4324

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

....., *Director*

State: Porto Rico

DESCRIPTIVE REPORT

Topographic | *Sheet No.* 4324

~~*Hydrographic*~~

LOCALITY

N. Coast of Porto Rico

Pt. Palmas Atlas and Barceloneta

1927

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 No. 14 4324

PALMAS ATLAS

ROADSTEAD

S.S. RANGER

G.C.MATTISON,
Chief of Party.

1927

DESCRIPTIVE REPORT.

TO ACCOMPANY

TOPOGRAPHIC SHEET No. ~~13~~ 14

PALMAS ALTAS ROADSTEAD

LIMITS:

The primary object of the survey was a new and detailed survey of Palmas Altas Roadstead. The work extends from a point 3/4 mile west of Barrio Islote eastward to a group of rocks known as Los Muertas, situated 6/10 of a mile east of the mouth of the Maniti River. The survey includes Palmas Altas Roadstead and the country in back as far as and including the sugar factory Central Plazuela. The Arecibo Barceloneta shore road is also surveyed within the limits of this sheet.

SURVEY METHODS:

Survey was made by a shore party under my command. A house was obtained in Palmas Altas through one of the Central officials. By means of a Ford truck food stuffs, were brought from Barceloneta. Water was supplied by a large cistern belonging to the house. Transportation for myself and party up and down the beach was afforded by means of Ford truck. Area east of Maniti River was reached by renting a boat locally. Plane table and stadia method supplemented by sextant location of minor details. Control for the survey was furnished by the triangulation of 1901.

The triangulation stations Palmas, Plazuela Chy. and Esperanza Chimney were recovered. Red chimney of Barceloneta was not recoverable.

The table was set up at Palmas and oriented on Plazuela with a careful check on Esperanza as an orientation to start the survey. A traverse was run eastward to the rocks Los Muertos where it was stopped at the high and low water marks of the sand beach extending to the eastward.

The traverse of the Maniti River was begun at the mouth and checked on Central Plazuela Chimney.

Work was again started at Palmas and this time the traverse was run to the westward a little more than four miles to a flat rock on the low water mark 1/4 miles west of the group of rocks called Los Negritos.

these rocks and the shoreline were transferred from the bromides furnished by the office and the new survey checked very well with transferred positions. The flat rock that marks the end of the beach traverse is the only one in the vicinity and is some eight to ten feet across so will be easily distinguished by any surveyor attempting to carry the work further, Carrying the traverse from Palmas around the rocky Point at Palmas Altas necessitated many short shots and very careful work but to preserve orientation a flag was erected at signal SEE and cut in from Palmas and the largest rock in Los Negritos group was cut in from SEE. This rock as well as all the rest of the off shore rocks were cut in by the alidade.

A very careful,search was made for topographic flag No. 1 and No. 2 but all traces had gone. People living in the vicinity could give no definite information as to the exact location. SEE however is a brick and mortar monument at one time marked with a $2\frac{1}{2}$" pipe/ Although the pipe is gone the bricks are still in good condition. This station is marked the same as Palmas. The sextant was used in locating the tall palm used as a rear range by ships anchoring to load sugar. This palm was in a grove and could not be located by the alidade. Directionsto it were taken from signal DOCK and signal TREE and the range line was run by the sounding launch and is recorded as such in the hydrographic record book.

The railroads and roads shown on the sheet were run in partly by the instrument and partly by transfer from a blue print furnished my by the Plazuela Sugar Central executive in charge of operations. The blue print only covered the area to the eastward shown as complete on the topographic sheet. To the west the shore-line is bordered by trees and sand dunes and the back country topography could not be surveyed without extreme difficulty and much time. The sugar cane was tall at the season the survey was made thus adding to the difficulty of locating railroads and irrigation ditches.

It was felt that these details were not important enough to warrant the time necessary for their addition tothe sheet. Hidden by the trees and dunes they do not show from the sea.

Form lines were transferred from the bromides and were found to check with the present formations The only check on my traverse was the agreement of the transferred work and the actual survey. At Los Muertos the agreement was exact, but the Los Negritos rocks all differed by about 18 meters; my position placing them further west than shown on the bromides. I went back a considerable distance and tested my traverse but could not find any mistakes so I am sending this sheet in as correct.

