

5791

U. S. COAST & GEODETIC SURVEY
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MAY 27 1935

Acc. No. _____

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 1.
Hydrographic }

State Florida

LOCALITY
Gulf Coast, St. Vincent Sound
(Western Part)

1935

CHIEF OF PARTY
C. A. Egner

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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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. 1

REGISTER NO. **5791**

State Florida

General locality Gulf Coast

Locality Apalachicola, St. Vincent Sound (Western Part)

Scale 1/10000 Date of survey March-April, 19 35

Vessel Party No. 23

Chief of Party C. A. Egner

Surveyed by R. E. Dille, Surveyor; Geo. Fortune, Surveyor.

Protracted by M. C. Burr, C. A. Egner.

Soundings penciled by G. C. McGlasson, C. A. Egner.

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by _____

Inked by Ben. Schlauchman; Bowers (Bowers time 19 hrs.)

Verified by Irvin Michaelson, Ben. Schlauchman

Instructions dated Nov. 30, 1934., 19 _____

Remarks: _____

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC

SHEET NO. 1 (Field)

INSTRUCTIONS:

This sheet was executed under instructions dated November 30, 1934, covering operations of Field Party No. 23, as a part of the combined project from Apalachicola Bay to Mobile Bay.

PURPOSE:

To provide a comprehensive resurvey of the western portion of St. Vincent Sound and Indian Lagoon and to develop the channel and bar of Indian Pass. The last previous survey of this area was done in 1914 (H.C.Denson) supplemented in 1915 by a survey of the Oyster Bottoms by the U. S. Bureau of Fisheries. This latter survey used U. S. C. & G. S. control exclusively, and was done only to define and identify the areas of oyster bar formation.

Since this oyster bar formation is a changeable one a major purpose of this survey has been to take an unusually large number of bottom characteristics to define the areas of oyster formation.

LIMITS:

This sheet joins sheet #2 on the eastward at a point, roughly, midway of St. Vincent Island and covers the western portion of St. Vincent Sound and Indian Lagoon as well as Indian Pass and approaches from the Gulf.

METHODS:

All sounding was done with the hand lead operating from GONDOLA #2, a hydrographic boat of shallow draft driven by an outboard motor.

All hydrography was controlled by sextant fix on shore signals located by triangulation and topographic intersection (no traverse); except a small portion of the work in the Bayou in the north shore of St. Vincent Island a part of which falls on this sheet. This part was controlled by sextant fix on signals spotted from aerial photographs and by direct spotting from the photographic shoreline.

CONTROL -- HORIZONTAL:

The triangulation covering this Sound was of third order accuracy forming part of a continuous scheme tied at either end to 1st order control of 1934-35 by Lt. Anderson. This triangulation was based on a recovered line of 1914 (N.A. Datum) and was all reduced to the N.A. 1927 adjusted Datum before plotting on the sheet.

All topographic signals were located by intersection from the triangulation stations or from 3-point fixes based thereon. No traverses were run.

CONTROL -- VERTICAL:

All soundings were reduced to mean low water as determined from a Portable Automatic Gage established at the Lighthouse Dock on St. George's Island about 3 miles E.S.E. of West Pass.

Tides in this area are small, and wind conditions distort the regularity of them to such an extent that in these shoal waters the rise and fall may be counter-acted altogether.

It is obvious, therefore, that for a localized area such as this sound is there may be some error in the reducers used. It is believed that this is the primary cause of the discrepancies obtained in line crossings at a few points on the sheet. It is further believed that the plane of mean low water as determined for the staff at St. George's Lighthouse Dock may be somewhat in error. This plane was determined by direct comparison with the Pensacola Standard Gage from a short series early in the season. Now that marigrams covering several months of observations are available for this gage, it is suggested that a redetermination of this plane would give a better value.

DESCRIPTION OF THE AREA:

The main body of water on this sheet is badly broken up by oyster bars. Oysters are being taken from this locality constantly, and it is inevitable that these operations deplete some beds. At the same time other beds are forming so that as the years go by a gradual change takes place while, however, not altering the general character of the bottom. The water is quite shoal and becomes quite rough on short notice. Storms from the Gulf lash the north coast of the Sound with the result that the shoreline, at least as far westward as Mile Eleven (measured from Apalachicola), is gradually receding. This was quite noticeable in attempting to recover triangulation stations of the 1914 scheme. All along this north shore had been washed out.

