

2632-2633-2640

2632-2633-2640

Diag. Cht. No. 901-1

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	<i>Hydrographic</i>
Field No.	<i>2632</i>
Office No.	<i>2633</i>
	<i>2640</i>
LOCALITY	
State	<i>Puerto Rico</i>
General locality	<i>West Coast</i>
Locality	<i>of Puerto Rico</i>
194	
CHIEF OF PARTY	
<i>P. A. Welker</i>	
LIBRARY & ARCHIVES	
DATE	

2632 2633

Assistant in charge of the Library and Archives.

U. S. C. & G. SURVEY.
AND ARCHIVES.
AD 6-1903
No. 2632-3, 2640

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2640

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Treasury Department,
U. S. COAST AND GEODETIC SURVEY.

D. H. Pittman
Superintendent.

State: Porto Rico

DESCRIPTIVE REPORT.

Hydrographic Sheets, Nos. ²⁶³²2633
2640.

LOCALITY:

West Coast of Porto Rico.

1903.

CHIEF OF PARTY:

P. A. Walker, Asst. C. & G. S.

2633

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Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. H. Tiltman
Superintendent.

State: *P.R.*

DESCRIPTIVE REPORT.

Hydro Sheet No. *2633*

LOCALITY:

See

2632

1903

CHIEF OF PARTY:

P. A. Walker

2633

83
SHA
2640

2640

Diag. Cht. No. 901-1

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. H. Gussman
Superintendent.

State: *PR*

DESCRIPTIVE REPORT.

Hydro Sheet No. 2640

LOCALITY:

See

2632

1903

CHIEF OF PARTY:

P. A. Walker

2640

2632

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TREASURY DEPARTMENT

U. S. COAST AND GEODETIC SURVEY

O. H. TITTMANN-SUPT.

WEST COAST OF PORTO RICO

(~~Unannotated~~)

Soundings beyond limits of sheet 2640

Off Shore Hydrography

P. A. Welker, Assist., Chief of Party

Steamer BACHE

Mar. ¹²~~10~~ to Mar. ^{Feb 27}~~10~~

1903

Scale: 1:80000

0 1 2 3 4
 Naut. Miles

0 1 2 3 4
 Statute Miles

Positions protracted by Wm. Sanger. *+ F. C. Dorn*
 Soundings plotted by Wm. Sanger. *+ F. C. Dorn*
do Sailed by F. C. Dorn

2632-3-4-40

POST-OFFICE ADDRESS: U.S.S. BACHE,

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

U. S. C. & G. SURVEY,
LIBRARY AND ARCHIVES

AUG 6 - 1903

Acc. No.

U. S. COAST AND GEODETIC SURVEY, Str. "Bache",

Baltimore, Md.,

June 30th, 1903.

Mr. O. H. Tittmann,

Superintendent, U.S. Coast and Geodetic Survey,

Washington, D. C.

S i r :-

In obedience to "Instructions and Memoranda for Descriptive Reports", 1887, I beg leave to submit the following report on Hydrographic Sheets, Nos. 2633, 2640 + 2632, the first mentioned being upon a scale of 1:20000, the Second, on a scale of 1:40000 and the third, on a scale of 1:80000. The work represented upon the three sheets was executed during the month of February and March, 1903, and comprises an hydrographic survey on the West Coast of Porto Rico, from the harbor of Mayaguez to Point Jiguero, extending out from shore to a distance of approximately ten nautical miles.

The most important part of the work consisted of the development of the approaches to the harbor of Mayaguez and the examination for reported banks and shoals without definite descriptions or locations.

In the execution of the work the plan called for in your instructions of January 6th. was followed as near as practical, the

work being carried forward from Mayaguez to the northward to Point Jiguero. Tourmaline Reef was developed and also the region about the spot marked "P.D.", to the northwestward of the same. Although this spot was thoroughly sounded and dragged no dangerous rock was found. There is an extensive bank, however, in the locality, which rises out of deep water, with the least depth of about thirteen fathoms. The shoalest part of the bank can easily be identified on account of the disturbed condition of the water about the locality. There are no indications of shoals in the vicinity of the spots marked Guadeloupe Bank and Peregrina Reef, although other shoals were found within a mile or two, which were probably the spots referred to and which were not originally correctly located. Special examinations were also made in localities requiring the same, in accordance with your instructions.

The method of locating positions of soundings used in the survey was by simultaneous sextant angles and the three point problem. The signals had been located by means of triangulation and the plane table. Lines were run at various distances apart according to the necessity shown by indications in the soundings. Where close development was necessary lines were run from 25 to 200 metres apart, while in the very deep water to the northward only occasional soundings were taken at from one half to one mile apart, the depth in this region being from 100 to 400 fathoms.

