

5506

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. ¹⁹ 5506
Hydrographic }

State South Carolina

LOCALITY

Charleston, S.C.

Upper South Edisto River

1934

CHIEF OF PARTY

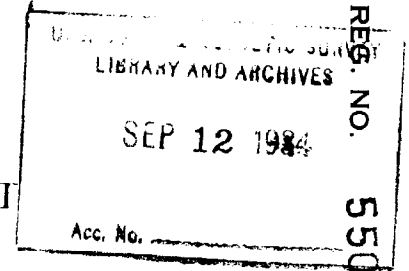
Lt. Fox [Signature]

5506

838

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET



REG. NO. 5506

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. 19

REGISTER NO. 5506

State South Carolina

General locality Charleston, S.C.

Locality ^{South} S. Edisto River

Scale 1-10,000 Date of survey June, 1934 ✓

Vessel Shore Party No. 19

Chief of Party Benjamin H. Bigg ✓

Surveyed by J. B. Kinghorn ✓

Protracted by C. J. Harryman

Soundings penciled by C. J. Harryman

Soundings in ~~feet~~ fathoms

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by M. S. Sibley

Verified by M. S.

Instructions dated October 10, 1933

Remarks:

*Soundings and Fixed Aids to nav.
in chart letter 676 (1934)
also Hqs. D. R's*

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 19

DATE OF INSTRUCTIONS - October 10, 1933.

SURVEY METHODS - The sounding lines were controlled by three point fixes on triangulation and topographic signals. The soundings were taken with a hand lead line graduated in fathoms and feet. Where possible the lines were run on ranges. In Mosquito Creek and the creek which enters it from the south, the lines were run by following the shore line. Also in the creek which runs between Fenwick Island and the marsh island to the north of Raccoon Island, the lines were run by following the shoreline. See boat sheet for positions in these areas.

DISCREPANCIES - In lat. $32^{\circ} 39.4'$, long. $80^{\circ} 23.5'$ on "D" day between positions 46 and 47, a 5' sounding falls on a 10' sounding on position 3 of "A" day. This may be explained by the fact that in this area the slope is very steep. The 5' sounding is plotted. It is recommended that this be charted as shown.

In lat. $32^{\circ} 39.1'$ long. $80^{\circ} 24.4'$ position 54 of "E" day plots very close to position 48 of "D" day with a 10' sounding and a 3' sounding respectively. The 3' sounding is plotted. It is recommended that this be charted as shown.

In lat. $32^{\circ} 37.6'$, long. $80^{\circ} 25.1'$ position 6 of "H" day, a 15' sounding falls in the channel outside of a 17' sounding. Both soundings are plotted. It is recommended that the 15' sounding be charted.

At the northern limits of the sheet (lat. $32^{\circ} 39.9'$, long $80^{\circ} 24.9'$) lines were run through the openings in the bridge. These lines are plotted in the 1-5,000 insert so that all the soundings might be plotted. Positions 24 to 34 of "W" day were protracted. Positions 18, 19, 20 "A" day; 10, 11, 12 "E" day; 21-24 "E" day; and 33-34 "E" day were raised to scale and plotted with proportional dividers.

DANGERS - There are banks of hard sand at four points in the river. At lat. $32^{\circ} 35.0'$, long. $80^{\circ} 23.7'$ there is one. The channel is well marked and deep in this vicinity. At lat. $32^{\circ} 37.1'$, long. $80^{\circ} 24.2'$ there is another. ^(submerged) There are no markers in this area. The channel lies close to the south-east shore. At lat. $32^{\circ} 32.6'$, ^{37.6} long $80^{\circ} 25.0'$ is a bank lying almost in the center of the river. The channel here is on the south shore, There are no markers. There is a bank at lat. $32^{\circ} 38.2'$, long. $80^{\circ} 24.2'$. The channel in this reach is very close to the west shore.

CHANNELS - From the southern limits of the sheet to Beacon No. 3 at the entrance of Watts Cut, the channel is well marked. Care must be taken to stay within this marked channel because the channel is very narrow.

Up the river from Watts Cut there is but one channel marker (Beacon No. 2). Special care should be taken at this marker because the channel is very shoal at this point.

COMPARISON WITH PREVIOUS SURVEYS - At Beacon No. 2, the controlling depth is found to be 7' instead of 8' as shown on the chart.

TIDAL DATA - Three portable tide gauges were set up in the vicinity of the work on the sheet, one at the Mouth of Dawho, location indicated on sheet, another at Pine Landing, location also indicated on sheet, the third at Big Bay Creek (not on sheet). Mean low waters on the staff are as follows:

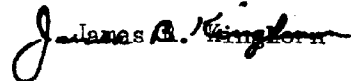
S. Edisto -- Mouth of Dawho	1.3
Pine Landing	1.9
Big Bay Creek	1.8

Areas controlled by the several gauges are indicated on the smooth sheet.

