

5518

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. Patton *Director*

State: South Carolina

DESCRIPTIVE REPORT

Topographic- } Sheet No. 1 5518  
Hydrographic }

LOCALITY

Beaufort, S. C.

Beaufort River

1933  
1934

CHIEF OF PARTY

Lt. I. E. Rittenburg

5518

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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FEB 1 1934  
Sept 27-1934

Acc. No. \_\_\_\_\_

FILE NO. 5518

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. **5518**

State South Carolina

General locality Port Royal Sound ✓

Locality Beaufort River ✓

Scale 1/10000 Date of survey Dec. Jan., 19 33-34

Vessel Shore Party # 15

Chief of Party L. E. Rittenburg

Surveyed by M. D. Cooper

Protracted by A. O. Dority

Soundings penciled by A. O. Dority

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water ✓

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by R. S. Bagwell

Verified by " " \_\_\_\_\_

Instructions dated \_\_\_\_\_ Nov. 2, 1933, 19 \_\_\_\_\_

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET FIELD NO. 1,  
BEAUFORT RIVER, PROJECT # H. T. 160.

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES

FEB 1 1934

Acc. No. \_\_\_\_\_

1 Date of Instructions.

This survey was done in accordance with instructions of Nov. 2, 1933.

2 Survey Methods and Control.

Standard methods were employed throughout this survey. The control was based on the triangulation of 1931 - 1933. All other supplemental stations were located from intersections by means of a plane table and alidade. It is believed that the work on this sheet is complete. This sheet joins sheet # 2 on the north and will join a future sheet on the south. Some of the work in Ballast Creek is subject to criticism as the hydrographer changed course between fixes. The two outside lines, i.e.; the lines close to H.W. on both sides of this creek, were run as close as possible to the Low Water line and the two middle lines were run about 15 or 20 meters off the shores. In some cases the line between adjacent positions was arbitrarily bent to conform to the other soundings obtained. The positions are accurately determined. When the shore line is received from the air photo reduction party in Savannah, it is believed that the soundings can easily be fitted in. Due to the relative unimportance of this creek above station 50, it was thought uneconomical to do this work over again. Soundings were taken off the dock at the Parris Island Marine Base but are not shown on the smooth sheet. These soundings show a much less depth than the soundings obtained from the sounding launch due to the fender piling off the face of the dock and the allowance for the keels of vessels laying alongside. It is recommended that the soundings off the dock be not shown and preference given those taken by the sounding launch as these would give a truer representation of the depth of water alongside this dock.

3 Discrepancies.

None.

4 Channels.

Twenty one feet, which is the deepest draft that can be carried over the bar at the entrance to Port Royal Sound can easily be carried to the Marine Dock at Parris Island. On this sheet however a greater channel depth is available except between position 48 and 49 L day and 7 - 8 H day where there is a small area of 22 foot depths. The channel is well marked and easily followed. 14 ft. can be carried to the entrance to Chowan Creek the critical depth being between position 49-50 T day.

✓  
16 ft. can be carried to end of work on this survey into Chowan creek.

This is on slope on side of creek and not a critical depth.  
A.C.S.

5 Dangers

The principal danger adjacent to the channel is near buoy C 3 and buoy C 5 between Lat. 32 - 17.8 and 32 - 18.5 and Long. 80 - 39.2 This is the easternmost limit of a middle ground on the west edge of the channel with a least depth of 5 feet ( pos. 47-48 C ). There is a 16 foot and 17 foot sounding S.E. of buoy C3 ( pos. 14-15 K which is on the channel side of the buoy. Between pos. 18- 19 L there are two 11 foot soundings which are near the west side of the channel. From Lat 32 - 17 to 32 - 17.8 Long 80 -39.5 there is middle ground running N. and S. with a least depth of 3 and 4 feet ( pos. 33 - 34 C and numerous soundings of 7 to 10 feet. From Lat. 32 - 18.6 to Lat 32 - 19.5 Long. 80 - 39.7 is a large sand spit to the eastward of a small marshy island.

6 Comparison with old surveys.

This survey was compared with H 3898 and chart 571. In general the the surveys show the same characteristic depth curves. Lat 32 -20.2 Long. 80-39.4 ~~this~~ survey shows an 8 and 9 ft. sounding. ~~fixxx~~ ~~xxxx~~ The previous survey shows two 10 foot soundings. ( 3-4 J) However the two and three fathom curves delineating the shoal are approximately the same on both surveys. Between 32-18.5 and 32-19.5 Long 80-39.2 the channel appears to be about 2 to 3 feet deeper on this survey. In Lat 32-18.3 - 18.4 Long. 80-39.5 a shoal with a least depth of 10 feet was found. The two 4 feet soundings shown on H 3898 in Lat 32-17.3 Long. 80-39.3 now show 5 feet about 100 meters to the S. W. This shoal is shown to extend on this sheet considerably to the south of the old survey. The 2 fathom curve now extends to 150 m. south of Lat 32-18 and the 3 fm. curve to 32-17.7. The shoal charted in Lat 32-17.6 to 32-17.9 showing 3 feet has shifted to the S. Eward, enlarged in size but still shows the same shoal depth. The detached 6 foot sounding in Lat. 32-17.3 Long. 80-39.5 was not found but an 8 foot soundings was obtained. The south end of this middle ground shows the 2 and 3 fm. curves about the same on both surveys. As much of the L. W. line off the mouth of Station Creek as was obtained on this sheet agrees with the old survey very closely. The low water line around the south end of Parris Island agrees fairly well on both surveys.

