

4315

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

....., Director

U. S. COAST AND GEODETIC SURVEY
L. & A.

State: Porto Rico

Acc. No.

DESCRIPTIVE REPORT

Topographic
Hydrographic

Sheet No.

4315

LOCALITY

S. Coast of Porto Rico

Vicinity of Guayama and Arroyo

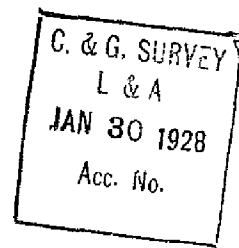
1926

CHIEF OF PARTY

G.C. Mattison

GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
U.S.COAST AND GEODETIC SURVEY
E. LESTER JONES, DIRECTOR



DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET # 10

ARROYO,

PR

S.S. RANGER

G.C.MATTISON,
Chief of Party.

1927

DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET # 10

Instructions dated July 3, 1926.

This survey is a revisions survey of the shoreline between Point Figuras and a short distance to the westward of Point Barrancas. It also includes the cities of Guayama and Arroyo and the general interior topography back to parallel 18 01'.

GENERAL DESCRIPTION:

The coastline plain is in general flat and covered with sugar cane. It extends from $1\frac{1}{2}$ to 2 miles inland to the foothills; from which the mountains rise abruptly. There is a general rise in the coast plain to an elevation of 300 feet at the base of the foothills. Between Guayama and Arroyo, there are two hills separate from the main ridge with a general elevation between 700 and 800 feet. They are covered with trees and coarse tropical grass.

Range Hill, about 1.0 mile to the northward of Point Figuras is a sharp conical hill with an approximate elevation of 900 feet. The hill stands alone and is wooded.

The main ridge of mountains to the northward of Arroyo rise to an elevation of approximately 2500 feet. They are covered with trees, underbrush and tropical grass. The summits are mainly bare and covered with grass.

Two sugar centrals operate in the vicinity of Arroyo and Guayama, the stacks of which form prominent landmarks. The large brick stack at Central Machete is the most prominent landmark on the sheet. The large steel stack at Lafayette is used as the rear range for the entrance range to Arroyo. Two other objects are of sufficient prominence to be noted; one, a large tree near the shoreline approximately $1\frac{1}{2}$ miles west of Arroyo. It is known as TREE in the triangulation data. The other is a concrete loading dock with two chutes extending into the water. This stands 1 mile west of Arroyo.

The shoreline in the vicinity of, and to 1 mile of Point Figuras is made up of Sand beach. There are numerous small reefs around Point Figuras. From the eastward of the lighthouse westward to Arroyo the beach is lined with a large grove of palms. Point Figuras is covered with low underbrush.

From Arroyo westward to the limits of the sheet, the shoreline is made up of a narrow gravel beach backed by red clay bluffs with a general elevation of 25 feet. The cane fields extend to the edge of the bluffs, with an occasional clump of trees to mark the small ravines which cut the bank. To the westward of Point Barrancas, there are small

number of small reefs from 100 to 200 meters offshore. At a distance of 1.4 miles, bearing 85° true from Point Barrancas, there is a small reef. This was located by using the limits of breakers on the reef.

SURVEY METHODS:

Control for this survey was furnished by the triangulation done by the party. A system was expanded from "CHARCAS" and Point Figuras Lighthouse, established in 1899.

Intersection stations were not computed until after the topographic work was completed with the exception of one or two important stacks and front range. The computed positions were first located by plane table traverse, especially those along the beach.

A traverse was started at Point Figuras Lighthouse, orienting on "MACHETE" B". The traverse was run down to "FRONT" with an error of closure of 20 meters. This was later re-run as the cause of error could not be determined and closed with no error. At "FRONT" the dock and permanent water front buildings were located including the warehouse of Nieves, Calafat & Co., a market building called Plaza del Mercado and the office building and warehouse of the N.Y. P.R. Steamship Co.

Starting at "BARRANCAS", a traverse was run along the beach closing at "ELENA" with no error. The traverse was continued from "ELENA" to "FRONT" closing within 10 meters of error.

Principal roads were checked by traverse run from the Guayama Church Steeple to "PICA" on the western end, and from "LAFAYETTE" to Arroyo Church Tower" on the eastern end. The remainder of the main road was taken from the blue prints accompanying the sheet. There are a number of roads of minor importance that can also be taken from the blue prints which were not located by plane table.

There are no navigable streams in this vicinity. Guamani River has been diverted into an irrigation flume one half mile north of Guayama. Seco River now flows intermittently. Both of these streams are small creeks excepting at times of heavy rains when they increase in size for a short time.

