5816



Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: South Carolina

# DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 2

LOCALITY

Winyah Bay

Northern Part.

19 35

CHIEF OF PARTY

Herman Odessey

U. S. GOVERNMENT PRINTING OFFICE: 1931

5816

Form 537
Ed. Sept., 1929

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. 2.

REGISTER NO. 5816

State South Carolina.

General locality Winyah Bay

Locality Northern Part.

Scale 1:10,000 Date of survey Feb., 1935

Vessel Ship "GILBERT".

Chief of Party Herman Odessey

Surveyed by Herman Odessey & Jeremiah S. Morton

Protracted by C. J. H.

Soundings penciled by C. J. H.

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by -

Inked by

Verified by

Instructions dated Letter dated Oct. 29th, 1934

Remarks:

U. S. GOVERNMENT PRINTING OFFICE: 1929

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET - No. 2.

INSTRUCTIONS:

There were no specific instructions issued by the Washington Office to this party, covering the project. Authority for the work was contained in a letter from the Director, dated October 29, 1934, (Reference No. 22-AB, 1995 - GI-4). The limits of the area to be surveyed, the layout of the sheets, and similar information were specified by Lieutenant Rigg, as instructed in the letter from the Director previously mentioned.

AREA :

This sheet is a survey of the North Western part of Winyah Bay, South Carolina, from Longitude 79°-15' on the Southeast to Latitude 33°-22' on the North, but this does not include Georgetown Harbor or the Sampit River, (this area is covered by sheet No. 2-A). This sheet joins sheet No. 1, of this party, on the Southeast, includes the greater part of the dredged channel across the bay and the mouth of both the Pee Dee and Waccamaw Rivers, extending to the Georgetown Bridge across these rivers where it joins sheet No. 3, executed by the party of Lieutenant J. C. Sammons.

SURVEY METHODS:

The soundings were obtained by lead line and sound-

continued

ing pole, and the positions are three-point fixes obtained from sextant angles, in accordance with methods prescribed in the Hydrographic Manual.

The control was established by plane table triangulation from a scheme of triangulation executed prior to this project.

The shore line on this sheet is taken from the compilation of airplane photographs under the direction of E. H. Kirsch, and is in very good agreement with the findings of the hydrographer.

DISCREPANCIES:

At Latitude 33°-19'8, and Longitude 79°-17'.2, some of the soundings between positions 158 and 160, "b" day, appear to be from 1 to 2 fathoms too shoal. The area was later investigated, and no indication of a shoal was found. It is recommended that all soundings between positions 158 and 160, "b", be rejected. O.K.

The soundings between positions 1 and 31 "m" appear too shoal, and it is recommended that further examination of tide reducers be made. On this day the wind was from the Northeast which would tend to retard the tide in the upper part of the bay. The soundings on "m" day are consistently about one foot shoaler than the other work at all crossings in areas where both lead line and sounding pole were used. 4 Tide reducers revised - pages 60 to 72 of Vol. 5 - Agreement of soundings now satisfactory.

DANGERS:

The wreck "HARVEST MOON" shown on the chart of this area was located and used as a hydrographic signal (MOON ). The wreck

continued

Is visible at all stages of the tide, the end of a boiler is bare about 4 feet at high water.

The only dangers not clearly shown on the sheet are those affecting small boats in the shoal areas inshore.

Along the east shore of the bay from the northern limit of the sheet to Latitude 33°-21'0, in the area from the shore out 100 to 150 meters, there are scattered trees, stumps, and cypress knees, some of which are covered by water at some stages of the tide. Along the same shore from Latitude 33°-21'0, to Latitude 33°-19'8, a similar area is foul with sunken logs, stumps, and remants of old stakes, etc.

Along the west shore of the bay in the area inside about the three foot curve between Latitude 33°-21'0, and Latitude 33°-17'1, there are numerous sunken logs, stumps, old dredging ranges, etc.