✓  
✓  
✓  
✓  
✓  
✓  
✓

7 Shoreline

No shoreline is shown on this sheet as the shoreline is now being obtained by an air photo compilation party in Savannah. The shoreline on the boat sheet was obtained from the photostats of H. 3898, and was used merely as an aid to the hydrographer.

*Shoreline added later by party of Lt. B.H. Rigg.*

8 Statistics

Statute miles of sounding lines - - - 266.1  
Number of soundings obtained - - - 6427  
Number of positions taken - - - 1529

9 Tides

FEB 1 1934

9 Tides

Both a standard automatic tide gage and a portable auto. gage were operated at the dock at the Marine Station, Parris Island, throughout the progress of this sheet. In addition a portable auto. gage was operated at the mouth of Station Creek for the greater portion of this survey. All soundings were reduced from the records of the portable automatic tide gage at Parris Island. The soundings shown on the boat sheet were reduced from the gage at Beaufort S. Car.

Acc. No. \_\_\_\_\_

## 10 Landmarks for Charts, list of recoverable Topo or Hydro. signals, and Coast Pilot notes.

The list of Landmarks for charts, recoverable topo. or hydro. signals is attached to the desc. report for topographic sheets A and B transmitted with this sheet.

I. E. Rittenburg, Lieut.,  
Coast & Geodetic Survey,  
Chief of Party.

Shoreline was applied to this sheet by the party of Lt.  
Benjamin H. Rigg.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. H-5518

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

Number of positions on sheet	..1529.
Number of positions checked	..101.
Number of positions revised	...13.
Number of soundings recorded	..6427.
Number of soundings revised	...26.
Number of signals erroneously plotted or transferred	.....

Date:..... November 16, 1934.....

Cartographer:.. Richard S. Bagwell.....

<b>Verification of protracting</b>	) by R.S. Bagwell	<b>Time</b>
<b>Verification &amp; inking of rocks and shoals)</b>		
<b>Verification of inking by</b>	R.S. Bagwell	<b>Time</b> 84hrs.
<b>Review by</b>	John G. Ladd.	<b>Time</b> 29 "

200  
5

October 27, 1934.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
6 volumes of sounding records for


HYDROGRAPHIC SHEET 5518

Locality Beaufort River, Port Royal Sound, South Carolina

Chief of Party: I. E. Rittenburg in 1933  
Plane of reference is mean low water reading  
0.5 ft. on tide staff at Parris Island  
13.0 ft. below B.M. 1

Height of mean high water above plane of reference is 7.1 feet.

Condition of records satisfactory except as noted below:

  
Acting Chief, Division of Tides and Currents.

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

Survey No. LH 5518

6

GEOGRAPHIC NAMES  
S. C.

Date. Oct. 12, 1934

Chart No. 1240-2

Diagram No. 1240-2

*Names underlined in red approved Oct. 15, 1934*

*H.B.*

\* 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
✓ <i>H.B.</i>	-----	<u>Ballast Creek</u>	-----	-----	32°19.9' 80°40.5'
✓ <i>H.B.</i>	-----	<u>Parris Island</u> (USGB)	-----	-----	32°19.4' 80°41.0'
✓ <i>H.B.</i>	-----	<u>Parris I. Spit</u> (USGB)	-----	-----	32°17.8' 80°40.6'
✓ <i>H.B.</i>	-----	<u>Beaufort River</u> <i>large</i>	-----	-----	32°19.1' 80°38.5'
✓ <i>H.B.</i>	-----	<u>Chowan Creek</u>			32° 21/4' 80° 39'
		<u>Chowan spit</u> <i>O.K. used</i>			{ 32° 20.6' 80° 39.4'



1

# Section of Field Records

Report on H. 5518  
Chief of Party - J. C. Fittenburg  
Constructed by A. O. Darity  
Verified and linked by R. S. Bagwell

Surveyed in Dec. Jan. 1933-1934  
Surveyed by M. D. Cooper  
Soundings plotted by A. O. Darity

1. The Records conform to the requirements of the General Instructions. ✓
2. The usual depth curves can be completely drawn. ✓
3. Field plotting was completed to the extent prescribed in the General Instructions, except that piling located in the Records, Vol. 3, P. 39, was not plotted on either boat sheet or smooth sheet, Lat.  $32^{\circ}-18.4'$  Long.  $80^{\circ}-38.7'$ . It has now been plotted and linked. ✓
4. The office drafterman did not do over any part of the field drafting. ✓
5. Junction with H. 5519 ~~is~~ <sup>is</sup> satisfactory. ✓
6. Remarks: has been made with photo compilation No. T-5210. The shore line in Ballast Creek needed moving in a few places in order to include soundings or fixes - 17N is an example. The two islands at the head of the creek did not seem to interfere at all with taking sounding lines directly over them. These lines are 32N-33N, 104N-105N. They were not plotted. line run at 33N, 104N plotted  
The east shore, south of lat.  $32^{\circ}-18.5'$  could not be verified because no compilation of this section was available at this time.  
Among the reports no "Special Chart for the U.S. Lighthouse Service" was submitted. ✓