Form lines were drawn in for the higher range of hills and for RANGE hill. The elevations of the two smaller hills east of Guayama were checked with those shown on the blue prints and the elevations transferred to the topographic sheet.

The blue print maps were furnished to the party by the Porto Rico Irrigation Service. The survey was made by the U.S. Geological Survey. No important differences were found. These prints may be used to obtain details for Guayama and Arroyo.

*Forwarded
G. M. Matten
Sgt. S. S. Rags.*

Respectfully submitted.
Carl F. Ehlers
Carl F. Ehlers,
Jr. H. & G. Engineer,
Topographer.

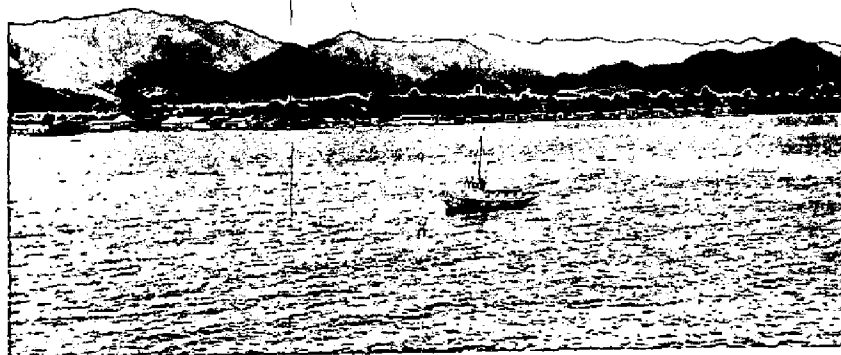
*Inspected and found adequate
E. P. Egan, May, 1928*

STATISTICS
TOPOGRAPHIC SHEET #10

Area surveyed-----23.8 square miles stat.

Shoreline surveyed----- 8.0 miles stat.

Roads surveyed----- 7.2 miles stat.



Anoyo entrance

LIST OF SIGNALS
Topographic Sheet #10

Object and Descrip.	Lat	D.M.	Long.	D.P.	Height	Remarks
Pica (Red Brk.Stk):	17 52 :	1666 :	66 07 :	441 :	30 ft. :	Center
Black (Gry.Ho. with Black roof):	17 56 :	1618 :	66 07 :	1592 :	:	E.Gable
Tin (Tin covered house)	: 17 56 :	1738 :	66 07 :	1072 :	12 ft. :	E. Gable
Ran (Gray Ho)	: 17 57 :	50 :	66 07 :	442 :	:	Center line
Bat (" ")	: 17 57 :	48 :	66 07 :	170 :	:	Center line
Cas (Palm)	: 17 57 :	60 :	66 06 :	1416 :	:	WW on vert. trunk
Tri (Tripod)	: 17 57 :	486 :	66 06 :	778 :	5 ft. :	Marked with iron pipe
Cat (Tree trunk)	: 17 57 :	858 :	66 06 :	80 :	8 ft. :	W.W.
Dog (Tripod)	: 17 57 :	1206 :	66 05 :	1368 :	5 ft. :	Marked with iron pipe
Chute (W.concrete Loading chute):	17 58 :	182 :	66 04 :	1492 :	:	Hyd.disc. under outward gable
Pal-(Palm)	: 17 58 :	86 :	66 04 :	986 :	:	WW and tacked with boards
Cor (Gry.tar Ho.)	: 17 58 :	188 :	66 04 :	610 :	:	E.Gable
End (Gry.roof unp painted)	: 17 57 :	1376 :	66 03 :	1252 :	12 ft. :	E.Gable
Tow (Gry.Ho.blk roof)	: 17 57 :	1224 :	66 03 :	546 :	:	W. Gable
Tie (Thatched ho.):	17 57 :	872 :	66 03 :	64 :	:	Outward gable
Lone (Palm)	: 17 57 :	492 :	66 02 :	1634 :	:	Largest of two
Pam (Palm)	: 17 57 :	1098 :	66 03 :	362 :	:	W.W. and tacked with boards

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 10

REGISTER NO. 4315

State PORTO RICO

General locality South Coast of Porto Rico

Locality Vicinity of Guayama and Arroyo

Scale 1:20,000 Date of survey Nov. 15--³Dec. 31, 192 6

Vessel Str. RANGER

Chief of Party G. C. MATTISON

Surveyed by C. F. EHLERS

Inked by C. F. EHLERS

Heights in feet above M. S. L. to ground ~~xxxxxxxxxxxx~~

~~Contours Approximate~~ Form line interval 100 feet

Instructions dated July 3, 192⁷6

Remarks: