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Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

....., *Director*

State: Florida

DESCRIPTIVE REPORT

~~*Topographic*~~ / *Hydrographic* *Sheet No.* B 4645

LOCALITY

Charlotte Harbor

Boca Grande

1927

CHIEF OF PARTY

R.P. Eyman

GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT

to

ACCOMPANY

HYDROGRAPHIC SHEET "B"

DESCRIPTIVE REPORT TO ACCOMPANYX HYDROGRAPHIC SHEET "B"

1. Authority.

Survey made under direction of Raymond P. Eyman, Commanding Steamer HYDROGRAPHER, under instructions from the Director dated October 21st, 1926.

2. Limits.

The limits of the hydrography on this sheet are from Lat. 26° 40' N to 26° 45½' N and from Long. 82° 13-3/4' W to 82° 19' W. This comprises ship work of the channel into South Boca Grande; Launch work on each side of the channel from the beaches of La Costa and Gasparilla Islands to the 18 foot curve, the area between the two islands, and extends to the eastward of these islands to the limits of the project and northward to and including the channel entrance to the town of Boca Grande. The positions and soundings for the outer channel lines extending from the lighted bell buoy in toward Boca Grande were replotted from Volume 4, A sheet to give a better conception of the character of the bottom; these positions are shown on the sheet in green ink and were as follows:

106 E	-	115 E	left hand dredge range
116 E	-	125 E	right hand dredge range
126E	-	135 E	center range
1 F	-	15 F	Wat and right hand front range
16 F	-	28 F	Red and left hand front range

The ~~fifth~~ sixth channel line was 125 E to 139 E, B sheet, range; red and right hand front range.

It was found on plotting up this sheet that these positions did not fall exactly on the ranges indicated due apparently to slight distortions in the sheet, as the protractor and all positions were carefully checked to determine the reason for this discrepancy. It will be noticed

that these same positions as plotted on Sheet "A" fall on their respective ranges.

3. Scale.

The scale of this sheet is 1 to 10,000.

4. General Description of the Coast.

The coasts of these islands are low, sandy and gentle sloping. The Islands are covered with palmetto, palms and grass on the higher spots and mangrove in the swampy low lying land. In the small town of Boca Grande there are large pine trees which are prominent from off shore. None of the land is more than a few feet above sea level. The shore of Gasparilla Island has a north and south trend while that of La Costa Island is north north west to south south east.

5. Outlying Dangers.

There is an extensive shoal with hard sand bottom to the south of the channel extending from the small sand bar close to the beach to a point about 1½ miles from shore with a least depth of two feet. An extensive shoal with hard sand bottom on the north side of the channel, extends from close inshore to 3½ miles off shore. The least depth on this shoal is two feet.

There is a very dangerous area 3¼ miles S.W. of Gasparilla light on the north side of the channel in 12 feet of water. In this area there are several old piling extending to the waters surface at low tide. There are so many of these and they are so dangerous to any kind of craft that the launch did not get closer than 20 meters to them. They cover an area about 200 meters long running in an E. and W. direction ~~to the channel~~.

There have been several wrecks reported in this area and one old submerged boiler and engine was located the least depth of water on this boiler being 4 feet.

In making a landing at the smaller docks at South Boca Grande there is a dangerous area at the end of the old railroad dock. This area is about 20 meters square and is full of old piling, part of which are broken off at the waters edge. This area is shown on a large subplan sketch on this sheet.

6. Currents Tidal.

The tidal currents set through the channel to Boca Grande to the N.E. with flood tide and to the S.W. with ebb tide. The ordinary velocity for neep tide is from 1.5 to 2 knots but reaches a velocity of about 3.5 knots with the spring tide.

There is an area close to the southern point of Gasparilla Island and right at the edge of channel and extending out into the channel where at times the currents are very strong and changeable in direction. There are moderate tide rips in this area at times. These currents make it almost impossible to get satisfactory soundings and positions in this area.

7. Landmarks.

In approaching the vicinity of Boca Grande there are several out standing objects which would help to determine ones location. On the south end of Gasparilla Island there is a black water tank 145 feet high and a brick chimney to the south of the tank and close to it. The height of this chimney is 125 feet. In this same vicinity and close to

the end of the island is a large shed used for storing phosphate which has a very light color.

To the north of these objects along the shore of Gasparilla Island there is another tall light tower painted red; at present; this is the rear range beacon for the dredged channel into Boca Grande Channel

Just to the north of this tank in the small town of Boca Grande there is a group of tall pine trees; the only pine found along this part of the Gulf Coast.

When entering the small harbor of Boca Grande, on the east side of Gasparilla Island, the entrance is narrow and not very easily determined from off shore. The same group of pines just to the north of the entrance and a large low black water tank to the south of the entrance marks the channel. There are two pile beacons at the entrance to this harbor which an entering vessel would pass on her starboard side. There are also range lights for this channel the front one being red, the other white. These lights are ordinary light bulbs fastened to light poles. A dock extends out about 100 meters from shore just north of the entrance to this harbor. Since the survey the two piling mentioned above have been removed and a single pile beacon put in on the opposite or south side of the channel, see topographic sheet # 1.

There is maintained a lighted bell buoy lying 5½ miles S 48° W true of Gasparilla light. This buoy is just south of the channel range, front range pile with banner boards between two other piles. The rear range beacon is a tall tower now being constructed; it has a coat of red lead at present.

8. Bars and Channels.

The dredged channel entrance to Boca Grande has a least depth of 28 feet. There is a hard sand bar extending along the north

side of this channel for about 3 miles off shore. The least depth on this bar is 2 feet.

There is also a hard sand bar to the south of this channel a small part of which is bare at all except extremely high tides. This bar does not follow the channel but allows the channel to widen out to the southward.

There is a narrow swash channel running from the main channel at the north end of La Costa Island along the west shore of the island and between the island and the small sand bar. The least depth in this channel is 5 feet.

There is also a narrow swash channel running north from the main channel along the west shore of Gasparilla Island. The least depth in this channel is 7 feet.

The channel into the small harbor at Boca Grande will admit small boats with a draft of not over 7 feet up to the boat shed or municipal pier or to the yacht club dock.

9. Anchorages.

The best anchorage for larger vessels is just inside and to the north of the main channel to Boca Grande just off the phosphate dock. Vessels of lighter draft can go a little farther north into water of desired depth as the depth shoals from 30 feet at edge of channel as one goes north to about 8 feet off Boca Grande. The bottom here is all hard sand. These anchorages are fairly well protected from the open Gulf but would have no protection from Charlotte Harbor. They were not tested under any strenous conditions.

10. Change in Coast Line and Bottom.

The bottom was found to have changed extensively since 1860. Special care was taken in investigating these changes in depth. The area off shore along the west coast of Gasparilla seems to have filled in and the three fathom curve is farther out than shown by the chart. The narrow swash channel to the south from the main channel, along the west coast of La Costa, evidently has formed since the last survey of the area. The small bar at the entrance to this channel is of recent orgin.

11. Survey Methods.

The control for the topography was furnished by triangulation stations located in 1909 and previously. The control for the hydrographic survey was the topographic work of this survey in 1927.

All the hydrographic shoal work was done by the launch. The channel and outside development work was done with the HYDROGRAPHER.

All sounding was done with the hand lead. The positions were determined by sextant angles on shore objects located by triangulation and topography.

In the plotting of sheet "B" there were several positions which were determined from two signals which did not plot on the sheet. In order to determine these positions the two signals "Calf" and "Bee" were plotted on a sheet of paper which was fastened good at the edge of this sheet. Care was taken to prevent either sheet from slipping while using these two signals. The positions were 91e,7f,89f to 94f launch work and 6 & 7A, ship work.

Respectfully submitted,

Curtis Le Fever.

Curtis Le Fever.

STATISTICS SHEET NO. "B"

Date (1927)	Letter	Volume	Positions	Soundings	Miles Statute	Vessels
March 4	a	1	210	996	33.0	Launch
March 8	b	1-2	214	1087	38.0	Launch
March 9	c	2	60	293	12.0	Launch
March 10	d	2-3	190	917	32.0	Launch
March 12	A	4	37	132	10.0	Ship
March 14	e	3	194	1067	37.0	Launch
March 15	f	3-5	198	1112	36.0	Launch
March 16	g	5-6	190	983	37.0	Launch
March 16	B	4	30	95	5.2	Ship
March 17	C	4	100	337	24.0	Ship
March 18	h	6	73	356	15.0	Launch
March 18	D	4	30	108	3.0	Ship
March 30	j	6	94	485	17.5	Launch
March 31	k	6-7	158	689	29.6	Launch
April 1	E	4	139	501	21.7	Ship
April 1	l	7	85	404	12.5	Launch
April 2	F	8	36	124	5.0	Ship
April 2	m	7	79	354	11.4	Launch
TOTALS	18	8	2117	10,040	379.9	

TIDAL SHEET
to accompany

SHEET "B" BOAT Str. Hydrographer & Power Launch.

Gauge Used Portable Field Automatic #158

Location of Gauge Old R.R. Dock, South Boca Grande, Florida

Bench Marks. Elevation of B. M's. above 0 of tide staff.

	Jan. 13, 1927	Mar. 29, 1927. Date
# 1.	9.890	9.882
# 2.	8.382	8.368
# 3.	8.616	8.588
# 4.	7.786	7.782
# 5.	10.498	10.493
# 6.	12.464	12.465

Tide Planes.	Readings on Staff. feet.	Date.
Highest tide observed.	5.25	Feb. 19, 1927
Mean high water. (133 obs.)	3.66	
Mean half tide level.	3.17	
Mean low water. (133 obs.)	*2.65	
Lowest tide observed.	1.45	Jan. 16, & Mar. 3, 1927
Mean range of tides.	1.01	

* Note: The value of M.L.W. for plotting this sheet was given as 2.8 ft. from Office data.

JDH.

Copy for Records Section.

(11)

June 10, 1927.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
volumes of sounding records for
8
HYDROGRAPHIC SHEET
4645

Locality:
FLORIDA, GULF COAST, BOCA GRANDE.

Chief of Party:
Plane of reference is R. P. Hyman
2.7 ft. on tide staff at M L W
South Boca Grande.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

E Rude

Chief, Division of Tides and Currents.

Sheet # 4645

Surveyed in from Mar. 4 Apr. 7 1927.

Report on Inking and Verifying hydrography.

Chief of Party - Raymond P. Eyman

Surveyed by - Raymond P. Eyman & Jack C. Simmons

Protracted by - Curtis Le Fever

Soundings platted by - Curtis Le Fever.

Verified and Inked by R. C. Johnson.

Topography inked by field men.

1. The records conform to the requirement of the General Instructions but in many cases are poorly written and illegible.

2. The plan and character of development fulfills the requirements of the General Instructions and is very thorough in most places.

3.

4. The sounding line crossings were usually adequate except in region of "For" "Gas" and "Brak". There are several poor crossings in this region and it is stated in both records and descriptive report that great difficulty was experienced here to

yet satisfactory sounding because of strong currents etc.

5. The usual depth curves can be drawn.

6. The field platting was completed to the extent prescribed in General Instructions.

√7. None of drafting had to be done over by office draftsman.

8. Junctions with adjacent sheets (4644) were satisfactory ~~except near signal ...~~ OK E.R.M.

9. Further surveying does not appear to be necessary. Important areas have been thoroughly developed.

√10. Remarks. Several errors in protracting were found. Signal "tank" was often confused with "Chim" in plotting. They are very close together. The same was true of "Red" and "Wood". Much of the spacing was not accurate. The sheet was received in a rather worn and soiled condition. Note the region in small bay and river in N.W.ly corner of sheet near "Tip" and "Pile" is somewhat indefinite in regard to some positions. No fixes by angles were used. Positions were described and some are indefinite. Boat sheet does not show suffic…

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4645

HYDROGRAPHIC TITLE SHEET

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

Field No. "B"

REGISTER NO. 4645

State Florida

General locality Charlotte Harbor ~~Gulf Coast of Florida, Boca Grande Channel~~

Locality ~~Entrance and to~~ Boca Grande

Scale 1:10,000 Date of survey ~~March~~ Mar. 4 ~ Apr. 7, 1927

Vessel Steamer HYDROGRAPHER

Chief of Party Raymond P. Eyman

Surveyed by Raymond P. Eyman and Jack C. Sammons

Protracted by Curtis Le Fever

Soundings penciled by Curtis Le Fever

Soundings in ~~fathoms~~ ~~feet~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated October 21st, 1926

Remarks:

GPO