

5820

U. S. COAST & GEODETIC SURVEY  
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JUL 2 1935

A. No. \_\_\_\_\_

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

DESCRIPTIVE REPORT

~~Topographic~~ }  
Hydrographic }

Sheet No. 1 A

State South Carolina

LOCALITY

~~Entrance to winyah Bay~~

Winyah Bay Entrance

1935

CHIEF OF PARTY

Herman Odyssey

5820

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. 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. 1 A

REGISTER NO. **5820**

State South Carolina

General locality Winyah Bay

Locality ~~Entrance to~~ Winyah Bay Entrance

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

Vessel U. S. Coast & Geodetic Survey Ship GILBERT

Chief of Party Herman Odessey, H. & G. Engineer

Surveyed by Herman Odessey and Jeremiah S. Morton

Protracted by Edwin Shuffle, Jr.

Soundings penciled by Edwin Shuffle, Jr.

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by -

Inked by Miss H. V. Bennett

Verified by JACK HONICK & C. STANLEY LIGHTBOWN

Instructions dated \_\_\_\_\_ Letter dated October 29, 1935 4

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

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET - 1 A.

INSTRUCTIONS:

There were no specific instructions issued to this party by the Washington Office for this project. Authority for the work was contained in a letter from the Director, dated October 29, 1934, ( Ref. 22-AB, 1995-GI4 ), directing the Commanding Officer of the "GILBERT" to proceed to Georgetown, South Carolina, and take over some of the work assigned to Lieutenant B. H. Rigg. Lieutenant Rigg had submitted to the Office a layout of sheets, indicating the work recommended for the "GILBERT'S" party. This layout was approved by the Washington Office, and the work done accordingly.

The layout of sheets, as approved, did not include a survey of the shoals at the entrance to Winyah Bay. Since it appeared that the "GILBERT'S" party would be able to do this additional work before returning to R. A. R. work off the Virginia Coast, the Commanding Officer recommended that this additional work be undertaken. This was approved by the Chief of the Division of Hydrography and Topography in March 1935, who was then in South Carolina inspecting this work.

AREA :

This sheet covers a survey of the shoals outside

continued

the entrance to Winyah Bay, from Latitude  $33^{\circ}-11'.3$  to  $33^{\circ}-14'.0$ , and extends from the beach out to beyond the 3 - fathom curve. This sheet joins Sheet 1, of this party, on the west, inside the entrance to Winyah Bay, at Longitude  $79^{\circ}-10'.0$  W.

SURVEY METHODS :

All soundings were obtained by leadline. Positions were determined by 3 - point sextant fixes, in accordance with the method prescribed in the Hydrographic Manual.

The basic control consisted of ample triangulation done previous to this project. This triangulation formed the control for a traverse run along the outside beach to locate additional shore signals.

With the exception of that along the outside beach, all of the shore line on this sheet was taken from the compilation of aerial photographs, done under the direction, and furnished by, Lieutenant E. H. Kirsch.

The survey of this area was done by two hydrographic parties working simultaneously. The "GILBERT" confined its work to the outside area, while a launch party, using a launch borrowed from Lieutenant J. C. Semmon's party, worked in the entrance channel, and made detailed surveys of the areas too shoal or too dangerous for the "GILBERT" to operate in.

The spacing of lines north of the north jetty was controlled largely by the positions of numerous floating fish nets. <sup>(2 FISH TRAPS)</sup> These nets, each several hundred yards long, were

continued

anchored in an approximately east and west direction, and were spaced at intervals of 150 to 300 yards. The sounding lines were run between these nets. Often it was necessary to break off lines and change course considerably to avoid running into the nets.

The work done by both parties is plotted on a single smooth sheet.

All sounding lines run in the main channel were parallel to and with the direction of the current.

DISCREPANCIES :

There are no discrepancies within the area covered by this sheet. Occasional crossings differing by 2 feet are found only where the slope of the bottom is steep.

COMPARISON WITH PREVIOUS SURVEYS :

A comparison with the latest edition of Chart No. 428 was made by superimposing an enlarged tracing of the chart on the smooth sheet.

A satisfactory junction was made on the north in Latitude  $35^{\circ}-14'$ , where the new position of the 1, 2, and 3 - fathom curves is in close agreement with the old. The agreement between the 2 and 3- fathom curves at the south jetty in Latitude  $33^{\circ}-11.4$  is likewise very good.

