer

Prepared by:
Frank W. Pickett
Frank W. Pickett
Cartographic Technician

* Note: The last GNB Decision - 1944 - was "Carribean Sea". Mar Caribe is used on nautical charts SGB

49. NOTES FOR THE HYDROGRAPHER

One photo-hydro station (number 104) was established.

Several offshore areas have been shown as questionable. The existance of rocks in these areas could not be positively ascertained from the photographs and will have to be investigated by the hydrographer.

The range from the Puerto Yabucoa daybeacons was not ascertained because no "point on range" was identified by the field inspector. The azimuth of this range will have to be determined by the hydro party.

Form 5[illegible]
(10-15-58)

Photogrammetric Review Branch

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

TO BE CHARTED
~~REVISED~~
~~REVIEWED~~
} STRIKE OUT TWO

Tampa District Office — December 28, 1961

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

The positions given have been checked after listing by M. M. Slawsby

William A. Rasure, *Chief of Party.*

STATE	PUERTO RICO		POSITION										
			LATITUDE ° ′	LATITUDE ″ D.M. METERS	LONGITUDE ° ′	LONGITUDE ″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
CHARTING NAME	DESCRIPTION	SIGNAL NAME											
	EAST COAST												
	PUERTO YABUCOA												
DAYBEACON	RANGE REAR		18 03	1118 46.12	65 49	966 32.85	P.R.	Photo T-12160	Oct. 1961	x	x		904 918
DAYBEACON	RANGE FRONT		18 03	1289 41.93	65 49	801 27.24	"	T-12161	"	x	x		"

Good Positions
No Pier error
1-3-62

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. Revisions shall show both the old and new positions. 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.

USCOMM-DC 27126

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Form 56[illegible]
(10-15-[illegible])

U.S. DEPARTMENT OF COMMERCE
COAST AND [illegible]DETIC SURVEY

Photogrammetric Review Branch

~~NONFLOATING AIDS OR~~ LANDMARKS FOR CHARTS

~~TO BE CHARTED~~
~~TO [illegible]~~ } STRIKE OUT TWO
TO BE DELETED

Tampa District Office, Dec. 29, 19 ~~61~~

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 M. M. Slavney

V.R.Schlaraleki, *Chief of Party.*

STATE: PUERTO RICO			POSITION									
			LATITUDE *		LONGITUDE *							
CHARTING NAME	DESCRIPTION	SIGNAL NAME	° ′	″ D.M. METERS	° ′	″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
TOWER	Tower on Cayo Batata (Cone)		18 07.1		65 46.3		P.R.	T-12160	Oct. 1961	x	x		904 923

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. Revisions shall show both the old and new positions. 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.

* TABULATE SECONDS AND METERS

USCOMM-DC 27126

17

FORM 182 (3-61)

PHOTOGRAMMETRIC OFFICE REVIEW
T- 12160

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

1. PROJECTION AND GRIDS	2. TITLE	3. MANUSCRIPT NUMBERS	4. MANUSCRIPT SIZE
MMS	MMS 4a Classification label unclassified	MMS	MMS

CONTROL STATIONS

5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (TOPOGRAPHIC STATIONS)		
MMS	MMS		
7. PHOTO HYDRO STATIONS	**8. BENCH MARKS**	**9. PLOTTING OF SEXTANT FIXES**	**10. PHOTOGRAMMETRIC PLOT REPORT**
MMS	XX	XX	XX
11. DETAIL POINTS			
MMS			

ALONGSHORE AREAS (Nautical Chart Data)

12. SHORELINE	13. LOW-WATER LINE	14. ROCKS, SHOALS, ETC.	15. BRIDGES
MMS	MMS	MMS	XX
16. AIDS TO NAVIGATION	**17. LANDMARKS**	**18. OTHER ALONGSHORE PHYSICAL FEATURES**	
XX	XX	MMS	
19. OTHER ALONGSHORE CULTURAL FEATURES			
MMS			

PHYSICAL FEATURES

20. WATER FEATURES	21. NATURAL GROUND COVER
MMS	MMS
22. PLANETABLE CONTOURS	**23. STEREOSCOPIC INSTRUMENT CONTOURS**
XX	XX
24. CONTOURS IN GENERAL	**25. SPOT ELEVATIONS**
XX	XX
26. OTHER PHYSICAL FEATURES	
MMS	