The shoals and reefs on the west coast of Porto Rico south

of Mayaguez, ^{from} a distance of five to ten miles off shore are numerous, have not been thoroughly developed and the region should be navigated with great care. This same characteristic extends to the northward of Mayaguez, but the reefs and shoals are not so numerous, extending only about from one to two miles off shore, the region about Anasco Bay, Cadena Point, and as far as the northern limit of the work, Point Jiguero, being foul bottom. In many places coral heads and shoals rise abruptly, the lead giving little or no indication upon approaching the same. It is not an unusual occurrence to have the depth of water change very suddenly from 100 fathoms and over to as little as five fathoms.

Mayaguez with its 8000 to 10000 inhabitants is one of the chief cities upon the Island of Porto Rico. The harbor is spacious, has excellent holding ground for anchoring and is well protected from all seas except from the west, from which it is only partially protected. There are no wharf facilities, freight to and from steamers must be transported by means of lighters. A narrow-gauge railroad connects the city with numerous small towns for a distance of about thirty miles along the coast. The cities of Ponce and San Juan can be reached by means of part railroad and part stage connection, but the means of communication is chiefly by steamer. There is telegraph connection, and a daily mail is received. Ship supplies and provisions are plentiful and can be obtained at reasonable prices. The city is supplied with an abundance of good fresh

water and special arrangements can be made for obtaining this along side of vessels in lighters. The city is well lighted, clean and healthy. There is a charitable hospital, with no regular fee, although each patient is permitted to donate for services rendered. Although there is telegraphic and cable communication, no time signal is received, and no weather signals are displayed. The entrance to the harbor is well buoyed and for use at night there is a set of range lights. There is no life saving station. A wreck would hold together for a long time upon the reefs close to shore, but only for a short time upon the outer reefs

The appearance of the shore is, at the upper limit of the sheets, a narrow strip of low land, covered near the beach with cocoanut trees, and back of this a low broken range of hills. Toward the lower limits of the sheets, the low land extends farther into the interior, with the back lying hills ~~///~~ higher, reaching an elevation of approximately two thousand feet.

There are extensive sugar plantations and refineries scattered over the region. The exportation of sugar, molasses and hats woven from palm are the chief exports. The inhabitants are mostly labors upon the plantations and are very poor. The wages paid varying from forty to sixty cents per day. There are but a limited amount of imports the natives subsisting mostly upon fruits raised in the locality.

With the exception of Mayaguez, there are no towns of

commercial importance in the locality. Tres-Hermanos, Corséca and Rincon are stations where trains on the railroad make stops. Rincon, the largest of these has a population of about three hundred.

During ordinary weather numerous places for landing with small boats upon the outer beach can be found, but during rough weather or while there is a heavy sea running it is always dangerous, in such cases, when necessary, the sandy spots upon the beach should be selected, in most all other places there are apt to be found boulders and outlying rocks. During rough weather it is very dangerous to attempt a landing anywhere between Cadena Point and Point Jiguero. Vessels in navigating this locality should not approach this shore closer than one mile. Peregrina Reef makes out to the Southeast of the sugar factory at Corséca, this factory can be identified by its large red smoke chimney. From the outer end of this reef the depth of water increases very quickly and shoal soundings with the lead would probably not give a vessel sufficient warning to avoid running upon the reef.

The general character of the bottom on the region sounded is of a fine grey sand mixed with mud, interspersed with reefs of rock and coral. The water is very clear and shoal spots can be seen by keeping a sharp lookout, the indications at a distance being usually a change in the color of the water.

During the season while engaged upon this work the weather was almost continuously fair, but on account of prevailing strong

trade winds, causing rough seas, there were few days available for close development of shoals, which required launch work and great accuracy. The steamer with few exceptions was engaged upon all days when the weather was favorable.

There are no facilities for hauling out vessels anywhere upon the island of Porto Rico. The nearest dry dock is at St. Thomas, Danish West Indis.

In accordance with instructions the season was closed on March 20th. Much additional examination is required in the locality before the survey can be considered as completed.

I desire to acknowledge, herewith, the assistance rendered by Mr. E. B. Latham, Assistant, C. & G. Survey, in the furnishing of information for the preparation of this report.

The following is a summary of the work accomplished upon the three sheets:

Number of miles (geographical) run while sounding	895.0
Number of angles measured-----	8050
Number of soundings-----	18924
Area sounded in square geographical miles-----	145.0

Respectfully yours,

P. A. Walker

Assistant, U.S.C. & G. Survey,

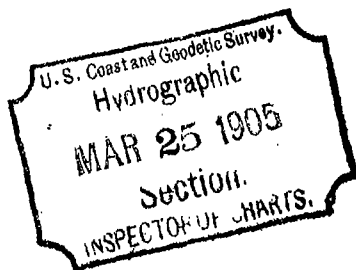
Commanding.

Report
on
Hydrographic Sheet
No. 2633.
West Coast of Porto Rico,
Point Jiguero to Mayaguez Bay.
Assistant Welker.
1903.

Some signals used not located, and no data for locating. Boat sheets not sent in. Two signals used with doubtful names. No changes in names of objects used. 54 rejected positions; 39 changes in angles. The numbers and letters marking boat positions too near the position mark.

Sub-sketches were made of Outer Manchas, the shoal S. E. of same, and Rodriguez Shoal on 1-10,000 scale in order to better combine with former work.

F. G. Donn. (Signed).



Sheet 2640

U.S. Coast and Geodetic Survey
O.H. Littman Supt

West Coast of Porto Rico
~~off~~ ~~Shoal~~ Hyd.

~~From~~ Point Figuero to Point Guanajibo
Steam Bache

from February 5 to 20 1903

P.A. Walker ^{asst} Chief of party.

Scale 40000

Statute —

Naut Mile —

Register No 2640

The Soundings are expressed in fathoms and ~~reference~~ ^{Show the depth}
at Mean Low water. The plane of Reference

~~the 18 ft curve is shown thus~~

12	"	"	"	"	_____
18	"	"	"	"	_____
24	"	"	"	"	_____
30	"	"	"	"	_____
36	"	"	"	"	_____
60	"	"	"	"	_____
600	"	"	"	"	_____

Sheet 2640

Table of Reference

Date 1900	Letter	Book	Date	Letter	Book
Febry 5	A	1	March 10	RU	3
6	B	1	11	XV	3
7	C	1	12	YW	3
9	D	1	13	ZX	4
10	E	1	14	#Y	4
11	F	1	16	XZ	4
12	G	1	17	A'	4
13	H	1	18	B'	4
16	J	1	19	B'C	4
17	K	1	20	B'D	4-5
18	L	1-2	19	B'A	6
19	M	2	Febmary 19	D'a	9-11
20	N	2	24	#b'	9-11
21	O	2	25	c'	9-11
26	P	2	26	d'	11
27	Q	2	24	a'	15-17
March 6	R	2-3	25	b'	15-17
9	T	3	26	c'	17

From letter Str Roche

Red letter
Launched 21

Blue letter
From Launched

Total 36 day = 10 Books = 3404 Angles = 6292 Soundings = 579.5 Miles
118 Square Miles

Hyd. 2640

Notes on field and office work for sheets 2632-33 & 40

Boat sheets not sent in to office

Two signals used with double names

54 rejected positions not including those where both positions and soundings were rejected.

110 changes in names of objects used

29 changes in angles.

The numbers and letters marking positions of boat are placed so near the position mark or line as to be covered by the soundings.

signed

A. C. Down

Copy

July 27, 1903

(Original with sheet 2632)

Sheet 2632

Table of Reference

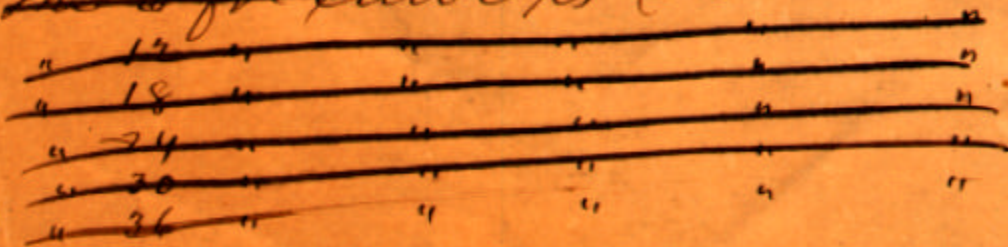
Date 1900	Letter	Book
July 20	N	2
" 27	Q	2
March 12	W	3
" 17	A'	4
" 19	A''	6

St. Lucie

Total Sounding 5 miles with sheet 2640
20 sq miles

The Soundings are expressed in feet and show the depth at Mean low water the plane of reference.

The 6 ft curve is shown thus:



The 120 ft curve is shown thus

" 600 " " " " "



Notes on Field + office work for Shub D 632-33 + 40
West Coast of Porto Rico R. A. Miller 1903

Boat sheets not sent in to office

Two signals used with double names.

54 rejected positions not including those where both
position and soundings were rejected.

110 Changes in names of objects used.

29 changes in angles.

The numbers and letters marking positions of boat are
placed so near the position mark or line, as to be
governed by the soundings.

F. L. Somers
July 27th 1903