The shoal area just north of the entrance light in Latitude  $33^{\circ}-11.8$ , Longitude  $79^{\circ}-08'5$ , extends further to the north and east than is shown on Chart No.428. The same applies to the 3- fathom curve in Latitude  $33^{\circ}-13'2$ , Longitude

continued

79°-08'5.

CHANNELS :

Winyah Bay Entrance South Jetty Channel is marked by a lighted bell buoy and jetty light at the outer end, and a lighted range at the inner end. This channel has a controlling depth of 19 feet, which is more than can be carried to Georgetown, the principal city in this locality. Most shipping uses this channel.

Local vessels, drawing 8 feet or less, coming in from the north, generally pass close to the outer end of the north jetty, and then head for the middle mound of the south jetty to clear the dangerous shoal between the outer ends of the two jetties. { only two mounds marked on chart

DANGERS :

The principal dangers within the limits of the area covered by this sheet are the shoals on the north side of the entrance to the main channel. A minimum depth of 1/2 foot at mean low water was found in Latitude 33°-11'8, Longitude 79°-08'7. There are breakers over this shoal at all times, with the possible exception of high water combined with calm weather. Strong currents make navigation close to this shoal very dangerous.

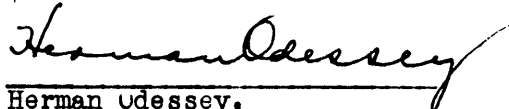
The jetties on both sides of the main channel have sunk to such an extent that at low water they are only partly bare. At high water the north jetty is completely

continued

covered, while only the three mounds of the south jetty are visible. Strangers should use extreme care in approaching this channel in thick weather, for several vessels have been wrecked on these jetties.

Inside the jetties the current is strong, attaining a velocity of 3 to 4 knots.

Respectfully submitted:



Herman Odessey,  
Lieutenant, USC&GS.  
Chief of Party.

Statistics to Accompany Sheet No. 1-A

LAUNCH

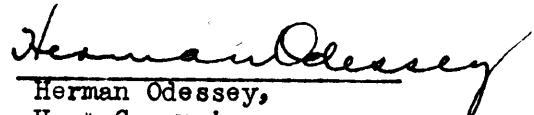
Date	Letter	No. Positions	No. Sdgs.	Stat. miles of hydrography
March 19	a	105	648	13.6
20	b	171	1116	24.1
21	c	212	1200	31.2
22	d	161	869	22.4
Total for Launch:-		649	3833	91.3
<u>SHIP</u>				
March 19	A	174	926	29.8
20	B	60	312	9.5
21	C	182	954	27.7
22	D	123	652	18.5
Total for Ship:-		539	2844	85.5
Total for both vessels:-		1188	6677	176.8



continued

APPROVAL SHEET

sheet No. 1 A, and the sounding volumes for same,  
have been inspected and are approved.

  
Herman Odessey,  
H. & G. engineer,  
Chief of Party.

REPORT ON H-5820 (1935)

- 1- The records conform to the requirements of the general instructions, except that the clay letter was omitted from several pages.
- 2- The manual depth curves were completely drawn.
- 3- The field plotting was completed to the extent prescribed in the Hydrographic Manual, except that the minus  $\frac{1}{2}$  fath soundings were not plotted as zero & also a stump which bears 2 ft. was not shown on Hydrographic sheet. The smooth plottor failed to indicate the submerged jetties which are a danger to navigation.
- 4- The office draftsman did not have to do over any part of the drafting done by the field party except for the replotting of one (1) position & the revision of fifty-four (54) soundings.
- 5- No junction was made with the only contemporary adjacent sheet (H-5815) because it had not been revised upon completion of this sheet.

Location of jetties from T-4164(1925)  
Location & extent of jetties taken from U.S. ENG. B.P. 27813 Surveyed July 1934.