Midway between the eastern limit of the sheet and

Indian Pass, a natural barrier of oyster bars has formed across the Sound, leaving only a narrow channel, known as "Big Gully". It is surprising that in this "Big Gully" a depth of 33 feet was obtained whereas the approaches are of one fathom or so. This must be due to scouring action of the current which runs swiftly through this gap.

Westward of "Big Gully" the water gradually deepens in a well defined and regular channel from 8 or 9 feet to Indian Pass which is comparatively deep due to current action.

The bar across the Gulf approach to Indian Pass has a controlling depth of 6 feet though no definite channel is visible in the line of breakers.

No buoys or marks indicate this channel, which is seldom used by other than fish boats in good weather with plenty of local knowledge for guidance. This bar is shifting one.

The approach to Indian Lagoon is devious, shoal, and leads to an area still shoaler. Indian Peninsular is Apalachicola's Bathing Beach (and a good one). A few cottages are found here with small dock on the Indian Lagoon side for several shallow draft boats.

The Lagoon in the north shore of St. Vincent Id. has no value. Oyster bars are found rather promiscuously in this lagoon.

DEVELOPMENT OF OYSTER BARS:

No attempt was made to fully develop all indications of oyster bars, though split and cross lines were run to delineate the major ones. An unusually large number of bottom characteristics were obtained in the course of the hydrography to assist in defining these bars.

PHOTOGRAPHIC SHORELINE:

All the shoreline on this sheet was taken from that compiled by the photo-reduction party under Lt. Reese at Pensacola, checked by numerous field inspection points throughout the area.

It will be noted that in numerous cases oyster bars appear with much different limits than those actually located by the hydrographic party. That gotten by the hydrographic party is the more accurate, as the photos show the bars at a stage of tide not close to low water, and are necessarily approximate. The same holds true of marshy areas opposite Indian Pass.

COMPARISON WITH PREVIOUS SURVEYS:

In general, the depths obtained follow the previous survey.

There is now 6 feet across Indian Pass bar whereas 7 feet is shown on chart 183.

"Big Gully" shows 33 feet as in the earlier survey.

Bottom contours are, in general, about the same.

DEPTH CURVES:

No consistent attempt was made to define the zero curve along the shores of the sound. The tide is so small that much delay would have been occasioned to do this at selected high waters, without providing much of value. Furthermore, along the north shore where the beach has receded stumps and snags prevent a close approach with a boat and outboard motor.

In part of the area where oyster bars are so numerous it happens that split lines were run on a day of unusually high water. As indicated above under "Control -- Vertical" it is believed a slightly erroneous plane of M. L. W. has produced crossings which consistently disagree. It is thought this will iron out later.

SURVEY OF BUREAU OF FISHERIES IN 1915:

A photostat copy of the Oyster Bottom survey in 1915 accompanies this sheet (together with Sheet #2). Numerous bars are shown thereon which do not appear definite on this years resurvey.

Also, numerous names appear on this photostat for which we have no other authority. It has been considered best to omit these names leaving their future charting to office decision.

COAST PILOT NOTES:

These are being prepared for the season's work as a whole.

STATISTICS:

Table accompanies this report.

LIST OF SIGNALS:

One copy with this report, duplicate under fly leaf of Volume #1.

TIDAL DATA:

Sheet accompanies this report.

Respectfully submitted,



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

STATISTICS FOR HYDROGRAPHIC SHEET NO. 1

DATE	DAY LETTER	BOAT	SOUNDINGS	POSITIONS	MILES	VOLUME
2/20/35	a	GONDOLA #2	663	173	16.66	1
2/21	b	"	636	178	16.	1
2/25	c	"	444	129	9.78	1 & 2
2/26	d	"	328	92	9.54	2
2/27	e	"	64	64	2.0	2
2/28	f	"	22 67	29	1.2	2
3/4	g	"	386	105	10.35	2
3/5	h	"	533	148	15.2	2
3/5	h	"	301	82	8.1	3
3/6	j	"	502	143	14.0	3
3/8	k	"	583	148	16.3	3
4/22	l	"	258	70	8.1	3
4/23	m	"	478	139	15.6	4
4/25	n	"	544	152	14.4	4
4/26	p	"	532	142	15.1	4
4/26	p	"	284	82	8.2	5
4/29	q	"	402	125	9.0	5
4/30	r	"	257	51	7.0	5
TOTALS			7259	2052	196.53	

SIGNALS FOR HYDROGRAPHIC SHEET NO. 1

TRIANGULATION

Oyster House "9"
Hoppe 2 1935
Oyster House "11
Hays 2
Lone Palm
Cedar 2 1935
Ragged Point 2 1935
W. Tank
E. Tank
Pass 2 1935
Bar 2 1935
Bayou 2 1935
Grove 2 1935

Photo Spot

All
 Spot

HYDROGRAPHIC

By

TOPOGRAPHIC

Louy Da
 Dar Gal
 Kink Log
 Ach Gat
 Dur Bil
 Zam Cory
 Ala Sap
 Pel Put
 Man Dro
 Red Hi
 Rosy Gun
 Sid Him
 Pig Nu
 Ed Rab
 On Let
 Tu Raz
 It Rog
 Dog Dos
 Cat Zoo
 Ex Bay
 Ram Lat
 Ar Man
 El Ke
 Bo Sno
 Ot Rain
 Lu
 Ig
 Ro
 Tag

HYDROGRAPHIC SURVEY NO. 5758

Smooth Sheet 1

Boat Sheet 1

Sounding Records 5 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes in Vol. 1

Landmarks for Charts (Form 567) No yes.

Statistics Yes

Approved by Chief of Party C. A. Egan

Recoverable Station Cards (Form 524) _____

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

Remarks _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..5791

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

Number of positions on sheet	2052
Number of positions checked	115
Number of positions revised	4
Number of soundings recorded	7259
Number of soundings revised	60
Number of signals erroneously plotted or transferred	0

Date:

Verification by **IRVIN MICHAELSON**
B. Schlockman

Time: { 27 hrs.
34 hrs.

owers time 10 hrs.

Review by

Lois Straw

Time: 144

200

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 14, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5791

Locality St. Vincent Sound (Western Part), 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

Condition of records satisfactory except as noted below:

P. Schurman
Acty Chief, Division of Tides and Currents.

Section of Field Records

Report on H-5791

Chief of Party C.A. Egener

Protracted by M.C. Burr, C.A. Egener

Verified by { I. Micholson
B. Schlachman

Inked by { B. Schlachman
Bowers

Surveyed in March-April 1935

Surveyed by R.E. Dille; Geo. Fortune

Soundings plotted by { G.C. McGlasson
C.A. Egener

- 1- The records are legible, neat, and complete, conforming to the general requirements of the Hydrographic Manual. ✓
However, the lettering in volumes 4 and 5 was poor. Compass readings were not given in vol. 1, 2 and 3, and only in part in vol. 4.
- 2- The usual depth curves can be completely drawn
- 3- Soundings were correctly plotted. Only 0.8% of the ✓
total soundings needed revision. The protracting was good. However, the positions 41y, 42j, 4c and 1m were revised. Position 68j was very close to a "revolver", hence it was plotted by the verifier on time and course. Crossings were good. ~~see #4 of Review~~ 
- 4- The field drafting was fair. Notes relative to oyster bars, controlling depth, tidal gauges, curves, junctions, etc., were already on the sheet in ink. Some of ✓
the lettering was poor and was replaced by the verifier. The remaining notes were removed entirely. These notes should always be in pencil and inked at the office. The shore line was ✓
drawn in excellently. The lettering of day letters ✓

and positions were good.

5- The sheet was compared with air-photo compilations, T-5506 and T-5508. The shore line followed the air-photo compilations very closely.

6- Junctions:

Sheet H-5792 (1935) is the only junction, which is on the east. The junction was made, but the soundings were not carried out far enough to get a good overlap. However, the curves from the two sheets joined well.

July 16, 1935

Respectfully submitted,
Ben Schlackman

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5791 (1935) FIELD NO. 1

St. Vincent Sound - Western Part, Gulf Coast, Florida
Surveyed in 1935

Instructions dated November 30, 1934

Hand Lead Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - C. A. Egner.
Surveyed by - R. E. Dille and G. Fortune.
Protracted by - M. C. Burr and C. A. Egner.
Soundings penciled by - G. C. McGlasson and C. A. Egner.
Verified by - I. Michaelson and B. Schlachman.
Inked by - B. Schlachman and Bowers.

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 adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

This is an excellent survey and fully complies with the instructions for the project.

3. Shoreline and Signals.

The shoreline is from T-5506 (1934) and T-5508 (1934). The signals originate with Graphic Control sheet T-6307a and b (1934).

4. Sounding Line Crossings.

In general sounding line crossings are satisfactory. Differences generally do not exceed one foot. Discrepancies in line crossings and the soundings run on "p" day are due mostly to abnormal conditions of wind and tide as explained by the Chief of Party. (See paragraph "Control - Vertical" on page 3 of the Descriptive Report).

5. Depth Curves.

The usual depth curves can be satisfactorily drawn including portions of the low water curve.

6. Junctions with Contemporary Surveys.

The junction on the east with H-5792 (1935) is satisfactory.

There is no contemporary survey joining the present survey on the outside coast at Indian Pass. The junction here with the prior survey H-1265b (1874) is satisfactory. (See paragraph 7b of this Review).

7. Comparison with Prior Surveys.

a. H-1241 (1874)

The depths on this survey from west of longitude $85^{\circ} 10.44'$ to Indian Pass are in fair general agreement with the present survey. Radical changes in shoreline, however, are noted just north of Indian Pass in the vicinity of latitude $29^{\circ} 41.2'$, longitude $85^{\circ} 13.3'$. East of longitude $85^{\circ} 10.44'$ the depths are generally one foot shoaler on the present survey.

b. H-1265b (1874)

Only a few soundings at the entrance to Indian Pass fall within the limits of the present survey. Except one or two soundings on the old survey that fall in shoaler depths on the present survey the two surveys are in good agreement.

c. H-2265 (1895-96)

Several small islands charted in the vicinity of latitude $29^{\circ} 41.5'$, longitude $85^{\circ} 09.7'$, have disappeared. The present survey shows from 1 to 3 feet of water where the islands formerly existed. The 2 and 2-1/2 foot soundings (charted) in latitude $29^{\circ} 42.0'$, longitude $85^{\circ} 09.7'$, and latitude $29^{\circ} 40'$, longitude $85^{\circ} 07.75'$ fall in 4 and 7 feet of water respectively on the present survey. These spots, as well as numerous oyster shell reefs (some of them dry at high water) have evidently washed down to the depths shown on the present survey. H-2265 (1895-96) should be superseded by the present survey for charting purposes.

8. Comparison with Chart No. 183, (Corrected to April 16, 1934).

Within the area of the present survey the chart is based on surveys discussed in the preceding paragraphs and U. S. Bureau of Fisheries Surveys of 1915 (Blueprint No. 15748). The latter survey contains a very sparse development and a generalized delineation of the numerous oyster bars and reefs. The purpose of the survey was evidently to determine the general location of oyster beds but not necessarily an accurate delineation of their limits. Many of the reefs are not definitely outlined on the present survey, however, the numerous shoal soundings with hard, and shell characteristics,

indicate the general location of these reefs. Regarding the changeable nature of these reefs reference should be made to pages 1, 3 and 6 of the Descriptive Report. Because of the character of the area and completeness of the present survey, the latter should supersede the Bureau of Fisheries survey for charting purposes.

9. Field Plotting.

The protracting and plotting conform to the requirements of the Hydrographic Manual.

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-1241 (1874) in part
H-1265b (1874) " "
H-2265 (1895-96) in part.

12. Reviewed by - Leo S. Straw, October 9, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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

L. O. Polbat
Chief, Division of Charts.

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

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

Applied to Chart Cor. 1114 June 18, 1938 H. S. MacLennan
Partially applied to Chart 185 - Oct. 1939 J. S. S.
Applied to Chart 1262 - Dec. 1939 J. S. S.
" " " 866 was B 6/26/46