

4644

4644

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

....., Director

U. S. SURVEY
L. & A.
Acc. No.

State: Florida

DESCRIPTIVE REPORT

Topographic } Sheet No. 4644
Hydrographic }

LOCALITY

Chartotte Harbor, Approach
to Boca Grande

1927

CHIEF OF PARTY

R.P. Eyman

C. & G. SURVEY
L. & A.
MAY 16 1927
Acc. No.

DESCRIPTIVE REPORT
to
ACCOMPANY

HYDROGRAPHIC SHEET "A"

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET "A"

1. Authority.

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

2. Limits.

The hydrography on this sheet extends from Lat. $26^{\circ} 38\frac{1}{2}'$ N to Lat. $26^{\circ} 44'$ N and from Long. $82^{\circ} 13'$ W to Long. $82^{\circ} 22'$ and comprises the launch work in the channel to Useppa Island and Pelican Bay to the eastward of La Costa Island, launch work to the westward of La Costa Island from the beach to the 18 ft. curve and ship work from the off shore limits of the launch work on this sheet and Sheet "B" to the western limits of the project, also ship work in the dredged channel from the whistle buoy to buoy N 4. Part of the dredged channel hydrography is repeated on Sheet "B" for a better view of the development of the main entrance channel.

3. Scale.

The scale of this sheet is 1:20,000.

4. General description of the Coast.

The coast is low and sandy and covered with mangroves, palmettos and a few pine trees. The outer coast is the shore of two islands, La Costa and Gasparilla. The coast of La Costa Island extends from S x E to N x W true, and the coast of Gasparilla Island in a North and South direction.

5. Outlying dangers.

There is an extensive shoal with hard sand bottom extending about parallel to the shore of La Costa Island its in-ashore limit about 1/2 mile from shore, and its outer limit about 2 miles from shore. There is a least depth of 1 ft. on this shoal, and a small sand bar that is bare at minus tide, 1-3/4 mile south of the northern end of La Costa Island, and 1/2 mile off shore. There is a shoal having a least depth of 29 ft. lying 4.2 mi. off shore with the Gasparilla Island Rear Range Lighthouse bearing N-77° E (true) and the lighted bell buoy bearing S-22° E (true).

6. Currents, Tidal.

The tidal current sets through Boca Grande to the NE'ward with flood and to the S.W'ward with the ebb. The velocity is from 1.5 to 2 kn. for ordinary neep tides, and attains a velocity of about 3 to 3.5 knots with the springs. Slack water occurs from 1/2 to 1 hour after high and low water depending on the amount of tide. Slack water is of very short duration, about 10 or 15 minutes.

The set of the current is fair through the channel.

7. Landmarks.

The shore is low and gently sloping, and furnishes no natural landmarks of value in navigation. The best landmark available consists of a high black water tank, 145 ft. high with a brick chimney 125 ft. high located close to, and SW'ward from it. The tank is 1/4 mile from the south shore of Gasparilla Island, which is the north shore of Boca Grande Channel.

The large light gray colored phosphate shed and dock furnishes a good landmark because of its size and is easily identified.

There is maintained a lighted bell buoy lying 5-1/2 mi. S-48° W-true of Gasparilla Light. This buoy is just to the southward of the channel range, front object pile with banner board between two other piles, the rear object being a tall cylindrical beacon painted white on its lower part and red on its upper. (beacon is now under construction and will be lighted when finished).

This range marks the dredged channel, the greatest depth that can be taken through this channel is 28 feet. In addition to range there are channel buoys.

Smaller boats can enter on the lighted range, see descriptive report of Sheet "B" - 1:10,000 for details.

Inshore Dangers - See Sheet "B" report.

8. Bars and Channels.

The dredged channel has a least depth of 28 ft. is marked by range and buoys. There is a bar to the northward of this channel. See report on 1:10,000 sheet.

9. Anchorages.

See report to accompany Sheet "B".

10. Change in Coast Line and Depths.

The coast line and depths are constantly changing, the beach has been built up since the previous survey made in 1860 on the northern portion of La Costa Island and cutting away on the southern portion. See descriptive report to accompany Topographic sheet No. 1.

The depths were found to have changed materially since 1860, especial development being made over shoal depths found at that time, and especial care being exercised in investigating changes found.

The channel leading toward Useppe Island and Pine Island Sound also show some changes since the previous survey. The greatest depth that can now be carries thru this channel is about 8 ft.

Pelican Bay is generally rather shoal and unimportant and is only used by small boats.

11. Survey Methods.

Control for topography furnished by stations located by triangulation executed in 1909 and previously. Topographic control for hydrography from survey made by this party in 1927.

All work was done with the hand lead and positions fixed by ordinary sextant angles to shore objects located by topography and triangulation.

The major part of the inshore hydrography was done by the Launch, with Punt # 2 being used in a few localities of very shoal water. Lieut. (j.g.) Jack C. Sammons was in charge of the Launch.

Steamer HYDROGRAPHER used in doing the off shore hydrography and hydrography through the channel, Lieut. Raymond P. Eymann in Charge.

