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U. S. COAST & GEODETIC SURVEY  
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SEP 27 1934  
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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

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DESCRIPTIVE REPORT

Topographic- } Sheet No. 2 5519  
Hydrographic }

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LOCALITY

Port Royal Sound

Beaufort River

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~~1919~~

CHIEF OF PARTY

Lt. I. E. Rittenburg

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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES

FEB 1, 1934  
Sep 27

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

REG. NO. 5519

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. 2

REGISTER NO. 5519

State South Carolina

General locality Port Royal Sound

Locality Beaufort River, Archer Creek, Anthony Creek

Scale 1/10000 Date of survey Dec., 1933, 19

Vessel Shore Party # 15

Chief of Party I. E. Rittenburg

Surveyed by J. A. McCormick

Protracted by A. E. Incedon

Soundings penciled by A. E. Incedon

Soundings in fathoms feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by H. L. Flemer

Verified by " " "

Instructions dated Nov. 2, 1933, 19

Remarks:

①

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET # 2,  
BEAUFORT RIVER, ARCHERS CREEK, BATTERY CREEK, H. & T. PROJECT # 160.

1 Date of Instructions

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

2 Surveys 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 of three or more cuts by means of a plane table and alidade, with the exception of signals Fir and Dry, which are hydrographic signals. It is believed that this sheet is complete within the area covered. It joins sheet # 1 on the south, will join sheet # 3 on the north and will join sheet # 7 on the west end of Archers' Creek. Wherever possible the low water line was obtained by soundings. Wherever the low water line was missed it was impossible to get the launch closer to shore. Soundings were taken off the dock at Port Royal but it is recommended that the depths obtained from the sounding launch be charted as they will show the depth under the keel of any vessel lying alongside the dock. ✓

Launch soundings shown on sheet. JGL

3 Discrepancies

None.

4 Channels

21 feet can be carried to the dock at Port Royal by careful navigation 15 or 16 feet can be carried up the Beaufort River to the North end of this sheet, with local knowledge. The bottom is lumpy and boats drawing over 13 feet should proceed with caution at low water. 5 1/2 feet can be carried through Archer Creek ( 8 - 11 D day ) Battery Creek has a deep channel, more than 15 feet, from its mouth at Port Royal to sig. Ike Lat. 32 - 23.8 Long. 80-42.35. The limiting sounding is on Pos. 66 H. The channel is narrow and has one very sharp turn. Line 15-17 J was run in an attempt to find a channel which would connect with the main creek but the launch went aground at 17 J and had to wait for a rising tide. At low water a sand bank runs from 17 J to 18 J ( a detached position locating the N.W. end of this bank). Lines 124-125 H and 126-128H are the limits of another sand bank ( near sig. Ike ) which closes the entrance of that arm of Battery Creek. There are apparently two entrances to Archer Creek. The N.W. entrance is not used as there is a 2-3 foot bar across the entrance ( 49-50C). The S.E. entrance is easy of access with a least depth of 9 feet, 3 1/2 feet more than can be carried through Archer Creek and is marked by a black can buoy # 11. ✓

5 ft. only ✓

both areas marked. Sand bank on sheet. JGL ✓

5 Dangers

The only danger of any importance is the spit making out from the S.E. end of Port Royal Island and marked at the S. end by a lighted beacon ( signal Bin.) ✓

6 Shoreline

No shoreline is shown on this sheet as the shoreline is now being obtained by an air photo compilation party in Savannah. ✓

Comparison with previous surveys

*This survey is to the south of the area of the new survey H 4174 covers area and fits depths discussed.*

This survey was compared with Sheet H 3898 and chart 571. Above Port Royal, in Battery Creek, it is believed that a comparison is of little value due to the time elapsed between the last previous survey and this survey. The 15 foot sounding shown on ~~3898~~ in Lat. 32-21.6 Long. 80-40.6 was checked with a 15 foot sounding 69-70 C. There has been considerable shoaling to the N.W. of this sounding as this survey shows 15-18 foot depths where the previous survey 19-21 foot depths. At the junction of Battery Creek and the Beaufort River this survey shows shoaling of about 2 - 4 feet. The 18 foot sounding shown on ~~3898~~ in Lat. 32-22.1 Long 80-40.6 was checked with an 18 ft. sounding (21A and 74-75 C ). The spit at the S.E. end of Port Royal Island agrees on both surveys. The <sup>4174</sup> 16 ft. sounding on ~~3898~~ in Lat. 32-22.7 Long. 80-40.4 was searched for and considerable time spent there but could not be found. This survey shows an 18 ft. sounding nearby ( 95-96 A ) and a large shoal area to the westward with several 15 ft. soundings not shown on the previous survey. The <sup>4174</sup> 18 ft. sounding on ~~3898~~ in Lat. 32-23.4 Long. 80-40.6 falls in an area of 21 ft. soundings on this sheet but several 18 ft. soundings were obtained immediately Eastward. Considerable time was spent searching for the 15 ft. sounding shown in Lat 32-23.7 Long 80-40.5 but an area of 19 ft. soundings was all that could be found.

