

5793

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, Director

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 3
~~Hydrographic~~ }

State FLORIDA

LOCALITY
Apalachicola Bay

~~PT. GEORGE AND CAND ISLANDS~~

West Pass & Vicinity

193 5

CHIEF OF PARTY

C. A. EGNER

5793

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 3

REGISTER NO. **5793**

State FLORIDA

General locality Apalachicola Bay
~~ST. GEORGE AND SAND ISLANDS~~

Locality West Pass & Vicinity
~~FROM ST. VINCENT'S SHOALS TO ST. GEORGE AND SAND ISL.~~

Scale 1/10,000 Date of survey FEB., MAR., APR., MAY 19 35

Vessel FIELD PARTY NO. 23

Chief of Party C. A. EGNER

Surveyed by C. A. BURMISTER

Protracted by M. C. BURR

Soundings penciled by G. C. MCGLASSON

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated NOVEMBER 30, 19 34

Remarks:

DESCRIPTIVE REPORT TO ACCOMPANY SHEET NO. 3

DATE OF INSTRUCTIONS:

The date of instructions for this work is November 30, 1934.

PURPOSE:

The purpose of this survey is to obtain data for the revision of existing charts.

AREA COVERED AND JUNCTIONS:

The area covered by this sheet is included approximately by the eastern side of St. Vincent's Shoal and the U. S. L. H. S. docks, in the east, with the shoreline of St. George's and Sand Islands on the South, a development of the 18 foot curve on the West near the approaches to West Pass and St. Vincent's Island to about latitude $29^{\circ} - 39.3$ on the North.

This sheet adjoins hydrographic sheet No. 5 on the North and East.

SURVEY METHODS:

(1) Control for this hydrographic survey was established by second and third order triangulation (C.A.Egner, 1935) which was based on a first order arc (Anderson 1934) run for this purpose. All Geographic Positions were reduced to North American Datum 1927. This third order

system was further supplemented by a topographic survey by which a continuous shore line was cut in together with various natural and artificial objects which could be used as "signals". Most of these signals were located by 3-point fixes, though stadia readings and azimuths determined several, especially those to the westward of triangulation station BEACH 1935. These were checked by re-sectioning back on triangulation BEACON 1935.

(2) Where possible sounding lines were run parallel to the axes of channels, or in cases where there might be, short lines were run in such direction as to get longest lines. The MILLER was used as a sounding launch for the larger part of this sheet, practically all depths greater than 6 feet being surveyed by it.

The usual methods of hand lead for obtaining depths with the control by three point fixes (by sextant angles) obtained. The underway speed was 600 R.p.m's of one motor which gave about 6 miles per hour. This was varied somewhat according to depth, a slower speed for the greater depths especially in the Pass proper.

The ordinary spacing in channels varied from about 50 meters at the western end of the main channel to somewhat over 150 meters where greater (relatively) depths were obtained through the Pass and inside the Bay.

All areas where it was impractical to use the MILLER as a survey boat a 25 foot Gondola, propelled by a 9 h.p. Johnson Sea horse was used. This was fitted up with a sounding chair (the one belonging to the MILLER) and plotting table, etc. At the start, a sounding pole was used to obtain

depths. This was a 15 ft. pole graduated and marked in feet and half feet, markings being so differentiated that the pole could be "tumbled", read from either end, the center mark being $7\frac{1}{2}$ feet. Accordingly, for several days soundings were recorded in feet depths ranging from about 1 foot to 14 feet and so recorded, instead of calling in fathoms and feet as required by regulations, as there was considerable chance of error by so doing. Later this method was abandoned in favor of the lead line, by which means soundings could be recorded as per instructions. A sounding pole 17 feet long would have been made to serve well, but no natural suitable one was to be had.

DESCREPANCIES:

Beacon F.R. 2 (or triangulation station BEACON 1935) shown on the chart in approximate latitude $29^{\circ}-37'$, longitude $85^{\circ}-08'$ is actually a little over a half mile to the westward with the same latitude. In general navigational beacons and aids are as shown.

Buoy No. 2 which may have marked the shoal in Latitude $29^{\circ}-37'.2$ Longitude $85^{\circ}-09'.5$ no longer exists.