CULTURAL FEATURES

27. ROADS	28. BUILDINGS	29. RAILROADS
MMS	MMS	MMS
30. OTHER CULTURAL FEATURES		
MMS		

BOUNDARIES

31. BOUNDARY LINES	32. PUBLIC LAND LINES
XX	XX

MISCELLANEOUS

33. GEOGRAPHIC NAMES	34. JUNCTIONS
MMS	MMS
35. LEGIBILITY OF THE MANUSCRIPT	**36. DISCREPANCY OVERLAY**	**37. DESCRIPTIVE REPORT**
MMS	XX	MMS
38. FIELD INSPECTION PHOTOGRAPHS	**39. FORMS**
MMS	MMS
SIGNATURE OF REVIEWER M. M. Slavney	SIGNATURE OF SUPERVISOR, REVIEW SECTION OR UNIT William A. Rasure

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 COMPILER	SIGNATURE OF SUPERVISOR
I.I. Saperstein	M.M. Slavney

USE REVERSE SIDE FOR REMARKS

USCOMM-DC 25353-P61

FIELD EDIT NOTES
OPR 423-1962
USC&GS Ship EXPLORER

All field edit notes have been delineated on the mylar T-Sheets. In general, the only discrepancies found were differences in the delineation of the mean high water line along sand beaches. These discrepancies were resolved with distance measurements from the hydrographic signals to the mean high water line. The azimuth used was a perpendicular line from the mean high water line to the respective signal. Each T-Sheet is discussed separately below with a listing of the necessary photos.

T-12160 - Mean high water line revision in area of "BED" appears necessary. Rock height revisions necessary in the following areas: HER, LOG, FOX, AND DIX.
Photos - 59S3933, and 3932.

T-12158 - Mean high water line revision along entire beach line appears necessary.
Photos - 59S3931, 3930, 3929, and 3928.

T-12159 (2 copies) - Mean high water line revision in area of DUN to ABE. Rock height revisions in the following areas: HUG, GEO, and WIG.
Photos - 59S3927, 3926, and 61W1676.

T-12153 - Rock height revision in area of JIM.
Photos - 61W1678 and 1679.

T-12155 - Rock height revision in area of CUT.
Photos - 61W1559 and 61W1560.

T-12156 - Rock height revisions in the following areas: EVA (2), KEN, and CRY.
Photos - 61W1584 and 1585.

T-12154 - Pier revision at OIL.
Photos - None

T-12157 - None

All T-Sheets, since they contain final locations of hydrographic signals, must be returned to this command as soon as possible as they are needed to plot hydrographic smooth sheets.

Respectfully submitted:
10 September 1962

George F. Wirth
George F. Wirth
LT, C&GS

Forwarded Approved:

Edmund L. Jones
Edmund L. Jones
CAPT, C&GS
Comdg., Ship EXPLORER

REVIEW REPORT T-12160
SHORELINE
March 1968

61. GENERAL STATEMENT:

See Summary accompanying the Descriptive Report (page 6).

An ozalid Comparison Print (pages 23 thru 26) showing the differences noted in Items 62 through 65, is included with the original copy of this report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Registered Survey 4323; 1:20,000; 1927
Registered Survey 2540; 1:20,000; 1901

Differences with T-12160 are on the Comparison Print in blue.

1. The islands at latitude 18° 04.8', off Punta Fraile, see page 24, and at latitude 18° 04.22', off Punta Icacos, see page 25.

2. Shoreline changes of up to 70 meters at Punta Fraile and Punta Icacos, pages 24 and 25.

This survey supersedes the previous registered surveys for nautical chart construction.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

PUNTA GUAYANES, P.R.; U.S.G.S. quad; 1:20,000; 1943, revised 1960.

The quadrangle differences are on the Comparison Print in brown.

1. The differences in shoreline position, to about 80 meters, appear due to a datum shift. The quadrangle details fall south of the positions on T-12160, see pages 23 thru 26.

2. The quadrangle gives the highest point on Cayo Batata as 12 meters. The elevation, 12 feet, on the original compilation of T-12160 was not changed or noted by the field editor.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

BOAT SHEET EX-10-1-62 (H-8637); 1:10,000; 1962

The boat sheet did not show any shoreline changes; but did show rocks and other details that are on the Comparison Print in green, see pages 23 thru 25.