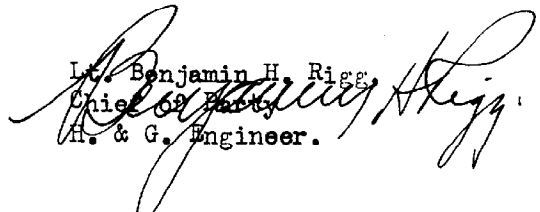
STATISTICS -

Vol. No.	Miles	Soundings	Positions
1	29.9	1358	258
2	30.6	1078	246
3	39.1	1575	292
4	40.9	1571	290
5	37.8	1470	315
6	<u>10.2</u>	<u>384</u>	<u>96</u>
	188.5	7436	1497

Respectfully submitted,


James A. Kinghorn

Forwarded by,


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

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

Survey No. H 5506

GEOGRAPHIC NAMES

Chart No. 1239

Date: September, 17, 1934.

South Carolina

Diagram No. 1239-2

Names underlined in red approved Sept. 17, 1934 H.B.

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

Ø, 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 and other maps	New Names in local use	Names assigned by Field	Location
✓ <u>OK</u> HB	<u>Raccoon Island</u>	same U.S.G.S "	-----	-----	32° 33.0' 80° 24.0'
✓ <u>OK</u> HB	<u>Edisto Island</u>	same U.S.G.S "	-----	-----	32° 35.5' 80° 23.0'
✓ <u>OK</u> HB	<u>Sampson Island</u>	same USGS "	-----	-----	32° 36.05' 80° 24.0'
✓ <u>OK</u> HB	<u>Jehossee Island</u>	same USGS "	-----	-----	32° 38.0' 80° 23.0'
✓ <u>OK</u> HB	<u>Dawho River</u>	same U.S.G.S "	-----	-----	32° 39.0' 80° 23.0'
✓ <u>OK</u> HB	<u>South Edisto River</u>	same USGS "	-----	-----	32° 37.05' 80° 24.0'
✓ <u>OK</u> HB	<u>Watts Cut.</u>	same USGS "			32° 37' 80° 24'
✓ <u>OK</u> HB	<u>Fenwick Island</u>	same USGS "			32° 34.5' 80° 25'
✓ <u>OK</u> HB	<u>Masquito Creek</u>	US Geol. Survey			32° 36' 80° 26'
✓ <u>OK</u> HB	<u>SALRR</u>	same			32° 39.8 80° 25'

LAC

November 16, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 5506

Locality South Edisto River, South Carolina

Chief of Party: B. H. Rigg in 1934

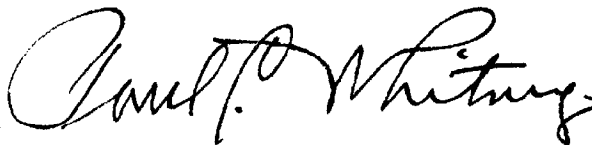
Plane of reference is mean low water, reading
1.5 ft. on tide staff at South Edisto River
6.6 ft. below B.M. 1

2.0 ft. on tide staff at Pine Landing
8.0 ft. below B.M. 1

1.7 ft. on tide staff at Big Bay Creek
6.8 ft. below B.M. 1

Height of mean high water above plane of reference is 6.3 feet at
South Edisto River and Pine Landing, and 6.1 feet at Big Bay Creek.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5506

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

Number of positions on sheet1497
Number of positions checked76
Number of positions revised1
Number of soundings recorded7436
Number of soundings revised12
Number of signals erroneously plotted or transferred0

Date: Dec. 3, 1934

Verification by *M. Silverberg*

Time: 59 hr.

Review by *H. W. Murray*

Time: 9 ..

Verification Report H-5506.

1. Conformity to Hydrographic Manual.

The sounding records are fairly neat and legible and conform to the requirements of the hydrographic manual. The position numbers in several areas are too large. A number of soundings had to be rejected due to trouble with signals. No approval by Chief of Party was submitted. ✓

2. Depth Curves.

The 6 ft., 12 ft., 18 ft. and 30 ft. curves are complete insofar as the limits of the sheet permit. In cases of steep slope, preference was given to the most representative curves. The low water line could be accurately determined in a great many localities. ✓

3. Field Plotting.

The field plotting was complete to the extent required for the soundings. The plotting of hydrographic positions was verified carefully. The protracting of approximately 5% of the positions was checked. The line from 46 N to 47 N did not agree with the time, course, boat sheet and adjacent hydrography so the right angle of 46 N (lat. $32^{\circ}35'2$, long. $80^{\circ}24'08$) was changed by $3^{\circ}45'$ to correct line. ✓

Position 52 C (Lat. $32^{\circ}38'95$, long. $80^{\circ}23'55$) is a weak fix and gives illogical plotting. It was therefore rejected. ✓