In general the depths in the main channel from triangulation station BEACON 1935 to the lighthouse service dock are a little deeper than charted, the most conspicuous differences being (1) at the entrance between Sand Island and St. Vincent's Island where a depth of 52 feet is found, as against 40 as shown on the chart; (2) on the Sand Island Cut range a minimum depth of 14 feet is found as against a controlling depth of 9 feet shown as a dredged channel; (3) a maximum depth of 19 feet was found to the northward of triangulation Beacons A and B where the chart indicates a depth of 24 feet; (4) the long sand spit, East Bank, making out from Sand Id.

to the westward is of somewhat greater extent and less depth than shown on charts. A large area of a depth of 1 foot was found as against the least depth of $2\frac{1}{2}$ and 3 feet as charted. (5) The shoal area sounded in Latitude $29^{\circ}-37.2$ Longitude $85^{\circ}-09.5$ is probably the area shown on charts in Latitude $29^{\circ}-37.0$ Longitude $85^{\circ}-08.7$. Here the least depth of $4\frac{1}{2}$ feet is found as against 6 feet charted. Least soundings are 4 feet, 4th sounding after position 7 g, May 9, 1935 and $4\frac{1}{2}$ feet, 1st sounding after position 11 g, May 9, 1935. (6) A small shoal, depth $5\frac{1}{2}$ feet (5th sounding after position 1 f, May 8; 2nd sounding after position 7 f, May 8) in Latitude $29^{\circ}-37.5$ Longitude $85^{\circ}-08.6$ is not charted. (7) The long shell-rake, St. Vincent's Bar, making out to the southward from St. Vincent's point Longitude (in general) $85^{\circ}-03'$ and easterly from Latitude $29^{\circ}-37.0$ to upper limits of sheet is considerably narrower than indicated on charts while the least depth found was slightly greater than charted. No indications of the depth charted as follows:

1 foot	Latitude	$29^{\circ}-37.3$	Long.	$85^{\circ}-02.5$
$\frac{1}{2}$	"	"	$29^{\circ}-37.5$	" $85^{\circ}-02.5$
$\frac{1}{4}$	"	"	$29^{\circ}-38.0$	" $85^{\circ}-02.7$

were found by sounding, nor was there even an indication during any rough weather (by breakers) that these existed. These did not show during the many times when there were negative tides of as much as one foot. It is recommended that these be deleted from the charts.

DANGERS:

There are no other dangers than other than those shoals already described in the paragraph under DISCREPANCIES. East Bank is covered at

practically all times, except in the very calmest weather by breakers and its outline is easily distinguished. The shoal in Latitude $29^{\circ}-37'.2$ Longitude $85^{\circ}-09'.5$, though not so easily distinguishable is usually also characterized by breakers.

CHANNELS:

(1) The main channel at West Pass is passable in practically all weather. The entrance Buoy (not shown on sheet) may be approached from any direction from Southeast to West. The Buoys in general mark the channel accurately, but one should not try to approach directly from F.R. 2 to 2 A (Ref) as the shoal (Lat. $29^{\circ}-37'.2$ Long. $85^{\circ}-09'.5$) is in the way. A better approach would be to line up the Beacon (triangulation station Beacon 1935) F R 2 and St. George's Light House on range until one is near the beacon, then to swing on to the "West Pass" Range. This would allow a clear passage (margin of 100 yards) of the shoal, but would not necessarily keep the buoys on the covered side. The least depth on this range is $10\frac{1}{2}$ feet (Lat. $29^{\circ}-37'.2$ Long. $85^{\circ}-09'.45$). Vessels drawing more than 7 feet seldom enter the Bay from this direction.

From the Beacon F. R. 2 to the turning buoy on "West Pass" range there is a controlling depth of 11 feet about 75 yards to the northward of the beacon.

The controlling depth on Sand Island Cut Range is (as previously stated) 14 feet.

(2) A channel used to considerable extent by small boats, especially fishermen, is found immediately to the westward of and paralleling, roughly, Sand Island. One can line up the shore of

Sand Island about two hundred yards on the port hand until he heads approximately S. E. X S, or 147° T. A controlling depth of 6 feet obtains in Lat. $29^{\circ}-37'.2$ Long $85^{\circ}-05'.7$. This channel is passable, in all but the heaviest weather, from the Southwest or West.

ANCHORAGES:

Excellent anchorages are found in the area northward of "West Pass" range on the extension of Sand Island Cut Ranges. Depths of 10 to 12 feet with good holding ground are found. Many fishermen use this area. The area marked Lower Anchorage on the charts is also excellent in any weather except northerly.

COMPARISON WITH PREVIOUS SURVEYS:

There is really no comparison between this survey and the charts in current use, due to the antiquity of the chart information.

TIDES:

For the vertical control of this sheet, a tide gauge was established on the U. S. Light House Service dock (about three miles south eastward from West Pass) in Lat. $29^{\circ}-36'.22$ Long. $85^{\circ}-02'.56$. The date of establishment was Feb. 13, 1935 and a continuous record was obtained until the date of dismantling.

The plane of reference as determined and used for this sheet corresponds to 2.50 feet on the tide staff.

This plane was determined by direct comparison with Standard Tide Gage at Pensacola. It is believed now that with a longer series available, some alteration in this plane will be made.

Curves have been drawn up for tide reducers covering the days effected by this gage and are made a part of this record.