GENERAL DESCRIPTION:

The three rocky points on the eastern end of the sheet all have the same characteristics. They are steep almost perpendicular on the sea side and at the seaward edge leave a wide shelf 10 to 15 meters broad that is just awash at high tide. The rocks themselves are

weathering considerable; the surfaces resemble a honey comb with knife like edges, with here and there a pool of water. The sea has undermined them, in several places hollowing out inside and forming a sub-terranean cavern.

The mouth of the Maniti River has a broad sand spit on the western side that covers in extreme tides and times of heavy rain in the back country.

From Point Palmas Altas to the mouth of the river the shoreline is sandy with dunes ten to twenty feet high, lining the high water mark. These dunes are covered in most cases with bushes and trees with scattered tall coconut palms extending above the tops.

The bight just west of Point Palmas Altas is edged by a broad sand beach lined with houses, back of which is a large grove of tall coconut palms.

From Palmas Altas westward the shore is a succession of coral and sand beaches. The high water mark is again sand dunes covered with trees and bushes giving shelter to a road running to Arecibo. At signal END the dunes are quite large and here the beach makes out into a broad sandy point.

VILLAGES AND BARRIOS:

The barrio of La Boca (The mouth) situated at the mouth of the Maniti River consists of about forty houses all nipa shacks and a school. The people are fishermenmand cane field workers. The fishing boats used are only small pulling boats and hence fishing is all done at very limited times, when the ocean is calm. All the fish caught are consumed locally.

PALMAS ALTAS:

Palmas Altas (Tall Palms) stretches for one mile on either side of Point Palmas Altas. And is the shipping point of sugar from the Plazuela and several other sugar centrals, reached by the Plazuela Central Railroad, terminating at a concrete dock. The sugar is stored in the warehouses till a steamer calls and then loaded on lighters which take it out to the waiting ships. The barrio has several grocery stores where necessities can be bought. The school is quite a modern building. The dwellings for the most part are nipa shacks although there are some half dozen frame dwellings. One of the frame houses was rented by the survey party during out stay in Palmas Altas. Practically every one in the town is employed at the Central Plazuela.

ISOLOTE:

Situated about two miles west of Palmas Altas along the coast is only a few shacks and a store.

CENTRAL PLAZUELA:

A settlement consisting of the Sugar Central, Railroad yards, offices and houses of the central executives, connected with the mill. I was given hearty co-operation and help. This is quite a prosperous central and one of the oldest on the island.

ROADS AND RAILROADS:

The road from Central Plazuela to Palmas Altas was alomst compàetely re-built while the survey was being made. I traveled it daily in a Ford truck while it was being re-built. Originally it was a sand and clay base but this was dug out and filled in with crushed coral rock with a top dressing of very fine rock rolled in. This makes a very excellent road, much needed on account of the heavy carts loaded with cane going to the central by this artery. The other roads surveyed are the new road from Plazuela to La Bocà and from La Bocà through Palmas Altas to Arecibo. These are both kept in repair and easily traversed by automobile.

Only part of the Central Plazuela R.R. was put on the map. The main lines from the roadstead to the central ran through a portion of fields already cut enabling quick surveying conditions while the rest of the area was covered with tall cane necessitating a large expenditure of time. The blue print furnished by the Central Executive covered the portion surveyed and by a combination of transfer and intersection points I was able to include area shown on sheet.

RIVERS:

The Manàti River was traversed from the mouth to the limit shown on this sheet; it's a broad swift flowing stream liable to floods in times of heavy rains in the hills; the banks are marshy and lined with tropical grass and bushes. Fresh water fish and eels are caught in limited numbers.

The ditch shown on the sheet was surveyed the same way as the roads and railroads. Partly by intersection and partly by transfer from the blue print.

Respectfully submitted.

Benjamin H. Rigg,
Jr. H. & G. Engineer,
Topographer.

Approved:

G. C. Mattison
Actg. C. S. Engr.

Inspected and found adequate
E. P. Lee
April, 1928

STATISTICS.

TOPOGRAPHIC SHEET ~~#15~~ #14

Area surveyed	6.0 Sq. stat. miles.
Detailed shoreline surveyed	6.0 Stat. miles.
Roads	9.5 Stat. miles.
Railroads	3.8 Stat. Miles.
Rivers	1.5 Stat. miles

Form lines checked from bromides.

Magnetic declination was measured with declinator at triangulation station PALMAS, ~~on~~ in June 1927 was 4° 08' W.