*channel area unchanged. 84.*  
*\* see review par. 61, 12, 13.*

8 Statistics

Statute miles of soundings	168.7
Soundings taken	4925
Number of positions	1125

9 Tides

Both a standard automatic tide gage and an portable automatic tide gage were operated at Parris Island Marine Dock throughout the period of this survey. In addition a portable automatic gage was operated at Beaufort for the entire period of the survey. All soundings were reduced from the records of the portable automatic tide gage at Parris Island. The boat sheet soundings were reduced from the Beaufort Gage ( See Tidal Data Sheet forwarded with this )

10 Landmarks for charts, description of recoverable stations etc. These are forwarded with the descriptive report for topographic sheets A & B

I. E. Rittenburg, Lieut.,  
Chief of Party C&GS

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

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5519.

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

Number of positions on sheet	1125.
Number of positions checked	140.
Number of positions revised	0.
Number of soundings recorded	4925.
Number of soundings revised	2.
Number of signals erroneously plotted or transferred	0.

Date:.....

Cartographer:.....

Verification of pretrasting Verification & inking of rocks and shoals)	by H. L. FLEMER	Time: 31 hr.
Verification of inking by	H. L. FLEMER	Time: 60 "
Review by	John G. Ladd	Time: 28 "

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

Survey No. H 5519

GEOGRAPHIC NAMES  
S.C.

Chart No. 1240

Date. Oct. 12, 1934

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
✓	<del>P.M. Map not reliable use Archer Creek</del> <i>H.B.</i>	<del>Archer Cr. (US Engrs)</del> <del>Archers (Fort Frankland Proj. Mil. Map)</del>	-----	-----	32° 21.5' 80° 42.8'
✓	-----	<u>Battery Cr. (USGB)</u>	-----	-----	32° 22.5' 80° 42.8'
✓	-----	<u>Beaufort River</u>	-----	-----	32° 23.5' 80° 41.0'
		<u>Archers Cr.</u>			
		<i>GN 4 letter gives Archers as local usage; i. so decided by Mr. Bacon for sheet H-5562, see name list in DTR. H.B.</i>			
					<i>2/1/35</i>

October 27, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5519

Locality Beaufort River, 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:

*Hammann*  
Acting Chief, Division of Tides and Currents.

Report on H. 5519.

Chief of Party - L. E. Rittenburg.  
Protracted by - A. E. Inledon.  
Verified and inked by - H. L. Flemer.

Surveyed - December 1933.  
Surveyed by - J. A. McCormick.  
Soundings plotted by - A. E. Inledon.

1. The records conform to the general instructions. ✓
2. The usual depth curves can be drawn. ✓
3. The field plotting was complete and exceptionally accurate. ✓
4. A bridge at signal FAT (Lat.  $32^{\circ}21'.7$ , Long.  $80^{\circ}42'.8$ ) and a wharf near signal SILVER (Lat.  $32^{\circ}24'.5$ , Long.  $80^{\circ}40'.6$ ) were shown on photo compilation sheets 5200 and 5209 and were added to this sheet. Bridge data was not given. The boat sheet indicates three islands in the vicinity of signal FEZZ, Lat.  $32^{\circ}22'.7$ , Long.  $80^{\circ}40'.7$ . The photo compilation sheet shows a marsh of indefinite area at this place. The latter was left in pencil. *5210  
islands and  
other tops.  
features on 52  
copied from  
old tops.*
5. Inasmuch as the adjacent sheets have not been verified, satisfactory junctions could not be made at this time. A tentative junction was made with field sheets 1 and 3 and the depth curves in these areas are approximately correct but subject to the verification of these sheets.
6. The authority for the zero curve south of Signal IKE (Lat.  $32^{\circ}23'.7$ , Long.  $80^{\circ}42'.4$ ) will be found on page 1 of the descriptive report. ✓

Two soundings (8' and 1') after 59 G day, Lat.  $32^{\circ}22'$ , Long.  $80^{\circ}41'.1$  line ends at 59 G. are inconsistent with the adjacent area when plotted by course and time. These were omitted on both the boat and smooth sheet.