The large discrepancies noted already are probably due to natural forces, erosion and building up by the tide efforts, the dredging of Sand Id. Cut being instrumental to eroding the channel deeper by the tide.

GEOGRAPHIC NAMES:

There are no changes in or additions to geographic names already in use.

STATISTICS:

It is to be noted that "D"day (March 20, 1935) is in volume #2 following "B"day; and "C"day (March 18, 1935) is in volume #3 followed by "E" day.

BUOY LOCATION:

Location of Buoy C+1, C-3, FLR 2, N-2 A, and N-2 B were located by signals cut in by topography rather than by angles on tangents as these were too indefinite to give good positions.

Respectfully submitted,

Clarence A. Burmister
Clarence A. Burmister,
Lieut.(j.g.) U.S. C.& G.S.

Approved and forwarded,

C. A. Egner
C. A. Egner, Lieut.,
Chief of Party #23.

LIST OF SIGNALS TO ACCOMPANY SHEET NO. 3

TRIANGULATION

Rear Range "A" (Ax)
Front Range "B" (Box)
Front Range "C" (Cow)
Front Range "D" (Dog)
Rear Range "E" (Egg)
Ank
Beach
Beacon (Beak)
Vin
West Pass (Pass)

TOPOGRAPHIC

Boat Hal
Cor Rear
Dol Sand
Girl Them
House Those
Hern They
Its Toe
Lar Us
Me Why
Met You
Milly

STATISTICS FOR SHEET #3

DATE	DAY LETTER	BOAT	SOUNDINGS	POSITIONS	MILES	VOLUME
Feb. 6	A	MILLER	1300	314	42.0	1
Mar. 15	B	"	565	101	19.0	1
Mar. 15	B	"	237	45	10.0	2
18	C	"	426	103	18.0	<u>3</u>
20	D	"	881	171	38.5	<u>2</u>
21	E	"	580	116	26.0	3
Apr. 4	F	"	554	130	26.5	3
8	G	"	160	43	7.3	4
10	H	"	344	88	17.0	4
Mar. 21	a	GONDOLA #3	217	59	6.0	1
22	b	"	948	206	33.5	1
26	c	"	494	130	15.5	1
26	c	"	481	108	14.8	2
Apr. 9	d	"	279	125	15.6	2
10	e	"	655	180	23.4	2
10	e	"	275	105	10.3	3
May 8	f	"	186	49	4.1	3
9	g	"	139	36	4.4	3
TOTALS.....			8721	2109	331.9	

HYDROGRAPHIC SURVEY NO. H5793

Smooth Sheet 1

Boat Sheet 1

Sounding Records 7 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes in Vol. 4

Landmarks for Charts (Form 567) ~~No~~ yes

Statistics Yes

Approved by Chief of Party C. A. Egner

Recoverable Station Cards (Form 524) _____

Special Chart for Lighthouse Service _____
(Circular Nov. 30, 1933)

Remarks _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..5793


The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	2109
Number of positions checked	277
Number of positions revised	25
Number of soundings recorded	872
Number of soundings revised	150
Number of signals erroneously plotted or transferred	None

Date:

Verification by J.E. Lynch

Inked by Miss Brinkley

Review by 

Time: 61 hrs.

21 "

Time: 13 hrs.

522

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 11, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in
7 volumes of sounding records for

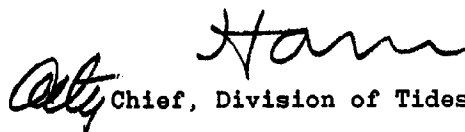
HYDROGRAPHIC SHEET 5793

Locality West Pass and Vicinity, Apalachicola Bay, Florida

Chief of Party: C. A. Egner in 1935
Plane of reference is mean low water reading
2.5 ft. on tide staff at St. Georges Lighthouse Dock
6.8 ft. below B.M. 1

Height of mean high water above plane of reference is 1.2 feet
at St. Georges Lighthouse Dock.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Verifiers Report Sheet H. 5793

7/17/38

The records conform to the requirements of the General Instructions. The depth curves were generally satisfactory as plotted by the field draftsman; ~~the field plotting on the boat sheet however showed sloppy protracting as some stations were guessed at apparently without being plotted.~~ At Lat. $29^{\circ}-37.3$ + Long. $85^{\circ}-06.3$ an effort was made by the verifier to improve the curve at the crossing but could establish no justification for boat sheet plotting.

On "3" day also for position No. 19 the signal used, namely "Point" is beyond the scope of the survey; the location on the smooth sheet checks with the boat sheet however.

