

5811

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

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 35 5811
Hydrographic }

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

JUN 13 1955

Acc. No. _____

State South Carolina

LOCALITY

~~McClellanville, S.C.~~

Bull Bay

Western Part & Vicinity

1935

CHIEF OF PARTY

Lt. Benjamin H. Rigg,

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
REG. NO.
JUN 14 1935
Acc. 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. 35

REGISTER NO. **5811**

State South Carolina

General locality ~~McClellanville, S.C.~~ Bull Bay

Locality ~~Bull Bay~~ Western Part & Vicinity

Scale 1/10,000 Date of survey March, 19 35

Vessel Party No. 19

Chief of Party Benjamin H. Rigg

J. B. Kinghorn
Surveyed by Lt. Edward B. Brown, Jr.

Protracted by C. J. Harryman

Soundings penciled by C. J. Harryman

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by _____

Inked by _____

Verified by S. M. Green Jr.

Instructions dated October 10, 19 33

Remarks: _____

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 35

DATE OF INSTRUCTIONS - October 10, 1933.

SURVEY METHODS - The soundings were taken with a hand leadline, and with a sounding pole in shoal water. The line was graduated in fathoms and feet in accordance with standard practice. The pole was graduated in feet and one-half feet. The soundings were taken while the skiff was underway on the sounding lines. The lines were run by following ranges, by following shorelines, by following ebb tide channel lines, and by following center lines in very small creeks. The positions were taken by the standard three point sextant fix on signals located by graphic aluminum sheet triangulation and third order theodolite triangulation. Signal RED was a small flag on a piece of 2 x 4 lumber stuck temporarily in the bottom outside the high water line. This signal was located by a sextant fix and a check angle. Signal HAT was located by cuts from signal RAB and Signal SO, and on Hydrographic Sheet No. 30 by a round of sextant angles taken at the signal.

The purpose of this sheet was to obtain hydrographic data in Bull Bay in the area not included on Hydrographic Sheet No. 30 and Hydrographic Sheet No. 31. This area is unimportant in that it is not used for navigation; the general depth is 0 to 1 foot. Sounding lines in this area were spaced 300 to 400 meters apart. There is a small slough near the southeastern limit of this sheet that might be used as an anchorage by small boats; this is not recommended, however, because this area is subject to heavy short seas which would be of danger to a small boat.

The inlets on this sheet are generally bounded by oyster bars and are not used. The creeks inside the inlets were developed by running lines parallel with the shorelines. These lines were spaced 25 to 30 meters apart.

In Awendaw Creek, an ebb tide channel line was run to the bridge. The positions were taken by range finder distances and compass bearings to

points that could be identified on the compiled shoreline. The limit of the photographs was at Lat. $33^{\circ} 01.8'$, Long. $79^{\circ} 37'$, therefore, the hydrography could not be plotted beyond this limit.

The intracoastal waterway crosses this sheet. No hydrography was executed in this waterway due to the fact that it is a dredged cut maintained by the U. S. Army Engineer Department.

DISCREPANCIES - None.

DANGERS - There are numerous oyster bars near the shoreline in the Bull Bay area covered by this sheet. They are inside the low water line and no attempt was made to locate all of them. Notes were entered in the sounding records giving the bearings, distances, etc. to the edges of the oyster bars that were seen while on sounding lines.

In Awendaw Creek there are numerous oyster bars in the reach between Lat. $33^{\circ} 01.8'$, Long. $79^{\circ} 34.5'$, and Lat. $33^{\circ} 01.8'$, Long. $79^{\circ} 35'$. To the westward of Long. $79^{\circ} 35'$, there are numerous snags near the shoreline.

Shoreline was not available beyond position 34a, Lat. $33^{\circ} 01.8'$, Long. $79^{\circ} 37.0'$. This is the limit of the photographs. The sounding line was continued to give information as to general depth to the road crossing the stream. (Highway Bridge)

CHANNELS - The old intracoastal waterway, which includes a part of Graham Creek, a part of Saltpond Creek, a part of Belvedere Creek, and a part of Vanderhorst Creek, is an unmarked channel. The shoalest part of the channel is in Graham Creek where the controlling depth is ⁴5 feet. This channel is narrow and has some very sharp turns. The heads of the creeks were blocked when the new intracoastal waterway was dredged; it is believed that this will cause a shoaling in the old waterway.

The channel in Awendaw Creek from the intracoastal waterway to the town of Awendaw (on the Sea Level Route) is narrow and crooked, and is unmarked. In the wide reach at Lat. $33^{\circ} 01.8'$, Long. $79^{\circ} 34.7'$ the channel is bounded

2 ft? W.A.B.

by oyster bars and the controlling depth in this reach is three feet. From this reach westward there are numerous snags near the shoreline. The depth is not less than three feet up to the highway bridge at the town of Awendaw.

GEOGRAPHIC NAMES - The name Awendaw Creek is shown on a state highway sign on the highway bridge. The name of the town Awendaw is shown on several of the stores in the town.

TIDAL DATA - See attached report on tides.

STATISTICS -

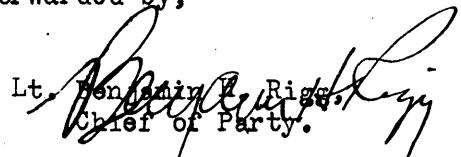
Vol. No.	Miles	No. of Sound.	No. of Positions
1	44.1	1818	271
2	31.7	1311	192
3	10.6	354	97
	<u>86.4</u>	<u>3483</u>	<u>560</u>

Respectfully submitted,



Lt. (j.g.) Edward B. Brown, Jr.

Forwarded by,


Lt. Benjamin H. Riggs,
Chief of Party.

The following tide Gauges were used to control Hydrography in the area covered by this sheet:

Bull Island tide gauge located near triangulation Station "Middle", Latitude $33^{\circ} 55.4'$, Long. $79^{\circ} 36.4'$. This gauge was in operation from Feb. 26, 1935 to March 19, 1935. Mean Low Water on the staff was 4.0'.

Sewee Wharf Tide Gauge located near triangulation station "Wagoner", Lat. $33^{\circ} 57.1'$, Long. $79^{\circ} 38.9'$. This gauge was in operation from Jan. 28, 1935 to March 20, 1935. Mean Low Water on the staff up until Feb. 19, 1935 was 3.5 feet. The staff was disturbed on Feb. 19, 1935 changing the Mean Low water on the staff to ³4.0'. See accompanying note.

For reduction of soundings the sheet was zoned as follows:

Bull Island Tide Gauge was used direct on all the Bay soundings.

Sewee Wharf Tide Gauge was used with time corrections on the creeks between Sewee Wharf and Harbor River to the northward, as follows:

Sewee Wharf to Belvedere used direct from Sewee Wharf Tide Gauge.

Zone 1 -- Belvedere to Graham Creek and Triangulation station "Owendaw". A ten minute time correction was applied from Tide Station Sewee Wharf.

Zone 2 -- Graham creek to the northern extremity of the boat sheet. A twenty minute time correction was applied from Tide Station Sewee Wharf.

Where a few of the soundings from Sewee Tide Zones extended into the Bay from some of the small creeks the zones were not changed to Bull Island. This is considered allowable due to the relative unimportance of the area and the irregularities in the tides due to wind.

HYDROGRAPHIC SURVEY NO. H5811

Smooth Sheet 1

Boat Sheet 1

Sounding Records 3 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes in Vol. 1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party B. H. Rigg

Recoverable Station Cards (Form 524) _____

Special Chart for Lighthouse Service no floating aids
(Circular Nov. 30, 1933)

Remarks _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ...5811

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

Number of positions on sheet	...560.
Number of positions checked	...20.
Number of positions revised	...4.
Number of soundings recorded	...3483.
Number of soundings revised	...✓...
Number of signals erroneously plotted or transferred	...✓...

Date: 8/14/35

Verification by S.M. Green

Review by R.J. Christman

Time: 10 1/7 days.

Time: Rev. 7 1/2 } 8 1/2 hrs
Cor. 1 }

GEOGRAPHIC NAMES
S. CAROLINA

Date 18 June, 1935

Survey No. H5811

Chart No. 1238

Diagram No. 1238-2

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

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

Under investigation. Q

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>Awendaw Creek</u> ✓	Owendaw Creek			
	<u>Intracoastal Waterway Canal</u> ✓	-----			
	<u>Graham Creek</u>	Same			
	<u>Bull Bay</u> ✓	"			
	<u>Saltpond Creek</u> ✓	"			
	<u>Belvedere Creek</u> ✓	"			
	<u>Vanderhost Creek</u> ✓ A	"		Vanderhost - V.S.G. B decision	
		APPROVED NAMES UNDERLINED IN RED H.L. FLEMING			

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 28, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5811

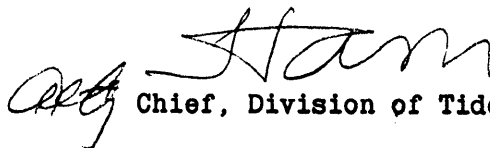
Locality Bull Bay, Western Part and Vicinity, Coast of South Carolina

Chief of Party: B. H. Rigg in 1935
Plane of reference is mean low water reading
3.0 ft. on tide staff at Sewee Wharf
11.2 ft. below B.M. 1

4.0 ft. on tide staff at Bull Island
6.8 ft. below B. M. 1

Height of mean high water above plane of reference is 5.0 feet at
Sewee Wharf; 5.1 feet at Bull Island.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

H-5811

8/14/35

As this is a rather unimportant Area the soundings lines have been run about 400 meters apart. Although this spacing is generally sufficient, in some places it was necessary to approximate the depth curves. Numerous corrections were made to the curves as plotted in the field.