A careful examination was made of the 1959 photographs, 59-S-3931 through 3934 and transparencies of the 1962 1:10,000 photographs 62-S(c)-224 through 229, 239 through 241, 9750, 9751, 9766 and 9767, to office identify the rocks and other details shown on the Comparison Print. In some places the rock has been classified differently on T-12160, see pages 23 thru 26. Several rocks on the boat sheet could not be identified on the photographs. No reference was made to these details by the field editor.

There is no contemporary hydrographic survey southeast of EX-10-1-62.

65. COMPARISON WITH NAUTICAL CHARTS:

Chart 918; 1:10,000; 4th Edition; Jan. 31, 1966
Chart 923; 1:20,000; 3rd Edition; May 9, 1966
Chart 904; 1:109,000; 12th Edition; June 19, 1967

No Comparison was made between latitudes 18° 02.5' and 18° 06.6'. This area is covered only by Chart 904, and the scale precludes detailed comparison.

The other chart differences with T-12160 are shown on the Comparison Print, pages 23 through 26, in red. Also on this Comparison Print are notes pertaining to these differences:

1. The elevation, (12), on Cayo Batata on T-12160 given as 40 feet on Chart 923. No note was made by the field editor, and the original T-12160 elevation was from the inspection. It is noted that the USGS quadrangle gives the islands topoelevation of 12 meters, see Item 63.

2. Three rocks awash on the chart near Cayo Batata, see page 23, are not visible on the photographs and are not noted on the boat sheet.

3. The Comparison Print, pages 23 through 26, show rocks on the chart not visible on the photographs, some rocks on T-12160 not on the chart, and in some cases what appear to be differing positions of shoreline, rocks, and islets.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This survey complies with the project instructions, Bureau requirements, and the National Standards of Map Accuracy. No accuracy tests were run in the field.

Reviewed by:

M. M. Slavney
Cartographer

Approved by:

For R. A. Stark
J. Bull, RADM, USESSA
Director, Atlantic Marine Center

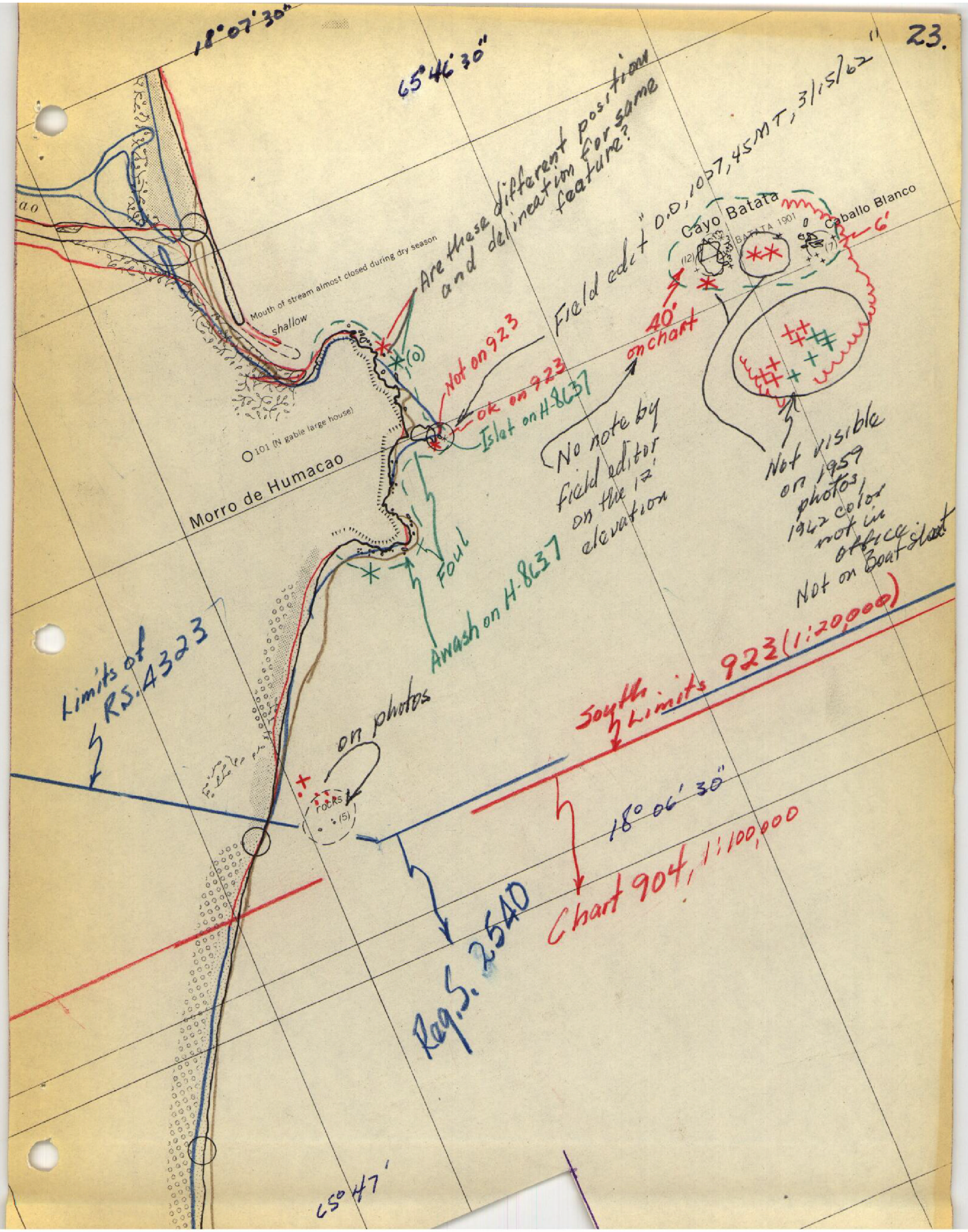
Approved by:

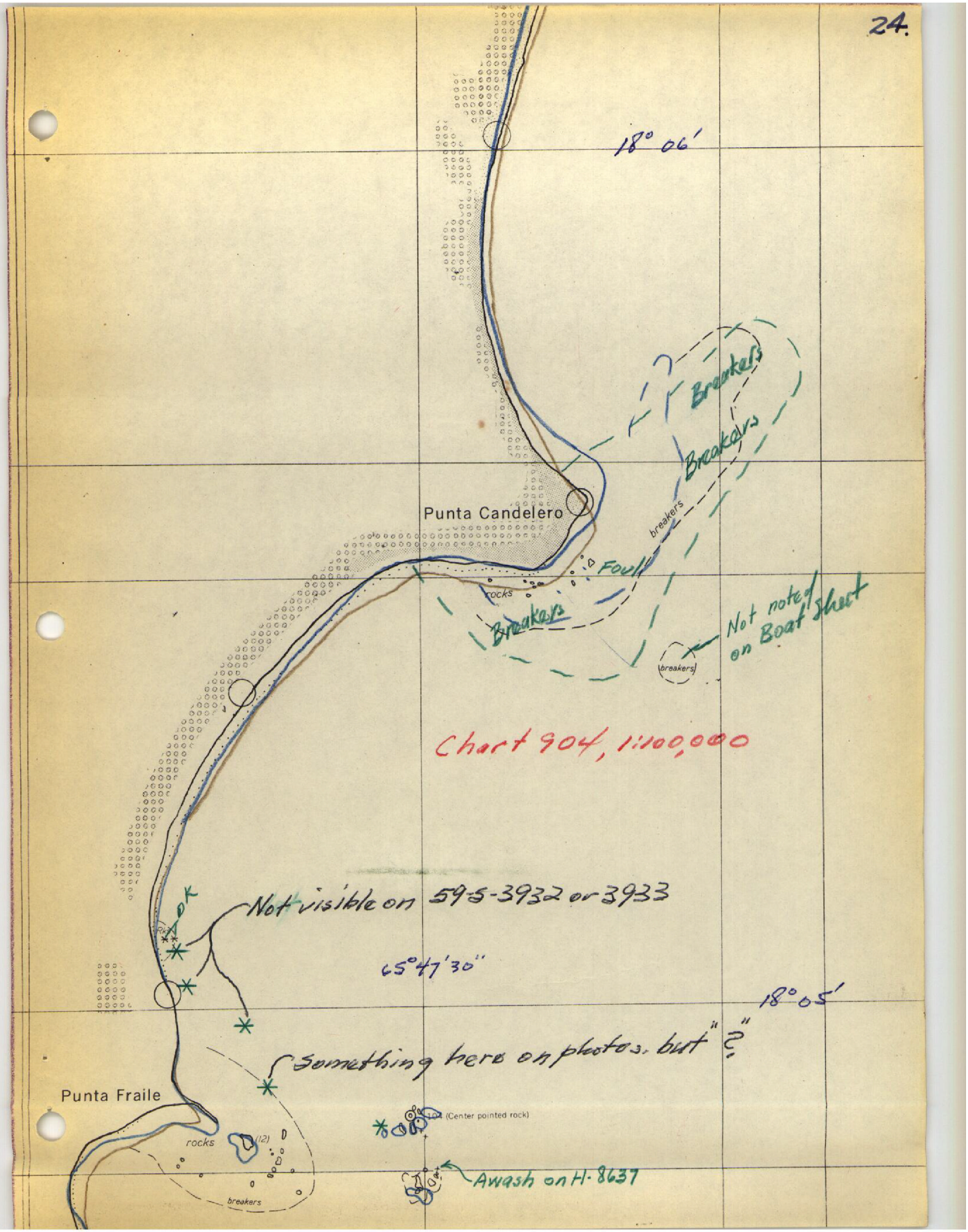
Chief, Photogrammetric Section