CHANNELS:

The dredged channel maintained by the U. S. C. of E. along the western side of the bay has proven difficult to keep open, and at the time of this survey the limiting depth was about 13 feet. However, the bottom in this channel is very soft mud and vessels drawing as much as 16 feet use the channel frequently.

The natural channel between Marsh Islands and the

continued

dredged channel has a limiting depth of 11 feet. This channel for the most part has a hard bottom, but appears to have filled in with mud at the point of this limiting depth, Lat. 33°-17'.1, Long. 79°-15'.0.

The Army Engineers are planning to dredge a new channel 18 feet deep and 800 feet wide, the center line of which is shown on the boat sheet. When the new channel is completed, they plan to block off the old dredged channel just east of the entrance to the Estherville and Minim Creek Canal. The object of this is to have more water pass through the canal to keep it open. The new dredged channel is to have 5 foot spoil banks on both sides.

COMPARISONS WITH PREVIOUS SURVEYS

Comparison with Chart No. 428, covering this area, shows the general configuration of the bottom to be the same, though there has been appreciable decrease in depth in some areas.

Respectfully submitted:

Jeremiah S. Morton

Jeremiah S. Morton,
Lieutenant, (j.g.).

Forwarded Approved:

Herman Odessey

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

Form 567
Rev. Jan. 1933

DIVISION OF CHARTS, FILE NO._____

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

# LANDMARKS FOR CHARTS

Georgetown, S.C.

March 6, 1935.

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Herman Odessey
Herman Odessey. *Chief of Party.*

| DESCRIPTION | POSITION | | | | DATUM | METHOD OF DETERMINATION | CHARTS AFFECTED |
|---|---|---|---|---|---|---|---|
| | LATITUDE | | LONGITUDE | | | | |
| | ° ′ | D.M. METERS | ° ′ | D.P. METERS | | | |
| (3) Waccamaw River Beacon #17 | 33 21 | 1257.6 | 79 -15 | 822.5 | NA-1927 | Plane table | 3255 836 |
| (3) Waccamaw River Beacon #4-A | 33 20 | 1499.0 | 79 -15 | 1500.2 | " | " | " |
| (3) Beacon #1, Hare Island. | 33 20 | 743.6 | 79 -15 | 1443.9 | " | " | " |
| (3) Beacon #3, Hare Island. | 33 19 | 1832.5 | 79 -15 | 1410.0 | " | " | " |
| (3) Winyah Bay, Western Ch. Bn. # 15. | 33 19 | 174.1 | 79 -17 | 430.0 | " | " | " |
| (3) Winyah Bay, opposite Rabbit I. Bn. #2. | 33 20 | 347.0 | 79 -16 | 1318.2 | " | " | " |
| (3) Sampit R. F.R. Bn. | 33 20 | 1097.7 | 79 -16 | 854.3 | " | Tri. | " |
| (3) Sampit R.R.R. Bn. | 33 20 | 504.8 | 79 -16 | 581.6 | " | " | " |
| (3) Winyah Bay, Sampit R. Training Wall Bn. | 33 21 | 3.8 | 79 -16 | 1081.8 | " | " | " |
| (3) Georgetown Episcopal Church Dome Cross Acard 1127 | 33 22 | 220.3 | 79 -16 | 1355.1 | " | " | " |
| (3) Georgetown Methodist Church Spire. | 33 22 | 300.9 | 79 -16 | 1529.5 | " | " | " |
| (3) Georgetown Silver Standpipe. | 33 22 | 585.4 | 79 -17 | 600.5 | " | " | " |
| (3) ACL -Corp. Water Tank. | 33 21 | 1748.1 | 79 -17 | 1127.4 | " | " | " |
| (3) ACL -Corp. Brick Stack. | 33 21 | 1617.1 | 79 -17 | 857.3 | " | " | " |
| (3) Waccamaw River Bn. # 4. | 33 20 | 1606.6 | 79 -16 | 732.9 | " | " | " |

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive indentification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

U.S. GOVERNMENT PRINTING OFFICE: 1934 25379

Form 567
Rev. Jan. 1933

SHEET- "2"

DIVISION OF CHARTS, FILE NO._____

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

# LANDMARKS FOR CHARTS

Georgetown, S.C.

March 6th, 1935

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Herman Odessey
Herman Odessey, *Chief of Party.*

| DESCRIPTION | POSITION | | | | | METHOD OF DETERMINATION | CHARTS AFFECTED |
|---|---|---|---|---|---|---|---|
| | LATITUDE | | LONGITUDE | | DATUM | | |
| | ° ' | D.M. METERS | ° ' | D.P. METERS | | | |
| (3) Winyah Bay, Western Ch. Bn. #3. | 33 15<br>33 15 | 993.8<br>995.6 | 79 15<br>79 -15 | 338.6<br>340.5 | NA-1927<br>NA-1927 | Tri.<br>Plane table | 3255<br>787,836 |
| (3) Winyah Bay, Western Ch. Bn. #5. | 33 15 | 1464.2 | 79 -15 | 1219.3 | NA-1927 | Tri. | same " |
| (3) Winyah Bay, Western Ch. Bn. #7. | 33 16 | 257.0 | 79 -16 | 547.9 | " | " | " " |
| (3) Winyah Bay, Western Shore, tide gauge house, peaked roof. | 33 16 | 556.1 | 79 -16 | 839.2 | " | " | " " |
| (3) Winyah Bay, Western Ch. Bn. #9, | 33 16 | 1154.5 | 79 -16 | 1266.2 | " | " | " " |
| (3) Winyah Bay, Western Ch. Bn. #11. | 33 17 | 255.8 | 79 -17 | 114.7 | " | " | " " |
| (3) Winyah Bay, Wreck of the "HARVEST MOON" | 33 17 | 935.9 | 79 -15 | 741.3 | " | " | " " |
| (3) Winyah Bay, Western Ch. Bn. #13. | 33 18 | 109.0 | 79 -17 | 327.5 | " | Plane table | " " |
| (3) Winyah Bay, Western Shore, white house chimney. | 33 18 | 267.1 | 79 -17 | 1095.1 | " | Triangulation. | " " |
| (3) Winyah Bay, Western Ch. Bn. #2. | 33 15 | 746.4 | 79 -15 | 757.7 | " | Plane table | " " |

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive indentification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

U.S. GOVERNMENT PRINTING OFFICE: 1934 25379

## Statistics to Accompany Sheet No. 2.

SKIFF

| Date | Letter | No. Positions | No. Sdgs. | Stat. miles of sounding lines |
|---|---|---|---|---|
| Feb. 20 | a | 62 | 428 | 9.1 |
| 21 | b | 169 | 1184 | 26.6 |
| 25 | c | 195 | 1222 | 30.0 |
| 26 | d | 185 | 1245 | 32.1 |
| 27 | e | 135 | 806 | 22.0 |
| 28 | f | 168 | 870 | 24.7 |
| Mar. 1 | g | 181 | 961 | 26.4 |
| 4 | h | 191 | 1141 | 24.9 |
| 5 | j | 104 | 575 | 15.3 |
| 6 | k | 148 | 905 | 19.4 |
| 7 | l | 194 | 1054 | 28.0 |
| 8 | m | 173 | 1059 | 24.3 |
| 11 | n | 93 | 499 | 13.5 |
| 13 | p | 32 | 190 | 4.2 |
| Total for Skiff:- | | 2030 | 12139 | 300.8 |
| SHIP | | | | |
| Jan. 29 | A | 14 | 188 | 3.5 |
| Total for both vessels | | 2044 | 12327 | 304.3 |

( APPROVAL SHEET )

Sheet No. 2, and the sounding volumes for same, have been inspected and are approved.