No Transfers were made as the adjacent sheet were being worked on J. E. Lynch.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5793 (1935) - FIELD NO. 3

West Pass and Vicinity, Apalachicola Bay, Florida

Surveyed in 1935

Instructions dated November 30, 1934

Hand Lead and Pole Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - C. A. Egner.
Surveyed by - C. A. Burmister.
Protracted by - M. C. Burr.
Soundings penciled by - G. C. McGlasson.
Verified by - J. E. Lynch.
Inked by - H. V. Brinkley.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

2. Compliance with Instructions for the Project.

This survey satisfactorily complies with the instructions for the project.

3. Shoreline and Control.

The shore line and control signals are from T-5508 (1934) and T-6309a and b (1935).

4. Sounding Line Crossings.

The cross lines are adequate and satisfactory.

5. Depth Curves.

The usual depth curves can be satisfactorily drawn including the low water curve along the north side of St. George Island.

6. Junction with Contemporary Surveys.

The junction with H-5794 (1935) is satisfactory.

There are no contemporary surveys joining the present survey on the outside coast. The present survey at its limits and junction with H-2593 (1902) is in satisfactory agreement.

7. Comparison with Prior Surveys.

a. H- 654 (1858)	H-2265 (1895-96)	Misc. 12a (1853)
H- 747 (1860)	<u>H-2593 (1902)</u>	<u>Misc. 12b (1853).</u>
<u>H-1265b (1874-75)</u>		

A comparison between the above surveys and the present survey reveals numerous changes (both natural and artificial) in depths and locations of shoals as well as changes in shoreline. Some of the more important natural changes are shown by the general deepening on the bar in approximate longitudes 85° 02.4' to 85° 03.0', latitude 29° 37.1' northward beyond the limit of the sheet. The shoalest charted depths on this bar, the 1/4 foot in lat. 29° 38.0', long. 85° 02.7' (from H-747); the 1/2 foot in lat. 29° 37.5', long. 85° 02.5' (from H-2265); and the 1 foot in lat. 29° 37.3', long. 85° 02.5' (from H-2265) were not found on the present survey. They were investigated at various times during the progress of the work and during a minus 1 foot tide, but no indication of their existence was observed. (See Descriptive Report, page 4). These soundings fall in depths of 3 feet on the present survey, and should be disregarded in future charting. Because of the time elapsed between the earlier surveys and the present survey, the general character of the bottom as well as subsequent dredging operations, and the fact that the present survey is better developed than any of the previous surveys it should, within its limits, supersede all of the above surveys for charting purposes.

8. Comparison with Chart 183 (Corrected to April 16, 1934).a. Hydrography.

Within the area of the present survey, the chart is based on surveys discussed in the preceding paragraph and U. S. Army Engineers Survey Bp. 25985 (1932). Although the Engineers survey is not as well developed as the present survey there is evidence of some changes in the configuration of the bottom at the entrance to West Pass.

Because of the changeable nature of the bottom at the entrance to West Pass together with the fact that the present survey is better developed, this blueprint (No. 25985 (1932)) should be superseded by the present survey for charting purposes.

b. Aids to Navigation.

The aids to navigation are located on the present survey in substantially the same position as charted, except Beacon FR2

(lat. 29° 36.95', long. 85° 08.57') which is about one half mile west of its charted position. The authority for the charted position is L. H. N. to M. 36 and 37 of 1934. This beacon was located by triangulation in 1935 and its position verified by the hydrographic party on May 9, 1935. The location of Beacon FR2 should be applied to the chart as given on the present survey, H-5793 (1935).

Buoy N2 which is charted in lat. 29° 37.2', long. 85° 09.5' is noted by the hydrographer as no longer existing. (See D. R. pg. 3).

- c. The charted controlling depth of 12 feet (January, 1935) is superseded by Chart Letter 805 of June, 1935, which gives a controlling depth of 10 feet. This is in substantial agreement with the present survey which shows a controlling depth of 10½ feet at lat. 29° 37.2', long. 85° 09.45'.

9. Field Plotting.

The protracting and plotting are satisfactory.

10. Additional Field Work Recommended.

This survey is complete and no additional work is required.

11. Superseding Old Surveys.

Within the area covered the present survey supersedes the following surveys for charting purposes:

H- 654 (1858) in part.	H-2265 (1895-96) in part.
H- 747 (1860) " "	H-2593 (1902) " "
H-1265b (1874-75) in part.	Misc. 12a (1853) " "
	Misc. 12b (1853) " "

12. Reviewed by - Leo S. Straw, October 5, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

F. S. Borden
Chief, Section of Field Work.

L. O. Abbott
Chief, Division of Charts.

G. H. Wade
Chief, Division of H. & T.

Applied to Chart Cor 1114 June 15, 1938. H. E. MacEwen
Partially applied to Chart 183. Oct 939. J. H. S.
Applied to Chart 1262 - Jan 1940 - J. H. S.
" " " 866 WEB 7/1/46