A number of soundings could not be plotted because of illegibility and in several cases were rejected because of illogical placing. ✓

4. Office Plotting.

The office plotting as done by the verifier consisted of corrections as outlined under 3 (Field Plotting). Several docks were noted in the remarks, ~~plotted and left in pencil because they could not be verified with the air-photo sheets.~~ ^{a check for accuracy was made} The beacons as mentioned in the descriptive report were not shown and had to be placed in the sheet from the topographic sheets. Attention is called to the Station QUO. and to the location of Beacon No. 2 which was plotted from the black and white sheet and from the remarks as noted in the sounding records. ✓

5. Junctions.

The agreement between junctions is good. Junctions were made with H-5505 and H-5506, but could not be made with H-5526 since it had not been verified. All positions were transferred with proportional dividers due to different scales. ✓

6. Remarks.

Recommendations of the field party as noted in the descriptive report regarding discrepancies were accepted. ✓

Respectfully submitted,

M. Silverberg

M. Silverberg.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5506 (1934).

South Edisto River, Charleston, South Carolina.
Instructions dated October 10, 1933 (B. H. Rigg).
Surveyed - June 1934.

Hand Lead Soundings - 5-Point Control on Shore Signals.

Chief of Party - B. H. Rigg.
Surveyed by - J. B. Kinghorn.
Protracted and soundings penciled by - C. J. Harryman.
Verified and inked by - M. Silverberg.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual with the exception that no approval sheet signed by the Chief of Party was forwarded with the descriptive report.

2. Compliance With Instructions for the Project.

The plan and character of the survey satisfy the instructions for the project. The extent of development of the river in general is very good for this type of waterway. However an additional line of soundings should have been run in the cross-over immediately southward of Beacon 2 (lat. $32^{\circ}58'.6$, long. $80^{\circ}24'.0$) to more accurately define the width of the 7 foot channel at this place.

3. Sounding Line Crossings.

Average agreement of cross lines is within one foot. Occasional differences of 2 and 3 feet occur in areas where the bottom slopes away sharply.

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. 5526 (1934), H. 5505 (1934) and H. 5504 (1934) are satisfactory.

6. Comparison With Prior Surveys.

H. 1349a (1875-76).

Soundings on this survey are sparse and inadequate for determining controlling depths; consequently does not warrant a detailed comparison with the present survey. However, in the broad flat areas soundings vary from 1 to 2 feet shoaler in some localities and

deeper in others. In other areas, radical changes have taken place in both shoreline and hydrography. No shoals nor bars were obtained on the old survey which have not been confirmed on the new. The several sand bars in mid-stream shown on H. 5506 (1934) all appear to be ^{increasing} necessary in extent.

7. Comparison With Chart No. 1239.

a. Within the area of the present survey, soundings shown on the above chart originate with surveys discussed in the preceding paragraph.

b. Fixed Aids to Navigation. Beacons shown on the present survey with the exception of Beacon No. 3 at the entrance to Watts Cut are all located in positions varying from 120 to 650 meters from their charted positions. The charted positions originate with L. H.M. to M. No. 6 (1924) and a section of Chart No. 1239 (Chart Letter No. 251-1930) sent to this office by the Lighthouse Bureau on which the beacons are spotted in relation to the shoreline which shoreline differs in geographic position from the shoreline on the present survey and accounts for the discrepancy in the location of the beacons.

8. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

9. Doubtful Soundings.

A number of shoal soundings (15, ~~6~~¹⁶ and 18 feet) in the general vicinity of lat. $32^{\circ}33'.6$, long. $80^{\circ}24'.0$, appear to be 1 fathom in error and should have been investigated in the field. In view of the controlling depth of 10 feet to the westward, they are relatively unimportant and need no further consideration.

10. Additional Field Work Recommended.

This survey is complete and satisfactory. Except for the line of soundings mentioned in par. 2, above, the area has been uniformly well covered. No additional field work is necessary.

11. Superseding Previous Surveys.

Within the area covered, H. 5506 (1934) supersedes the following survey for charting purposes:

H. 1349a (1875-76) In part.

Jan 16, 1935

12. Reviewed by - Harold W. Murray.
Inspected by - A. L. Shalowitz.

Examined and approved:

G. K. Green, *G. K. Green*
Chief, Section of Field Records.
A. L. Shalowitz
Chief, Section of Field Work.

K. T. Adams
Asst Chief, Division of Charts.
W. H. ...
Chief, Division of H. & T.

25 f-13, 1936
collg

Applied to Chart 838 Jan. 22, 1936 W. A. Bruders
Applied to Chart 793 June 30, 1936 H. MacEwen
" " " 1239 Apr. 1937 J. M. A.

Applied additional soundings (Holiday Area)
to Chart 837-5C 2nd Edition for L-699/64 32°34' 80'24"
Paul V. Howard 3/15/65