All of the reports and records required were found in the files except: ✓

- a. Special chart for U. S. Lighthouse Service. ✓
- b. Approval of Chief of Party. ✓

Submitted by - H. L. Flemer.



Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5519 (1933)

Port Royal Sound, Beaufort River, South Carolina  
Surveyed in 1933

Instructions dated November 2, 1933 (I. E. Rittenburg)

Hand Lead soundings - 3 Point fixes on shore signals.

Chief of Party - I. E. Rittenburg.  
Surveyed by - J. A. McCormick.  
Protracted and soundings penciled by - A. E. Incledon.  
Verified and inked by - H. L. Flemer.

1. Condition of Records.

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

a. A list of the signals used in the smooth sheet was not submitted with the records. (par. 139).

b. No approval note by the Chief of Party was included in the Descriptive Report.

c. The chart for the location of aids to navigation for use of the Lighthouse Bureau has not been submitted.

2. Compliance with Instructions for the Project.

The survey complies with the instructions for the project.

3. Sounding Line Crossings.

The cross lines together with 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 curve.

5. Junctions with Contemporary Surveys.

The junctions with H-5518(1934) and H-5562(1934) on the south and with H-6025(1934) on the north are satisfactory.

6. Comparison with Prior Surveys.

a.	H-633 (1855)	H-1521 (1882)
	H-834 (1862)	H-2119 (1892)
	H-962 (1868)	H-2120 (1892)

A comparison between the above surveys and the present survey reveals numerous changes in depth and locations of shoals. 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 the various changes noted. From the standpoint of information to be carried forward to the present survey, there are no shoals or dangers of any importance on the old surveys which are not accounted for on the present survey. The present survey within its limits should supersede all the above surveys for charting purposes.

b. H-4174 (1921).

This survey which is the latest of the prior surveys of the area of the present survey shows some slight continued changes in the shoals and channels which are considered to be due to the changeable nature of the area. However the general agreement with H-5519 (1933) is fair with the following exceptions:

(1) The 16 foot sounding (charted) on H-4174(1921) at lat.  $32^{\circ}22.75'$  long.  $80^{\circ}40.4'$  falls on the present survey in depths of 18 to 20 feet. The descriptive report (page 2) states that the field party searched for this 16 foot sounding and failed to find it. In as much as all the surrounding soundings indicate that this area has undergone a change it is considered that the 16 ft. sounding no longer exists and should be disregarded in future charting.

(2) The 18 foot sounding on H-4174(1921) at Lat.  $32^{\circ}23.4'$ , long.  $80^{\circ}40.6'$  falls on the new survey in depths of 21 to 22 feet. About 60 meters to the east there are a number of 18 ft. soundings on H-5519(1933) and these are considered to be the present locations of the shoal spot as originally shown by the 18 on H-4174(1921).

(3) The 15 foot sounding (charted) on H-4174(1921) at Lat.  $32^{\circ}23.7'$  Long.  $80^{\circ}40.5'$  fall on the present survey in depths of 19 feet. The field party searched for this 15 foot sounding and the least depth found was 19 feet (see D.R. page 2). In view of this and the fact that the surrounding depths on the present survey indicates that changes have taken place in this area the 15 foot spot is considered to be now non-existent and should be disregarded in future charting.

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.

b. Aids to Navigation.

The aids to navigation as shown on the present survey differ from the positions as shown on the chart by 20 to 130 meters with the exception of beacon (  $\Delta$  ~~ste~~ Arch 1921) at Lat.  $32^{\circ}21.2'$ , long.  $80^{\circ}44.2'$ , which agrees with the positions as shown on the chart. However the positions of the aids as located on H-5519(1933) adequately mark the features intended.

8. Field Plotting.

The field plotting was satisfactory.

9. Additional Field Work Recommended.

No additional field work is recommended.

10. Superseding Old Surveys.

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

H-633	(1855)	In part.
H-834	(1862)	" "
H-962	(1868)	" "
H-1521	(1882)	" "
H-2119	(1892)	" "
H-2120	(1892)	" "
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*  
Asst. Chief Div. of Charts.

*J. S. Borden*  
Chief, Section of Field Work.

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

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

Applied to Cht. 571, Apr. 2, 1935

K. Reynolds

25 Jan 13, 1936  
end