~~Remarks - The exact location of the end of the North Jetty could not be determined by the verifier, however a note indicating its location was shown. The South Jetty which evidently extends to Winkah Bay Jetty Light was indicated by a penciled line & note, which was taken from the descriptive reports & records. This sheet has been compared with the Photo~~

Compilation T-5381 & T-5385

Respectfully submitted,  
Jack Norick,  
C. Stanley Lightboon

HYDROGRAPHIC SURVEY NO. 5820

Smooth Sheet 1

Boat Sheet 2

Sounding Records 4 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 H. Odyssey

Recoverable Station Cards (Form 524) Yes

Special Chart for Lighthouse Service No  
(Circular Nov. 30, 1933)

Remarks \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **5020**

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

Number of positions on sheet	<b>.1188.</b>
Number of positions checked	<b>.128..</b>
Number of positions revised	<b>..!...</b>
Number of soundings recorded	<b>.6677.</b>
Number of soundings revised	<b>.54..</b>
Number of signals erroneously plotted or transferred	<b>.....</b>

Date: **7/3/35**

Verification by **J. Honick**

Inked by -- **H.V. BENNETT**

Review by

~~**[Signature]**~~  
**R.J. Christman**

Time: **40½ hours**

Time: **12 hours**

Time: **52½**  
**23½ hrs.**

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. <sup>--</sup>..5820

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

Number of positions on sheet	.....
Number of positions checked	.....
Number of positions revised	.....
Number of soundings recorded	.....
Number of soundings revised	.....
Number of signals erroneously plotted or transferred	.....

Date:

Verification by

Time:

Review by

Time:



## TIDE NOTE FOR HYDROGRAPHIC SHEET

July 10, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in  
4 volumes of sounding records for

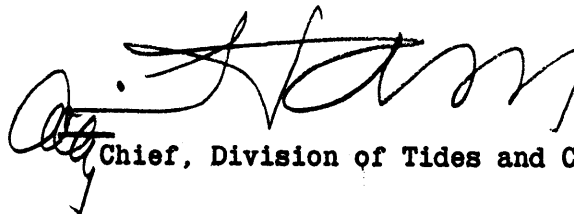
HYDROGRAPHIC SHEET 5820

Locality Winyah Bay Entrance, So. Carolina

Chief of Party: Herman Odessey in 1935.  
Plane of reference is mean low water reading.  
4.0 ft. on tide staff at South Jetty (T. S. No. 2)  
9.2 ft. below B.M.1

Height of mean high water above plane of reference is 4.5 feet at  
South Jetty.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

C K G  
KTH  
R

82-NM

August 28, 1935.

To: District Engineer,  
U. S. Engineer Office,  
Charleston, South Carolina.

From: The Director,  
U. S. Coast and Geodetic Survey.

Subject: Chart No. 428, Winyah Bay, S.C.

On chart No. 428, Winyah Bay, South Carolina is shown a wreck just northward of the south jetty in latitude  $35^{\circ} 11.48'$ , longitude  $79^{\circ} 09.98'$ . Our hydrographic party recently operating in this vicinity found depths of 7 to 8 feet in the area of the wreck symbol.

In order that this symbol may be expunged from the chart if the wreck is now non-existent, any information regarding this feature will be appreciated.

(Signed) J. H. HAWLEY

Acting Director.



UNITED STATES ENGINEER OFFICE  
CUSTOMHOUSE  
P. O. BOX 905  
CHARLESTON, S. C.

September 4, 1935.

*File with review*

*H-5820*

U. S. Coast and Geodetic Survey  
Department of Commerce  
Washington, D. C.

Attention: Acting Director.

Dear Sirs:

Replying to your letter of August 28, 1935, regarding the position of a wreck shown on Chart 428 for Winyah Bay, S.C., you are advised that surveys made by this office in that vicinity within the last sixty days indicate that there is no wreck at the location shown on the chart. Portions of a wreck were observed on the line of the jetty approximately 2,000 feet west of the position shown on the chart.

Yours very truly,

W. G. Caples,  
Colonel, Corps of Engineers,  
District Engineer.

*Disposed of  
by [signature]  
Sept. 6, 1935.*

FILE

*Rec. Sept 6, 8:31  
CKG*

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5820 (1935) - FIELD NO. 1A

Winyah Bay Entrance, Winyah Bay, South Carolina

Surveyed in March, 1935

Instructions dated - Director's letter Oct. 29, 1934 (GILBERT)

Hand Lead Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - H. Odessey.

Surveyed by - H. Odessey and J. S. Morton.

Protracted by - E. Shuffle, Jr.

Inked by - H. V. Bennett.