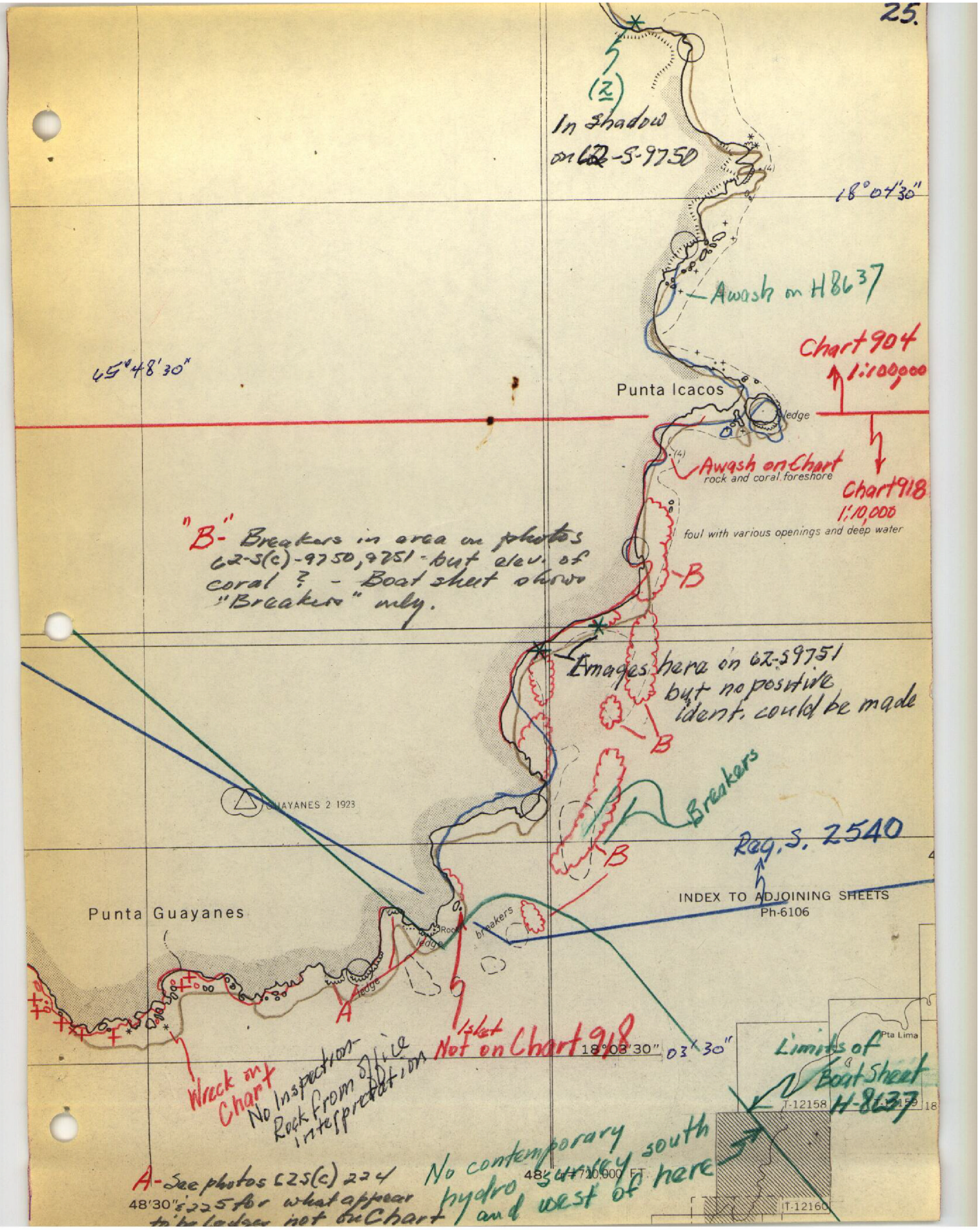
S. Ralph Sobieralski
Photogrammetry Division, Chief

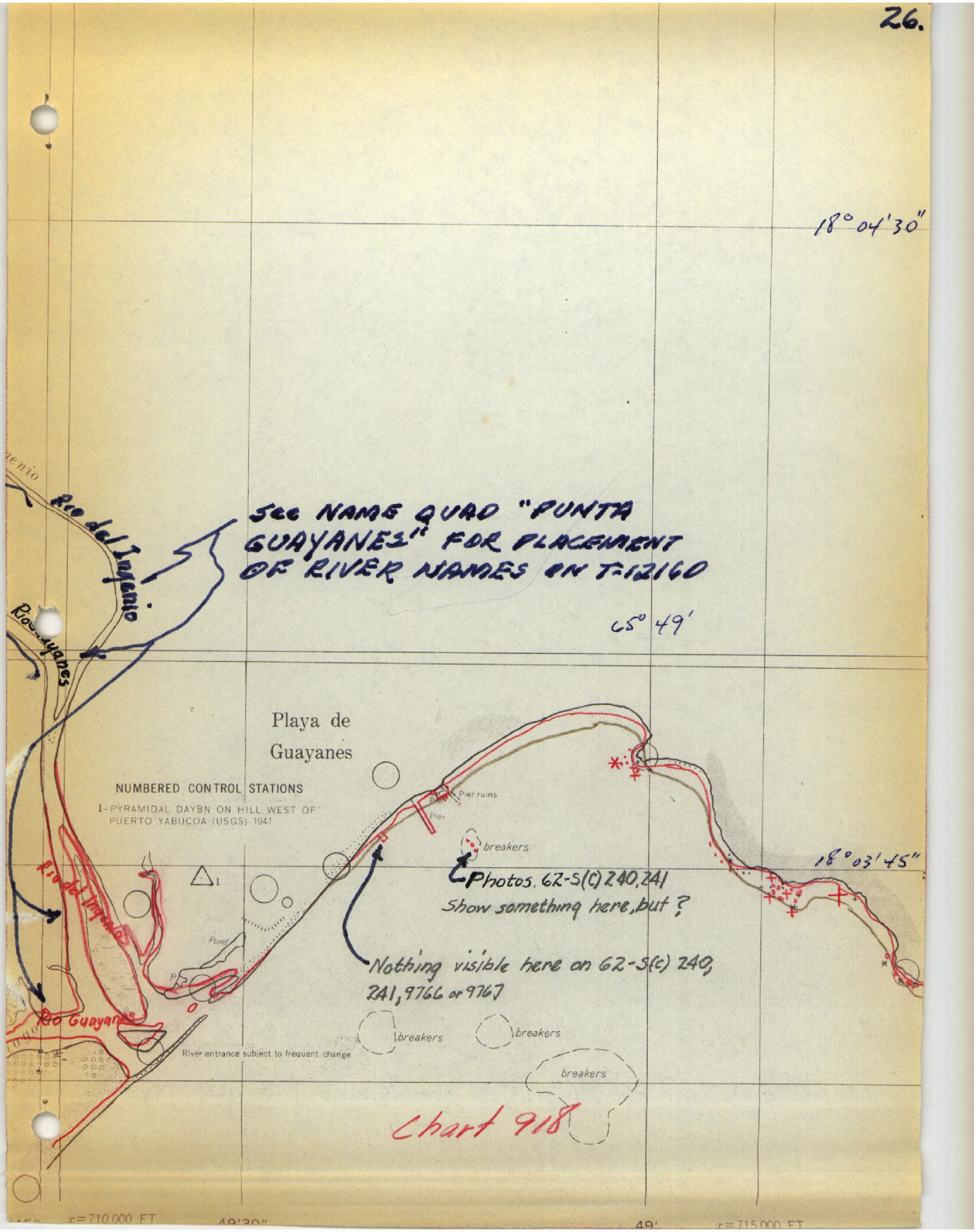
JUL 1 1968

John C. Boyer
Nautical Chart Division, Chief


18°07'30"
65°46'30"
Are these different position and delineation for same feature?
Field edit "O.D., 1057, 45 MT, 3/15/62
Cayo Batata
Caballo Blanco
BATATA 1901
6'
40'
on chart
Not on 923
ok on 923
Islet on H-8637
No note by field editor on the 12' elevation
Not visible on 1959 photos, 1962 color not in office
Not on Boat sheet
Mouth of stream almost closed during dry season
shallow
101 (N gable large house)
Morro de Humacao
Awash on H-8637
Foul
Limits of RS. 4323
on photos
South Limits 923 (1:20,000)
18° 06' 30"
Rog. S. 2540
Chart 904, 1:100,000
65° 47'


18° 06'
Breakers
Breakers
Punta Candelero
breakers
Foul
rocks
Breakers
breakers
Not noted on Boat Sheet
Chart 904, 1:100,000
Not visible on 59-5-3932 or 3933
65°47'30"
18°05'
Something here on photos. but "?"
Punta Fraile
(Center pointed rock)
rocks
(12)
breakers
Awash on H-8637


(2)
In shadow on 62-S-9750
18°04'30"
Awash on H8637
Chart 904
1:100,000
45°48'30"
Punta Icacos
ledge
Awash on Chart
rock and coral foreshore
Chart 918
1:10,000
foul with various openings and deep water
"B"- Breakers in area on photos 62-S(c)-9750, 9751 - but elev. of coral ? - Boat sheet shows "Breakers" only.
B
Images here on 62-S-9751 but no positive ident. could be made
Breakers
GUAYANES 2 1923
Reg. S. 2540
INDEX TO ADJOINING SHEETS
Ph-6106
Punta Guayanes
Rocky ledge
breakers
ledge
A
Wreck on Chart
No Inspection
Rock from Office interpretation
