

5466

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

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

State: South Carolina

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. 8 5466

LOCALITY

Charleston

Stone River, Church Flats to

Rantowles Crask

19 34

CHIEF OF PARTY

Lt. M. O. Witherbee

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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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. 8

REGISTER NO. 5466

State South Carolina

General locality Charleston, S. C.

Locality Stone River, Church Flats to Rantowles Creek

Scale 1-5,000 Date of survey Feb. & May, 1934

Vessel Shore Party No. 2

Chief of Party Lt. M. O. Witherbee

Surveyed by G. A. Stanton & E. B. Brown, Jr.

Protracted by C. J. Harryman, H. L. Beck, Jr., & A.A. Lookerbie

Soundings penciled by H. L. Beck, Jr.

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by R. S. Bugswell

Verified by " " "

Instructions dated November 2, 1933

Remarks: Survey and descriptive report under direction of Lt. M. O. Witherbee. Smooth plotting under direction of Lt. Benjamin H. Rigg.

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DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 8

DATE OF INSTRUCTIONS - November 2, 1934.

LIMITS IN AREA - This sheet comprises a survey of the Stono River from lat. $32^{\circ} 47'$, long. $80^{\circ} 07'$ to lat. $32^{\circ} 45'$, long. $80^{\circ} 09.5'$, and includes Rantowles Creek, Wallace River, and Log Bridge Creek.

SURVEY METHODS - In the Stono River, standard Coast Survey methods were used. Lines were controlled by three point sextant fixes taken on signals located by triangulation and topography. In Rantowles Creek, the upper section was controlled by three point sextant fixes taken on signals spotted on the photograph and located by Radial Plot. The extreme upper portion of Rantowles Creek and Wallace River was surveyed on a 1-21,209 scale. This was done due to the relative unimportance of this section, and also due to the fact that in order to obtain shore line on the 1-5,000 it would have been necessary to send the sheet to Washington for enlargement.

A single line was run up Log Bridge Creek, and it was controlled by distances and bearings to points easily distinguished from the compiled shore line. } $\frac{1}{2}$ of the line
is controlled
by 3 Pt. Fixes

Depths were measured by lead line to the nearest foot in deeper areas, and to the nearest half foot in shoaler areas.

Signals shown in green are Radial Plot stations. On the 1-5,000 projection, they were scaled four ways on the celluloid sheet and then raised and adjusted to the 1-5,000^{and} plotted on the boat and smooth sheets. As this work was checked, the computations are not included in this report. The Radial Plot signals shown on the 1-21,209 insert were pricked directly from the celluloid sheet.

DESCRIPTIVE REPORT TO ACCOMPANY
Sheet No. 8

DISCREPANCIES - In checking the smooth plotting of this sheet, due allowance must be made for the turning of the boat on the zig-zag lines run in the main channel. Two hundred meters S. E. of topographic signal Buck, position 196b falls outside of the line 50b - 51b with 4' between two 7' soundings. The 4' sounding was plotted. ✓

CHANNELS -- Stono River -- There is a limiting depth of 7' through ^{7/2 - Lat. 32° 46' 30" N} ~~Long. 80° 07' 30" W~~ the inside route covered by this sheet. At various places, the channel is filling in and dredging will be necessary. One spot, a 6' shoal, appears at lat. 32° 46.8', long. 80° 07.1'. Another lies at lat. 32° 46.6', long. 80° 07.7' and still another at lat. 32° 44.8', long. 80° 09.1'. ✓

Rantowles Creek -- Rantowles Creek carries 6' to the highway ^{9 ft. at Lat. 32° 47.7' N} ~~also Lat. 32° 47.3' N Long. 80° 08.0' W~~ bridge. ^{Long. 80° 08.0' W}

Wallace River -- Wallace River will carry 4' to the highway ^{5 ft. at Lat. 32° 47.7' N} ~~also Lat. 32° 47.3' N Long. 80° 08.0' W~~ bridge. These creeks are little used, however for other than local fishing. The highway bridges are fixed spans, limiting the size of the boats that pass under them. The country through which the creeks flow is of no commercial importance at this time.

COMPARISONS WITH PREVIOUS SURVEYS - Comparisons were made with overlapping work completed this season at the eastern and western limits of this sheet. No attempt was made to compare with existing charts because the scale was too small. ✓

TIDAL NOTES - For tide reducers in Stono River, see special report of tides by Lt. M. O. Witherbee for this area.

Tide reducers for Rantowles Creek and Wallace River were obtained from a tide staff established on Rantowles Creek highway bridge. Mean low water on this staff was 2.41.

STATISTICS -

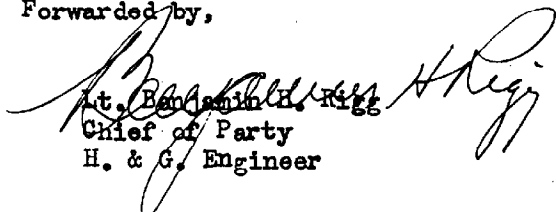
Vol. No.	Statute Miles	No. of Soundings	No. of Positions
1	32.4	1752	350
2	0.8	63	19
3	<u>25.0</u>	<u>1393</u>	<u>237</u>
	58.2	3208	606

Respectfully Submitted by,

G.A. Stanton

Lt. M. O. Witherbee
Chief of Party
H. & G. Engineer

Forwarded by,


Lt. Benjamin H. Rigg
Chief of Party
H. & G. Engineer

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5466

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

Number of positions on sheet	...606
Number of positions checked9
Number of positions revised0
Number of soundings recorded	..3208
Number of soundings revised0
Number of signals erroneously plotted or transferred

Date:.....November.23,.1934.....

Cartographer:..R. S. Bagwell.....

Verification of protracting

Verification & inking of rocks & shoals) by R. S. Bagwell

Time:

Verification of inking by

Time: 1 1/2 hrs.

Review by

John B. Ladd

Time: 8 1/2

LAC

November 15, 1934.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5466

Locality Stono River, Church Flats to Rantowles Creek, South Carolina

Chief of Party: M. O. Witherbee in 1934

Plane of reference is mean low water reading

1.7 ft. on tide staff at S. A. L. Bridge, Stono River.

10.2 ft. below B.M. 1

2.4 ft. on tide staff at Rantowles Creek

No bench marks established

Height of mean high water above plane of reference is 5.7 ft. at

S. A. L. Bridge and 4.3 ft. at Rantowles Creek.

Condition of records satisfactory except as noted below:



Acting Chief, Division of Tides and Currents.

Verifiers Report of H-5466

The records conform to the requirements of the General Instructions. ✓

The usual depth curves can be completely drawn except the 6 foot curve. ✓

The field plotting was completed to the extent prescribed in the Hydrographic Manual. ✓

The office draftsman did not have to do over any part of the drafting done by the field party. ✓

The junctions with H-5434 and H-5435 are made and are satisfactory. ✓

Remarks:

Comparison has not been made with the air photo - ^{see note below} compilation sheets as they are not yet available. *

The point of land at signal Sat, Lat. $32^{\circ}47'$ Long. $80^{\circ}07'$ will need comparing as it does not match with that shown on the insert on H-5434. ✓

At position 31d, Lat $32^{\circ}47.1'$, Long. $80^{\circ}7.6'$ the records give the distance to shore as 10 M. On the smooth sheet it reads 31 M. Other estimated distances disagree also. ✓

In Vol. 3, P 20, the third cut from signal 247 does not check on either the main sheet or the insert. Almost all the cuts taken from all signals check rather poorly. ✓

* Comparison has now been made with the air photo compilation sheets. The point of land at signal Sat was corrected. No change was made opposite position 31d. ✓

Submitted by F. S. Bagwell
November 23, 1934

In several places, particularly at Lat $32^{\circ}5'30''$ Long $80^{\circ}08'$, numerous inlets off Stone River were shown on the smooth sheet for which no authority could be found. They were removed and the shore line made to agree with the air photo compilation sheet. F. S. B. Jan. 4, 1935 ✓

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

Survey No. H-5466

GEOGRAPHIC NAMES

Chart No. 1239

Date. November 23, 1934

South Carolina

Names underlined in red approved Dec. 10, 1934
H. Bacon.