Respectfully submitted  
Richard S. Bagwell

November 16, 1934

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5518 (1934)

Coosaw River, St. Helena Sound, So. Carolina.  
Instructions dated November 2, 1933 (I. E. Rittenburg)  
Surveyed - December, 1933, February, 1934.

Hand Lead Soundings - - 3 Point Fixes on Shore Signals

Chief of Party - I. E. Rittenburg.  
Surveyed by - J. A. McCormick.  
Protracted and soundings plotted by - A. O. Dority.  
Verified and Inked by - R. S. Bagwell, Jr.

1. Condition of Records.

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

- a. The chart for the location of aids to navigation for use of the Lighthouse Bureau has not been submitted.
- b. No approval note by the Chief of Party was included in the Descriptive Report.

2. Compliance with Instructions.

The survey satisfies the instructions for the project.

3. Sounding Line Crossings.

The cross lines as well as 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 portions of the low water curve.

5. Junctions with Contemporary Surveys.

The junctions with H-5525 (1934) and H-5519 (1933) on the north and with H-5517 (1934) on the south are satisfactory.

The junction with H-5564 (1934) will be considered in the review of that sheet.

6. Comparison with Prior Surveys.

- |                 |               |
|-----------------|---------------|
| a. H-535 (1856) | H-834 (1862)  |
| H-633 (1855)    | H-1521 (1882) |
| H-802 (1862)    | H-2119 (1892) |

A comparison between the above surveys and the present survey reveals numerous changes in depths and locations of shoals as well as changes in shoreline. Because of the time elapsed between the earlier surveys and the present survey, 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 within its limits should supersede all of the above surveys for charting purposes.

b. H-649 (1853-1857)

An examination of this sheet shows that it is a compilation of numerous individual surveys. Within the limits of the present survey it includes H-535 (1856), which is included in the discussion of the prior surveys in the previous paragraph.

c. H-3898 (1916)

This survey is in general good agreement with the present survey with the following exceptions:

(1) There are a few small changes in the shoals near the mouth of the river. The new survey in some cases shows 1 to 2 foot greater depths over these shoals; however, the lesser depths were not carried forward because the surrounding depths show similar changes.

(2) Because of the general good agreement between the two surveys in the vicinity of Lat.  $32^{\circ}19.6'$ , Long.  $80^{\circ}39.7'$  and the indication on the present survey of the possible persistence of the low water spit, low water curve was drawn as shown on H-5518 (1933) after taking into consideration the delineation of the area as shown on H-3898 (1916).

d. H-4174 (1921)

This survey overlaps the present survey on the north at Beaufort River. It is in satisfactory agreement.

7. Comparison with Chart No. 571.

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 with the exception of the charted 13 foot sounding at Lat.  $32^{\circ}16.90'$ , Long.  $80^{\circ}39.55'$  which is an 18 foot sounding on H-3898 (1916). All charts of this area subsequent to the charting of this survey (H-3898) with the exception of the present edition shows this sounding as an 18. There is no authority in this office for the 13 foot sounding at this spot. It is considered that the plate prior to the last printing became

marred and in touching up the 18 was inadvertently changed to a 13. This 13 should be discontinued in future charting.

b. Aids to Navigation.

The location of the aids to navigation as shown on H-5518 (1934) differ from the positions as shown on the chart by 30 to 180 meters. However, the aids as located on the present survey adequately mark the features intended, with the exception of buoy "C3" at Lat. 32°17.85', Long. 80°39.26', which should be moved about 140 meters south and 50 meters east in order to properly mark the southern end of the shoal, upon which it is located, with respect to the main channel in the river.

*Sup. of LHS Charleston, furnished  
Photostat of vicinity 'buoy C3, on July 27, 1935.*

8. Field Plotting.

The field plotting was satisfactory.

9. Additional Field Work Recommended.

This survey is complete and <sup>no</sup> additional field work is required.

10. Superseding Old Surveys.

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

H-535 (1856)	In Part.
H-633 (1855)	" "
H-649 (1853-'57)	" "
H-802 (1862)	" "
H-834 (1862)	" "
H-1521 (1882)	" "
H-2119 (1892)	" "
H-3898 (1916)	" "
H-4174 (1921)	" "

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

Inspected by - A. L. Shalowitz.

Examined and approved:

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

*L. O. Pollut.*  
Chief, Division of Charts.

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

*G. Thude*  
Chief, Division of H. & T.

Applied to Cht. 571 Mar. 26, 1935

K. Reynolds

25 Jun 13, 1936

CMG.