It was necessary to revise the field platting of all soundings in the creeks between Bull Bay and the Intercoastal waterway. This was due to a correction to the tide reducers made after the soundings were plotted in the field. (See Vol. 1, page 3 to 53) Due to the limit of the available shoreline the soundings between 35'a and 40'a have not been plotted.

There is a sand island extending from $33^{\circ}57.5'$ to $33^{\circ}58'$ and from $79^{\circ}33.5'$ to $79^{\circ}34.8'$. There is no definite location of this except as sketched on the B.S. The outline of this as shown on the H.S. is drawn and labeled according to instructions given to the verifier by Capt. E. P. Ellis.

The sheet has been compared with the Air-photo

S. M. Green Jr.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5811 (1935) - FIELD NO. 35

Bull Bay, Western Part and Vicinity, South Carolina

Surveyed in March, 1935

Instructions dated October 10, 1933 (B. H. Rigg)

Hand Lead and Pole Soundings.

3 Point Fixes on Shore Signals.
Range Finder and Bearings.

Chief of Party - B. H. Rigg.

Surveyed by - J. B. Kinghorn, E. B. Brown, Jr.

Protracted by - C. J. Harryman.

Soundings penciled by - C. J. Harryman.

Verified and Inked by - S. M. Green, Jr.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual, except that position numbers and day letters were shown in black on the cover and title page instead of the color assigned to the sounding boat. They have been changed in the office.

The Descriptive Report satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan and character of development are in accordance with the instructions for the project.

3. Shoreline.

Shoreline originates with photo compilation T-5390 (1934) and T-5391 (1934).

Signal locations were determined by triangulation in 1934 by Graphic Control sheets T-6291b (1934) and 6292a (1935), and by sextant observations for two signals, "Red" and "Hat."

4. Sounding Line Crossings.

No regular test cross lines were run but depth at crossings of lines resulting from the work are in good agreement.

5. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn with the exception of the low water line defining the shoal area "Sand awash at H. W." at the southern edge of the sheet.

6. Junction with Contemporary Surveys.

The junction with H-5803 (1935) to the northeast is satisfactory.

The junction with H-5786 (1935) to the south is satisfactory except that the outline and elevation of the shoal area in lat. $32^{\circ} 57.6'$, long. $79^{\circ} 34.0'$ should have been better determined.

7. Comparison with Prior Surveys.

- a. H-683 (1859),
H-1276b (1875),
H-1674 (1886).

A comparison between the above surveys and the present survey reveals many changes in depths and in location of shoals. Sections of the creeks have been changed by the closing off of bends and the opening of cuts to improve the waterways. Because of the time elapsed since the earlier surveys and the general character of the area, it is not necessary to consider in detail for the purpose of future charting, the various changes that have taken place. The present survey should supersede the above surveys for charting purposes.

- b. H-4179 (1921).

A comparison between this survey and the present survey shows many changes in details though the general agreement is fair. In view of the unimportance of this part of Bull Bay and because the present survey is on larger scale and shows somewhat closer development, H-5811 (1935) should supersede the above survey for future charting purposes.

8. Comparison with Chart 1238.

- a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs except as follows:

- (1) The Intracoastal Waterway is based on U. S. Engineers' surveys (Blueprints 27675 and 27676). The channel is maintained by the U. S. Engineers and the present survey does not show any development.
- (2) The old Inland Waterway was improved by cuts connecting Awendaw Creek with Graham Creek, Graham Creek with Saltpond Creek, and Saltpond Creek with Belvedere Creek. The latest improvement of Saltpond Creek is shown on EP. 22399 (1929). This route is no longer maintained and no effort was made to trace the original source of the information.
- (3) The "Old Boiler" charted as a landmark in lat. 32° 59.5', long. 79° 35.2' is reported as not prominent and should be expunged from the chart. (See Chart letter 455 of 1935).

b. Controlling Depths.

The controlling depth of 4 feet in the section of the old Inland Waterway shown on the present survey is in agreement with the charted depth.

c. Aids to Navigation.

There are no aids to navigation in this area except those marking the Intracoastal Waterway.

9. Field Plotting.

The protracting of positions was satisfactory. About one third of the penciled soundings had to be revised on account of a change in the tide reducers.

10. Additional Field Work Recommended.

The survey is satisfactory 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- 683	(1859)	in part.
H-1276b	(1875)	" "
H-1674	(1886)	" "
H-4179	(1921)	" "

12. Reviewed by - R. J. Christman, September 25, 1935.


Inspected by - A. L. Shalowitz.

Examined and approved:


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


L. O. Golbet,
Chief, Division of Charts.


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


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

25 Jan 2, 1936

lad