Diagram No. 1239-2

* 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	New Names in local use	Names assigned by Field	Location
*	<u>Stono River</u>	Stono River extends to a junction with Church Creek. See U.S.G.S. Quadrangles!			
	<u>Log Bridge Creek</u>				
	<u>Rantowles Creek</u>				
	<u>Wallace River</u> ^{Creek}				
	<u>Johns Island</u>				

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5466 (1934).

Stono River, Church Flats to Rantowles Creek, South Carolina.
Instructions dated November 2, 1934 (NATOMA).
Surveyed - Feb.-May, 1934.

Hand Lead Soundings - 3-Point Fixes on Shore Signals.

Chief of Party - M. O. Witherbee.
Surveyed by - G. A. Stanton & E. B. Brown, Jr.
Protracted by - C. J. Harryman; H. L. Beck and A. A. Lockerbie.
Soundings penciled by - H. L. Beck.
Verified and inked by - R. S. Bagwell.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual with the following exceptions:

a. That portion of the sounding volumes containing the hydrography in Log Bridge Creek is recorded as Rantowles Creek. This has been corrected in the office.

2. Compliance with Instructions.

The survey satisfies the instructions for the project. However, the enlargement of the control from 1:10,000 to 1:5,000 for Rantowles Creek and Wallace River and the surveying of the same on the enlarged scale is contrary to the usual practice but is considered justifiable in this case because of the relative unimportance of the area involved. Likewise the surveying of the upper ends of Rantowles Creek and Wallace River on a scale of 1:21,209 is considered justifiable due to the unimportance of the area.

3. Sounding Line Crossings.

The cross lines as well as the parallel adjacent lines are in good agreement.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn including portions of the zero foot curves.

5. Junctions With Contemporary Surveys.

The junctions with H. 5435 (1934) on the west and with H. 5434 (1934) on the east are satisfactory.

6. Comparison With Prior Surveys.

a. H. 1639 (1885).

This survey covers Stono River only and is the only prior survey

of the area. The survey consists of practically a single line of soundings in mid-channel and is in good agreement with the present survey. It contains no shoals that were not located on the new survey.

7. Comparison With Chart No. 1239.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional matters of importance that need consideration in this review. The 8 foot sounding at lat. $32^{\circ}45'.2$, long. $80^{\circ}08'.18$ and the 9 foot sounding at lat. $32^{\circ}44'.95$, long. $80^{\circ}08'.4$, originate with a source unknown. They are in good agreement with the present survey, H. 5466 (1934).

8. Field Plotting.

The field plotting was satisfactory. In order to preserve the points spotted on the ground from the air-photo compilation, they have been circled in brown on the smooth sheet in the office.

9. Additional Field Work Recommended.

No additional field work is required.

10. Bridge Clearances.

At the bridge at lat. $32^{\circ}47'.2$, long. $80^{\circ}07'.8$, the field party determined a clearance of 5 feet at M.H.W., whereas the air-photo compilation sheet T. 5165 shows a clearance of 2.8 feet at H. W. The 5 ft. clearance is shown on the Hydrographic sheet.

11. Superseding Old Surveys.


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


H. 1639 (1885) in part.


12. Reviewed by - John G. Ladd, January 1935.

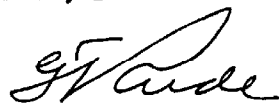
Inspected by A. L. Shalowitz.

Examined and approved:

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


Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H. & T.

Applied to chart 1239 I.M.A. Apr. 1937 25 Jan 23, 1936
L.H.J.