Verified by - Jack Honick and C. Stanley Lightbown.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual except as follows:

The north and south jetties were not completely inked in on the smooth sheet. The end of the north jetty was not indicated on the smooth sheet; however cuts were shown on the boat sheets and on T-6245 (1935). Since these agree with the location shown on T-4164 (1925) the north jetty was transferred from the 1925 survey (T-4164) to the present survey.

The Descriptive Report in general is satisfactory. It should however have included a recommendation in regard to the charted wreck in lat.  $33^{\circ}11.48'$ , long.  $79^{\circ}09.98'$ .

2. Compliance with Instructions for the Project.

This survey complies with the instructions for the project.

3. Shoreline.

The control signals used for the hydrographic work originate with T-6245 (1935) Graphic Control. The shoreline is from T-5381 (1935) and T-5385 (1935) Air Photo Compilation.

4. Sounding Line Crossings.

The cross lines are adequate. In general the agreement of soundings at crossings is excellent, differences rarely exceed one foot.

5. Depth Curves.

The usual depth curves can be satisfactorily drawn within the limits of this survey.

6. Junction with Contemporary Surveys.

The junction with H-5815 (1935) on the west at the entrance to Winyah Bay will be considered in the review of that survey.

No surveys joining the present survey outside of Winyah Bay are contemplated at the present time. The present survey at its limits is in fair general agreement with the latest previous survey, H-4522 (1935).

7. Comparison with Prior Surveys.

a. H-571 (1853), H-535 (1856), H-1318 (1876).

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 one, the general character of the area and the fact that construction of jetties at the entrance to Winyah Bay have materially affected the contour of bottom, it is unnecessary to consider in detail, from the standpoint of information to be carried forward, the various changes noted. The present survey should supersede the above surveys for charting purposes.

b. H-4522 (1935).

This survey is on a 1 to 20,000 scale. The dangerous shoal to the north of the main entrance channel, lat. 33°11.8', long. 79°08.65', has built out to the north and east.

In the area between the north and south jetties there have been numerous changes in depths and location of shoal spots, due to the strong currents over a variable hard and soft bottom. Depths north of the jetties are in fair general agreement with the present survey.

The wreck charted in lat. 33°11.48', long. 79°09.98' was not mentioned in the Descriptive Report or shown on the smooth sheet or boat sheet. One sounding line (depth 7 to 8 feet) was run over the charted position and another about 30 meters north, no notation regarding a wreck was recorded in the remarks column. Although the wreck was not definitely disproved its present existence is doubtful. This wreck is not shown on the Army Engineers survey of 1934, Sp. 12815. The Engineers have been requested to furnish any information available regarding this wreck.

*Wreck does not exist. See letter dated Sept. 1, 1935 U.S.E. attached to this Descriptive Report.*

*LL*

Because of the larger scale and greater detail of the present survey and the fact that some changes were noted, H-4522 (1925) should be superseded within the common area by the present survey.

8. Comparison with Chart No. 428.

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and on the U. S. Army Engineers survey, blue print No. 27813 (1934). The Engineers survey is in good agreement with the present survey, however the survey by this Bureau was made eight months after the Army Engineers survey and since the area is well developed should be given preference in charting. The chart contains no additional information that needs consideration in this review.

b. Aids to Navigation.

The aids to navigation are located on the present survey substantially in the same position as charted except buoys N2 and N6 which were located about 300 meters east of their charted positions; and buoy N4 was located about 100 meters east of its charted position. These buoys still adequately mark the features intended.

c. Controlling Depths.

The controlling depth of the main entrance channel is 19 feet as shown on the present survey.

9. Field Plotting.

The protracting and plotting are satisfactory and conform to the requirements of the Hydrographic Manual, except that minus  $\frac{1}{2}$  ft. soundings were not plotted as zero. (Par. 155 of the Hydrographic Manual).

10. Additional Field Work Recommended.

This survey is complete 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- 371 (1853) in part.  
H- 533 (1856) " "  
H-1318 (1876) " "  
H-4522 (1925) " "

12. Reviewed by - Leo S. Straw, August 20, 1935, and R. J. Christman, August 21, 1935.


Inspected by - R. L. Johnston.

Examined and approved:

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

  
Chief, Section of Field Work.

  
Chief, Division of Charts.

  
Chief, Division of H. & T.

applied to chest 787, June 1937  
" " " 1227, Sept 1937  
" " " 1238 Oct. 21, 1937

J.P.C.  
g.H.S.