TOPOGRAPHIC STATIONS

Name and Description	Lat.	D.M.	Long.	D.P.	Remarks.
Last WW rock	18 29	107	66 31	247	Center of WW
Tan WW Roof	18 28	1540	66 31	700	Center of WW
Pit Lone Coconut	18 28	1737	66 31	1172	Bottom of WW
Sow WW rock	18 29	349	66 31	982	Center of WW
Tip WW rock	18 29	482	66 31	1353	Tip of rock
Box WW tree	18 29	64	66 31	1671	Center of WW
Lug WW.house	18 28	1817	66 32	237	Center of house
Jig WW house	18 29	1137	66 32	673	Center of house
Sky WW.coconut	18 29	229	66 32	931	Bottom of WW
Hot WW.coconut	18 29	349	66 32	1250	Bottom of WW
Ram WW rock	18 29	767	66 33	834	Center of WW
Co WW coconut	18 29	665	66 33	571	Bottom of WW
Rot WW rock	18 29	951	66 33	998	Center of WW
Ben W.beacon	18 29	948	66 33	1394	
Dok Flagpole on dock	18 29	793	66 33	1401	WW on end of dock, Flagpole is station.
Tree WW tree	18 29	579	66 33	1418	Center of WW
Can WW tree	18 29	445	66 33	1844	Center of WW

TOPOGRAPHIC STATIONS

Name and Description	Lat.	D.M.	Long.	D.P.	Remarks.
Net WW tree	18 29	496	66 34	318	Center of WW
Kin Schoolhouse	18 29	354	66 34	346	NW corner of bldg.
See W. Flag	18 29	267	66 34	400	
How WW house	18 29	408	66 34	808	Center of house
Fig WW Cocomut	18 29	307	66 34	1414	Bottom of WW
Lam WW. coconut	18 29	300	66 35	47	Bottom of WW
Cot W.flag	18 29	385	66 35	742	
Tin WW.coconut	18 29	488	66 35	1061	Bottom of WW
Put WW.house	18 29	572	66 35	1365	Center of house
Bug WW.coconut	18 29	737	66 35	1655	Bottom of WW
Rat WW.rock	18 29	795	66 36	162	Center of WW
End Tripod	18 29	938	66 36	744	Center pole.

Form 567

DIVISION OF CHARTS, FILE NO._____

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Miami, Fla.,

February 16, 19 28

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

T 4324 C.C.Mattison Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETERMINATION	CHARTS AFFECTED
	Latitude			Longitude		Datum		
	° '	D. M. meters		° '	D. P. Meters			
Lone Coconut tree Exceptionally tall (PTT)	18 23	1727		66 31	1172	P.R.	P.T.	903
School house White red roof (KIE)	18 29	354		66 34	346	P.R.	P.T.	903
Esperanza Chy. red brick	18 29	326		66 31	1034	P.R.	Trian.	903
Central Plazuela Chy. Yellow brick	18 27	1740		66 32	696	P.R.	Trian.	903.

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

GOVERNMENT PRINTING OFFICE

POST-OFFICE ADDRESS: U.S.C.&.G.S.S. RANGER, Drawer 2792, Miami,Fla.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

11

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Steamer RANGER

April 19,1928.

To: Chief, Section of Field Work,
U.S.Coast and Geodetic Survey,
Washington, D.C.

From: Lieut. B.H.Rigg,
U.S.Coast and Geodetic Survey.

Subject: High and Low Water Lines at Palmas Altas.

Reference: Your letter 10-McC, dated April 16,1928.

Lines in question should be dotted. I have outlined in yellow the lines that should be dotted. Where hachures were made on the topographic sheet, the shoreline is a cliff and high and low waters are practically the same.

Benjamin H Rigg.

B.H.Rigg,
Lieut. (j.g.),
U.S.Coast & Geodetic Survey.

The changes have been made on the sheet

Form 537a
11—5813

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY
I. & A.
MAR 2 1928
Acc. No.

REG. NO. 4324

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. ~~1514~~

REGISTER NO. 4324

State PORTO RICO

General locality North Coast of Porto Rico

Locality Pt. Palmas Altas and Barceloneta

Scale 1/10,000 Date of survey May, June, 1927

Vessel RANGER

Chief of Party G.C.MATTISON

Surveyed by B?H.RIGG

Inked by B?H.RIGG

Heights in ~~feet~~ meters above Mean High Water to ground ~~to tops of trees~~

~~Contour, Approximate contour~~, Form line interval checked ~~feet~~ 10 meters

Instructions dated July 3, Sept. 22 '26-Feb.28, 1927

Remarks: Re-survey of Palmas Altas Roadstead.

Form lines from T.2532 (Checked)

GPO