*Respectfully submitted,
Raymond P. Eymann,
Chief of Party.*

STATISTICS SHEET NO. "A"

Date (1927)	Letter	Volume	Positions	Soundings	Miles Statute	Vessels
February 28 . . .	a	1	91	474	14.5	Launch
March 1	b	1	130	697	20.25	Launch
March 3	c	1-2	50	197	5.2	Launch
March 7	d	2	81	378	14.5	Launch
March 9	e	2	110	479	13.0	Launch
March 10	f	2	11	66	2.0	Launch
March 14	A	3	121	546	40.2	Ship
March 15	B	3	120	554	41.6	Ship
March 16	C	3-4	95	477	29.9	Ship
March 17	g	2-5	229	1231	48.3	Launch
March 18	D	4	49	171	10.8	Ship
March 18	h	5	57	322	11.7	Launch
March 29	j	5-6	189	885	31.0	Launch
March 30	k	6	103	557	17.5	Launch
March 31	E	4	136	573	27.25	Ship
April 1	F	4	28	109	5.1	Ship
TOTALS . . .	16	6	1600	7716	332.8	

T I D A L S H E E T
TO ACCOMPANY

SHEET "A" BOAT str. Hydrographer. Power Launch.

Gauge Used Portable Field Automatic # 158

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

<u>Bench Marks.</u>	<u>Elevation of B. M's. above 0 of tide staff.</u>	
	<u>Jan. 13, 1927</u>	<u>March 29, 1927.</u>
# 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

<u>Tide Planes.</u>	<u>Readings on Staff</u>	
	<u>feet</u>	<u>Date</u>
Highest tide observed. _____	5.15	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.

June 9, 1927.

T. J. H.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 4644

Locality: **FLORIDA, GULF COAST, ENTRANCE TO BOCA GRANDE.**

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

G. W. de

Chief, Division of Tides and Currents.

Report on H. 4644

Survey in 1927

Chief of Party - Raymond P. Egan

Survey by R. P. Egan and J. C. Sammons

Projected by Ector B. Latham

Sounding Plotted by " " "

Verified and reduced by John G. Ladd

1. The records conform to the requirements of the General Instructions.
2. The sounding line crossings are adequate.
3. The depth curves could be correctly drawn.
4. The field plotting was complete to the extent prescribed in the General Instructions.
5. No part of the field plotting had to be done over by the office draftsman except for minor corrections caused by careless plotting.
6. The area seems to be fully developed.
7. The sheet as a whole was very sloppily done. The soundings in pencil were very irregular in

size and there was apparently no attempt
made to keep the sounding vertical. This made
it most difficult to ink the sounding with
neatness and uniformity of size of letters.

John S. Ladd

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

June 18, 1928.

AND REFER TO No. 11-DEM

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4644

Approach to Boca Grande, Florida

Surveyed in 1927

Instructions dated October 21, 1926 (HYDROGRAPHER)

Chief of Party, R. P. Eyman.

Surveyed by R. P. E., J. C. Sammons.

Protracted and soundings plotted by E. B. Latham.

Verified and inked by J. G. Ladd.

1. The records conform to the requirements of the General Instructions with the exception that no leadline comparisons appear in the records although a note at beginning of each day states, "Leadline correct."
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of the survey satisfy the requirements of the specific instructions with the exception that the work was not carried north to lat. $26^{\circ} 44'$ as called for.
4. The usual depth curves could be drawn.
5. The usual field plotting was completed by the field party. While no portion of the work had to be done over, yet the character of the field drafting was not up to standard. There were evidences of careless plotting as well as carelessness in the penciling of soundings. (See verifier's report.)
6. The junctions with the contemporary survey, H. 4645, will be taken up when that sheet is reviewed.

A comparison with the present chart No. 474 shows a number of changes to have taken place on the shoal area making out from La Costa Island. The development here seems amply close and doubtless represents existing conditions very well. Outside the 30 foot curve the present survey indicates a deepening in places of from 1 to 2 feet. It is recommended that in the new compilation the old surveys be entirely ignored and precedence be given to the new survey throughout.

7. Attention is called to the three shoal soundings shown on the present charts in the following localities:

31 feet - lat. $26^{\circ} 39 \frac{3}{4}'$, long. $82^{\circ} 20 \frac{1}{3}'$.
31 " " $26^{\circ} 40'$, " $82^{\circ} 19 \frac{1}{4}'$.
30 " " $26^{\circ} 40 \frac{1}{3}'$, " $82^{\circ} 19 \frac{1}{4}'$.

These soundings were charted from H. 797^a but in each case the depths were incorrectly shown. In all these cases the depth as plotted on the original sheet is $5 \frac{3}{4}$ fathoms, which would reduce to 34 or 35 feet. These depths agree with the depths on the new survey. Therefore the above shoal soundings should be omitted from all future editions of the charts of this locality.

8. No additional surveying is necessary.
9. Character and scope of field operations - excellent.
Field drafting - good.
10. Reviewed by A. L. Shalowitz, February, 1928.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

4644

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. "A"

REGISTER NO. 4644

State Florida

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

Locality Approach
Entrance to Boca Grande

Scale 1:20,000 Date of survey Feb. 28 ~ Apr. 1
March 1927

Vessel Steamer HYDROGRAPHER

Chief of Party Raymond P. Eymann

Surveyed by Raymond P. Eymann and Jack C. Sammons

Protracted by Ector B. Latham

Soundings penciled by Ector B. Latham

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated October 21st 1927

Remarks: