5552

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

....., *Director*

State: GEORGIA

DESCRIPTIVE REPORT

~~*Topographic*~~
Hydrographic } *Sheet No.* 4 5552

LOCALITY

ST. CATHERINES SOUND

MEDWAY RIVER

1934

CHIEF OF PARTY

C. A. EGNER

U. S. GOVERNMENT PRINTING OFFICE: 1933

5552

Form 537
Ed. Dec., 1930

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5552

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. 4

REGISTER NO. 5552

State Georgia

General locality St. Catherines Sound

Locality Medway River

Scale 1/10000 Date of survey Jan.-June, 1934

Vessel "Gilbert", "Patsy", "Sea Island"

Chief of Party C. A. Egner and Herman P. Odessey

Surveyed by As above and J. Morton - R. E. Dille

Protracted by W. F. K. (Riley) V. F. S. (Simmons), G. Fortune

Soundings penciled by V. F. S. and G. F.

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by Edward W. Smith

Verified by Edward W. Smith

Instructions dated December 5, 1933

Remarks:

U. S. GOVERNMENT PRINTING OFFICE: 1931

DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET

FIELD #4

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC

SHEET FIELD NO. 4

INSTRUCTIONS:

Dated December 5, 1933, for the execution of combined operations by parties #23 and the M. V. GILBERT along the inside channels of the Georgia Coast.

PURPOSE:

For the revision of existing surveys and to provide new data for the charting of channels for which no survey now exists.

LIMITS:

This sheet covers St. Catherines Sound to a junction with sheet #6 at about latitude 31°--45'; joins sheet #13 at the northern entrance to Walburg Creek; proceeds south toward the Newport Rivers to about latitude 31 -- 41 -- 30, and northwest up the Medway River to Longitude 81 -- 15 where it joins sheet #5. All adjacent side creeks within the confines of the sheet were sounded, joining adjacent sheets in cases where these creeks overlapped from one sheet to the other. No attempt was made to survey the bars outside the entrance, the limit being arbitrarily drawn roughly in Longitude 81 --08.

WORK ON THIS SHEET:

Work on this sheet was begun in Jan. 1934 by Party #23 which then included the GILBERT and its personnel, and was extended to include most of the area covered by the single lens photos. When Lt. Odessey returned to take over the GILBERT

on Feb. 1st operations by the GILBERT party were shifted further south. Then later, when the survey of the upper Medway River was put in following receipt of 5-lens shoreline, this general area was completed.

The survey of this sheet, therefore covered a period of 6 months or more and under the direction of two different Chiefs of Party.

METHODS:

All sounding was done with the #10 hand lead operating from the launch PATSY with some supplemental channel lines by the M. V. GILBERT and the launch SEA ISLAND. Lines were run parallel with the channels, and with the current, except in shoal water where the current would have little or no effect upon the soundings. An arbitrary depth of 15 to 18 ft. was taken in deciding whether this current would have an appreciable effect on the soundings.

In all cases throughout this sheet, hydrography was controlled by fixed sextant positions. In minor side creeks only a single center line was run or three lines, or five, depending upon the width. In these, no attempt was made to determine the zero curve on the sides of the channels as this is practically the same as the marsh grass line. In the main body of the sound, this zero curve was determined by lines run close inshore at high tide, though it was out of the question in places to run close enough to do this.

CONTROL--HORIZONTAL:

Supplementing stations established in 1932-33 by the coastal-coordinating 2nd order work of C. M. D., which furnished basic lines for further breakdown, a number of intersection stations were located by triangulation distributed over the sheet.

These stations were used for setups with the planetable for intersection on numerous hydro. signals, with the result that signals on this sheet were quite well controlled. Also proceeding up the Medway river a scheme of 3rd order triangulation was established for the control of the upper area. A few of these stations fall within the confines of this sheet, and give the N. W. section fully as good control as in the main body of the sound.

CONTROL--VERTICAL:

A portable automatic gauge was set up in Walburg Creek for the control of this general area. Bench marks used with a gauge established in 1925 by F. S. B. were recovered here and used for this year's gauge. A new plane was determined however, using this year's longer series by comparison with Ft. Screven. Practically the entire sheet used the Walburg gauge for the reduction of tides, only a small portion of the Medway River (and side creeks) were referred to the gauge at Sunbury, the plane for which was determined by direct comparison with the Ft. Screven standard gauge. Part of Cabbage Creek was referred to the staff at Kilkenny. No time and height adjustments were made between the gauges.

COMPARISON WITH PREVIOUS SURVEYS:

The last hydrographic Survey was made in 1925. It covered the main body of the sound and the Medway river roughly to the limits of the present sheet. It did not include the smaller side creeks undertaken this year. Prior to that year the latest survey was in 1867. These surveys were both dependent upon topographic shoreline by graphic control from triangulation similar to this year's without, however, the advantage of a rigidly established datum.

This time, all shoreline is from aerial photos, largely (since this sheet covers part of the Inside Route) of single lens work on 1/10,000 scale. The N.W. part of the sheet fall within the 5-lens work reduced from 1/21,500 to the 1/10000 scale of this sheet.

Changes are noted from the old surveys. The shoreline is obviously more accurate and detailed. The main body of the sound is changeable area, and rather rapidly so, as the currents are quite swift. No comparison is possible in the side creeks.

Since this year's work is much more complete than any previous one, no detailed list of discrepancies with the chart is attempted here, though considerable change in the depth, shapes, and positions of the important sand bars are quite obvious.

THE INSIDE ROUTE:

This much-used protected inside channel falls for about five miles of its length within this sheet, across the main body of the Sound. The route is well marked by buoys and beacons and offers no difficulty.

DANGERS AND ANCHORAGES:

Sand bars are clearly defined and offer no problem, but currents are swift, and corresponding care must be exercised by those unfamiliar with the locality. The main body of the Sound is exposed and becomes quite rough in moderately bad weather. Hard sand gives poor holding ground in the areas subject to strong currents, and while one can anchor in many places throughout the sheet, the favorite spots are the more protected ones like Walburg Creek.

SIGNALS ON HYDROGRAPHIC SHEET NO. 4

TOPOGRAPHIC	TRIANGULATION
DUCK	NEWELL
TOP	ABAW 1934
HAF	OS 3 1932
PIG	CAT 1934
TREE	WAL 1934
WOOD	BURG 1934
WE	CEDAR 1932
BAN	GABLE 1934
TEE	YELLOW BLUFF 1932
IN	LOON 1934
DIE	SPIT 1934
NUT	HALL 1934
TOP	WAY 1925-1932
HUM	AIR BN. NO. 9 1932
HOUR	BN. NO. 2 1932
NEW	MED 1925-1932
UP	
BEG	
DOWN	
CROSS	
PEAK	
FIN	
LOG	
SOCK	
NES	
LIT	
BYE	
BIG	
DRY	
WET	
WING	
BUSH	
RAG	
HIGH	
BAD	
WUF	
COW	
IS	
PLUM	

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..5552

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

Number of positions on sheet	3235.
Number of positions checked	80
Number of positions revised	20
Number of soundings recorded	13808.
Number of soundings revised	many
Number of signals erroneously plotted or transferred	None.

Date: Feb. 6, 1935.

Verification by Elbert W. Smith Time: 24 days--1½ hrs. (169½ hrs.)

Review by John G. Ladd Time: 3 " - 5 " (26 hrs.)

HYDROGRAPHIC STATISTICS

SHEET #4

VOLUME	DATE	DAY-LETTER	BOAT	MILES	SOUNDINGS	POSITIONS
1	FEB. 8	A	GILBERT	6.2	162	41
1	" 25	a	SEA ISLAND	13.0	577	82
	" 26	b	" "	5.9	198	37
1	JAN. 18	a	PATSY	25.5	429	81
	" 19	b	"	15.6	369	68
	" 22	c	"	18.0	327	74
1	" 23	d	"			
2	" 23	d	"	34.1	953	146
	" 24	e	"	15.6	527	79
2	" 25	f	"			
3	" 25	f	"	20.0	662	114
	" 26	g	"	9.3	335	62
	Feb. 6	h	"	21.3	849	130
3	" 7	j	"			
4	" 7	j	"	22.3	844	148
	" 8	k	"	18.0	582	109
	" 13	l	"	6.0	217	40
	" 14	m	"	14.3	467	105
5	March 28	n	"	5.5	147	37
	" 30	p	"	10.4	341	71
	April 21	q	"	6.2	244	62
	" 22	r	"	21.8	751	206
—	" 23	s	"	16.7	563	132
	May 1	t	"	9.8	304	66
	" 2	u	"	17.3	571	147
7	" 3	v	"	12.1	362	116
	" 4	w	"	15.0	580	193
	" 5	x	"	17.8	628	225

HYDROGRAPHIC STATISTICS (CONT.)
SHEET #4

VOLUME	DATE	DAY-LETTER	BOAT	MILES	SOUNDINGS	POSITIONS
7	May 6	y	PATSY			
8	" 6	y	"	12.9	458	147
	" 7	z	"	11.9	427	198
	" 8	a'	"	10.5	356	166
9	" 16	b'	"	6.0	288	97
	" 23	c'	"	7.5	290	86
		TOTALS.....		426.5	13808	3235

To: Mr. Bacon
From L. S. S.

Date Dec. 3, 1934

GEOGRAPHIC NAMES
GEORGIA

Survey No. H 5552

Chart No. 1241 & 573

Names underlined in red approved Dec. 14, 1934 Harlow Bacon

Diagram No. 1241-2

*, Approved by the Division of Geographic Names, Department of Interior.

¢, Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart or other Maps	New Names in local use	Names assigned by Field	Location
✓	St. Catherine's Island	St. Catherines Island ✓			
✓	Walburg Island ✓	Same 571 & 1273 & P.M.M.			
✓	Ossabaw Island ✓	" " " " "			
✓	Bear River ✓	" " " " "			
✓	Cedar Creek ✓	" " " " "			
✓	Dead Creek	------- Prog. Military Map			
✓	Ashley Creek	------- " " "			
✓	Cubbage Cabbage Creek	GN 3-1937 Same Charts and Prog. Mil. Map			
✓	Medway River ✓	" " " " " "			
✓	Sunbury Creek ✓	" " " " " "			
✓	Gould Creek	------- Prog. Military Map			
✓	Jones Creek	------- " " "			
✓	Fancy Hall Creek ✓	------- " " "			
	Retreat Creek	" " "			

Note:

Names on this Survey were inked on this Sheet by the Field

Add 1/25/37 SAE

LINCOLN CR. GN 3-1937

(M 100)

Mr. Ellis

220

December 12, 1934

Division of Hydrography and Topography:

✓ Division of Charts:
E.P.Ellis

Tide Reducers are approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 5552

Locality St. Catherine Sound, Georgia

Chief of Party: Herman Odessey in 1934
Plane of reference is mean low water reading
2.3 ft. on tide staff at Walburg Creek
10.7 ft. below B.M. 1

3.7 ft. on tide staff at Sunbury
12.4 ft. below B.M. 1

1.9 ft. on tide staff at Kilkenny
14.2 ft. below B.M. 1

Height of mean high water above plane of reference is 7.1 feet at Walburg Creek; 7.5 feet at Sunbury; 7.9 ft. at Kilkenny

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

SECTION OF FIELD RECORDS

Verification Report on H-5552.

1. The records do not conform to the requirements of the Hydrographic Manual in the following respects:
   a. There are several days in which no "bottom Characteristics" appear in the sounding volumes, however, the smooth sheet shows such characteristics for these lines. The verifier could find no information# to substantiate them.* → Possibly from adjacent sounding lines. VGL.
   b. Several lines of soundings had no penciled soundings on them and this was done in the office. ✓
   c. The plotting of soundings seemed to have been done without any regard to time spacing. ✓

2. The sounding crossings are adequate and in most cases in good agreement. ✓

3. The usual depth curves can be drawn, however, since the "low-water" line was established by hydrography in most all of the side streams, most of the curves in these streams are cramped to the middle of the stream. ✓

4. The field plotting was not completed to the extent prescribed in the Manual in the following respects:
   a. While the protracting of positions is very well done, the plotting of soundings is poor. In many cases several pages of reduced soundings had been changed in the sounding volumes, but no changes made to the soundings incorrectly plotted on the smooth-sheet. Soundings were plotted incorrectly frequently, and such little attention given to time distribution and time change as to lead the office draftsman to think they were plotted by eye. ✓ ✓
   b. There are numerous soundings that appear to be at least 1-fathom in error as compared to adjacent soundings, but these were neither questioned nor verified by the field party. ✓

5. Some of the station names were removed where they were placed in the hydrographic work and replaced to the shore area. The topographic names were inked in the field in slanting letters but due to their number it was ordered by the Assist. Chief of the Section that these should stand as inked. ✓

6. Only one of the adjacent sheets has been completed. H5527 The junction from this sheet has been applied and is satisfactory. ✓

7. The following have not been submitted with this sheet: ✓
   a. Landmarks for Charts (Form 567)
   b. Recoverable Stations (From 524) ✓
   c. Special Chart for the U.S. Lighthouse Service .

8. Considering the area surveyed, the work was well done, all lines in the surving side streams having strong controll, and as a general rule no difficulty was encountered in intrepertation. ✓

Respectfully submitted,
Elbert W. Smith
Elbert W. Smith.

February 6, 1935.

P.S. The Field Party was not consistent in the color used for the day letter in the sounding Volumes. E.W.S. ✓

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5552 (1934)

Medway River, St. Catherine's Sound, Georgia
Surveyed in January - June, 1934
Instructions dated December 5, 1933 (C. A. Egner)

Hand Lead Soundings. 3 Point Fixes on Shore Signals.