As was the case with sheet No. 1, protracting positions and plotting soundings on the smooth sheet were done by one of the draftsmen employed in the office of Lieutenant B. H. Rigg, at Charleston, South Carolina. This sheet was carefully gone over by Lieutenant (j.g.) J. S. Morton, particular attention being given to any apparent errors in the record books and to all poor crossings. This office work was done during the Chief of Party's absence on leave.

It is believed that the aerial photographs of this vicinity will be a valuable guide to the cartographer in sketching the limits of shoals bare at low water, and the low water line; the trends of these lines are usually clearly shown in the photographs. These should be used as a supplement to the actual hydrographic work.

Except in shoal water, all sounding lines were run parallel to, and with the current, which was strongest in the main channel, and at times attained a velocity of 2-1/2 or 3 knots.

Herman Odessey

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

Verification report - H 5816 - (1935)

Generally the records conformed to instructions -

The depth curves were completely drawn. -
The smooth sheet was checked with the boat -
sheet all positions showing possibility of error -
were checked.
No serious errors were found although a -
number of positions and soundings were
changed to conform to records.
Field plotting was done in a satisfactory -
manner.
The office draftsman did not do over any of the -
field parties work. except for few minor
corrections
Comparison was made with. Air Compilation ✓
sheet and found to be correct.
Junction with H 5839 - (1935) — H 5815 - (1935) ✓
also H 5821 - (1935) were not made the.
Sheets not being available at this time -

respectfully submitted. -

A Stiles

Satisfactory comparison was made with T 6247 a - T 6247 b - (1935) ✓

Satisfactory comparison was made with Air Compilation sheet-
Number - 5378 - (1934)

HYDROGRAPHIC SURVEY NO. H5816

Smooth Sheet 1

Boat Sheet 1

Sounding Records 7 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. Odessey

Recoverable Station Cards (Form 524) Yes

Special Chart for Lighthouse Service None
(Circular Nov. 30,1933)

Remarks

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ....5816

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

| | |
|---|---|
| Number of positions on sheet | 2044 |
| Number of positions checked | 200 |
| Number of positions revised | 7 |
| Number of soundings recorded | 12327 |
| Number of soundings revised | 103 |
| Number of signals erroneously plotted or transferred | 0 |

Date:

Verification by A Stiles verification 1.55 5 Time: 83 hours Total 88

Review by Leo Thrasher Time: 17½

Survey No. H5816

# GEOGRAPHIC NAMES

Date. June 20, 1935 S. CAROLINA

Chart No. 1237

Diagram No. 1237

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 |
|---|---|---|---|---|---|
| | Sampit River | Same | | | |
| | Pee Dee River * | " | | | |
| | Waccamaw Point | " | | | |
| | Waccamaw River * | " | | | |
| | Sampit Point | " | | | |
| | Rabbit Island | " | | | |
| | Hare Island | " | | | |
| | Frazier Point * | " | | | |
| | ---------- | Estherville ~~and~~ Minim Creek Canal | | | |
| | ~~Winyah Bay~~ | Winyah Bay * | | | |
| | HORSE ISLAND | | | | |
| | | | | | |
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| | | | | | |
| | | APPROVED NAMES UNDER INVESTIGATION H.L. Flemer | | | |
| | | | | | |
| | | | | | |
| | | | | | |

(M-136)

RAC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

# TIDE NOTE FOR HYDROGRAPHIC SHEET

June 27, 1935

Division of Hydrography and Topography:

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

Tide Reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 5816

Locality Winyah Bay (Northern Part), South Carolina

Chief of Party: Herman Odessey in 1935
Plane of reference is mean low water reading
3.8 ft. on tide staff at Beacon 15, Winyah Bay
4.3 ft. below B.M. 1

2.2 ft. on tide staff at Georgetown Lighthouse Dock
6.8 ft. below B.M. 3 (1935)

Height of mean high water above plane of reference is 3.5 ft. at Beacon 15;

Winhay Bay; 4.0 ft. at Georgetown Lighthouse Dock.