Not on Chart 918
18°08'30"
03'30"
Limits of Boat Sheet H-8637
Pta Lima
T-12158
T-12160
48°47'30"
10,000 FT
A- See photos C25(c) 224 48'30" & 225 for what appear to be ledges not on Chart
No contemporary hydro survey south and west of here


18°04'30"
Río del Ingenio
Río Guayanes
See NAME QUAD "PUNTA GUAYANES" FOR PLACEMENT OF RIVER NAMES ON T-12160
65°49'
Playa de Guayanes
NUMBERED CONTROL STATIONS
1-PYRAMIDAL DAYBN ON HILL WEST OF PUERTO YABUCOA (USGS) 1941
Pier ruins
Pier
breakers
18°03'45"
Photos, 62-S(C) 240, 241
Show something here, but ?
Río del Ingenio
Pond
Nothing visible here on 62-S(C) 240, 241, 9766 or 9767
Río Guayanes
breakers
breakers
River entrance subject to frequent change
breakers
Chart 918
x=710,000 FT
49'30"
49'
x=715,000 FT

NOTES TO VERIFIER
T-12160, Project Ph-6106
BOAT SHEET EX10-1-62

Please note Items 63, 64, and 65 of the final review report and the Comparison Print (pages 23 thru 26) for rock, shoreline, and other notes.

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-12160

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.

CHART	DATE	CARTOGRAPHER	REMARKS
923	11/7/73	J. Sherman	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. Adequately appl'd
923	8/14/74	D.A. Clements	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. Adequately Appl'd.
918	8/14/74	D.A. Clements	Full Part Before After Verification Review Inspection Signed Via
			Drawing No. Adequately Appl'd.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63