Chief of Party - C. A. Egner and H. P. Odessey.
Surveyed by - C. A. Egner, H. P. Odessey, J. Norton, and R. E. Dille.
Protracted by - W. F. Kiley, V. F. Simmons, and G. Fortune.
Soundings penciled by - V. F. Simmons.
Verified and inked by - E. W. Smith.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except as follows:

a. Geographic names were inked on the sheet by the field party instead of being left in pencil as required by par. 160 of the Hydrographic Manual. Names of islands were inked in slanting lettering instead of vertical lettering, which is the accepted standard practice. This was not changed in the office.

b. No bottom characteristics were entered in the records for C, P, Q and V days.

c. The smooth sheet had a number of lines plotted without any soundings penciled thereon. These were added from the records in the office.

d. No copy of "Landmarks for Charts" on form 567 accompanied this particular sheet.

e. The chart showing locations of objects for use of Lighthouse Bureau has ~~not~~ been received in the office.

f. Two complete projections are shown on the smooth sheet as received from the field; one representing the "North American Datum" (in black), and the other the "North American 1927 Datum" (in red). Two full projections on a sheet are always confusing and where the values on the 1927 datum are available (as appears to be the case on this sheet), there is no necessity for showing the "North American Datum". The latter projection, however, has been retained on the smooth sheet.

The "Descriptive Report" is complete and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project, with the following exceptions:

a. The area to the east of the zero sounding in midstream at lat. 31°45.1', long. 81°15.0' should have been developed.

b. The general area just south of Ossabaw Island at approximate lat. 31°43.05', long. 81°08.1' should have been more adequately developed in order to better define the depth curves.

3. Sounding Line Crossings.

The crosslines, together with the parallel adjacent lines are in good agreement.

4. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn, including most of the low water curve.

5. Junctions with Contemporary Surveys.

Satisfactory junctions are made with H-5527 (1934) on the north and H-5582 (1934) on the south. The junction with H-5573a (1934) on the west is satisfactory. There is no contemporary survey to the eastward, however this area is covered by H-4472 (1925), which at the junction proper makes a fair agreement with the present survey. (H-4472 (1925) is further considered as a prior survey in par. 6c).

6. Comparison with Prior Surveys.

a. H-916 (1867) and H-928 (1867).

A comparison between the above surveys and the present survey reveals numerous changes in depths and locations of shoals, as well as changes in shore line. Because of the time elapsed between the earlier surveys and the present one, the general character of the area and the nature of the bottom, it is unnecessary to consider in detail, from the standpoint of information to be carried forward, the various changes noted. The present survey should supersede all of the above surveys for charting purposes.

b. H-2687 (1904).

This survey overlaps the present survey at the mouth of St. Catherine Sound. A comparison between this 1904 survey and the present one shows continued changes in the bars and channels, together with a small change in shoreline. The area is therefore considered to be a changeable one, and a discussion of the

changes noted is omitted since it would serve no useful navigational purpose. The present survey within its limits should supersede H-2687 (1904) for charting purposes.

c. H-4472 (1925).

A comparison of this survey with the present survey also shows changes in depths and locations of shoals and channels and some changes in shoreline. The area is doubtless a changeable one, and a discussion of the changes noted is omitted since it would serve no useful navigational purpose. H-4472 (1925) should be superseded by the present survey within its limits.

7. Comparison with Chart No. 573.

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

b. Aids to Navigation.

The positionsof the buoys on the present survey are 30 to 60 meters different from the positions shown on the chart, with the exception of buoy N2 at lat. 31°41.95', long. 81°10.75', which is 80 meters north and 350 meters west of its charted position. However, in the positions as shown on the present survey they adequately marked the features intended.

8. Field Plotting.

The field plotting was satisfactory, with the following exceptions:

a. The spacing of soundings between positions was apparently done without reference to the time intervals. This has been corrected in the office.

b. Numerous incorrect soundings were penciled on the smooth sheet.

9. Additional Field Work Recommended.

No additional field work is required with the exception that the spit eastward of the zero sounding at lat. 31°45.1', long. 81°15.0' should be developed.

10. Superseding Old Surveys.

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

H- 916 (1867) in part.
H- 928 (1867) " "
H-2687 (1904) " "
H-4472 (1925) " "

11. Reviewed by - John G. Ladd, May, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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

L. O. Colbert
Chief, Division of Charts.

Paul S. Borden
Chief, Section of Field Work.

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

Applied to chart 573. Dec. 11, 1936. J. H. S.

25 Jan 13, 1935