Condition of records satisfactory except as noted below:

Paul C. Whitney

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5816 (1935) - FIELD NO. 2

Winyah Bay (Northern Part), South Carolina
Surveyed in 1935
Instructions dated Director's Letter, October 29, 1934

Hand Lead and Pole Soundings. 3 Point Fixes on Shore Signals.

Chief of Party - H. Odessey.
Surveyed by - H. Odessey and J. S. Morton.
Protracted by - C. J. H. (draftsman).
Soundings penciled by - C. J. H. (draftsman).
Verified and Inked by - A. Stiles.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that there was no evidence that the topographic stations had been checked since the initials of the checker are lacking in stamp number 26.

The Descriptive Report is clear and comprehensive and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

This survey satisfactorily complies with the instructions for the project.

3. Shoreline and Control.

The shoreline originates with Air Photo Compilation Sheet T-5378 (1934). The control signals are from Graphic Control Sheets T-6247a and T-6247b (1935) and from sextant determinations.

4. Sounding Line Crossings.

The cross lines are adequate and the depths check those on the main system of lines satisfactorily.

5. Depth Curves.

The usual depth curves can be satisfactorily drawn including large portions of the low water curve.

6. Junctions with Contemporary Surveys.

The junction with H-5821 (1935) at the mouth of the Sampit River is satisfactory.

The junctions with H-5839 (1935) on the north and H-5815 (1935) on the east will be considered in the reviews of those surveys.

7. Comparison with Prior Surveys.

a. H-373 (1853) and H-1318 (1876).

A comparison between the above surveys and the present survey reveals numerous changes in depths and location of shoals as well as changes in shoreline. The most notable change since the above surveys were made is the dredging of the channel and the formation of the long island with the spoil in approximate lat. 33° 16.2' and long. 79° 16.1'.

Because the present survey adequately covers the area, and the fact that there are no important shoals on the old surveys not fully developed on the present survey, H-5816 (1935) should supersede the above surveys for charting purposes.
See Addenda attached to this review.

8. Comparison with Chart No. 428 (Corrected to January 16, 1935).

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the preceding paragraph and U. S. Army Engineers surveys, blue prints No's. 16796 (1917), 26041 (1932), 27814 (1934) and 27815 (1934). The depths on the present survey in several cases are not in agreement with the charted soundings. For instance, the old channel (abandoned in 1912) in lat. 33° 18.0', long. 79° 16.8'; 120° true, has shoaled 2 to 4 feet. The pocket shown on the chart in lat. 33° 16.9', long. 79° 16.0'; 133° true, has shoaled 1 to 3 feet in places.

The row of piles charted in lat. 33° 17.9', long. 79° 16.83' which originate with B. P. No. 16796 (1917), evidently no longer exist. This area is well developed and no notation of their existence was made in the remarks column of the records nor on the boat sheet. The row of piles should be expunged from the chart.

b. Aids to Navigation.

The fixed aids to navigation are located on the present survey in the same position as charted. Buoy at the entrance to the Sampit River in lat. 33° 20.8', long. 79° 16.68', C "5", is located about 100 meters northeast of its charted position but nevertheless marks the channel properly.

Four ferry channel markers in approximate lat. 33° 21.4', long. 79° 16.0' and one ferry channel marker in lat. 33° 21.0', long. 79° 16.32' are located on the present survey southwest of Waccamaw Point. These are not shown on the chart.

c. Controlling Depths of Channels.

(1) The chart gives a controlling depth of 12 feet as of July, 1934, at the entrance channel to the Sampit River, whereas the present surveys, H-5821 (1935) and H-5816 (1935), show a controlling depth of 14 feet in the channel at the end of the training wall. In connection with the controlling depth in this channel, attention is called to the fact that the U. S. Army Engineers survey of July, 1935 (B. P. 28938), executed 4 months subsequent to our survey, shows a controlling depth of 18 feet just south of the end of the training wall. The U. S. Army Engineers survey B. P. No. 28938 (1935) should within its limits supersede the present survey, H-5816 (1935), for charting purposes.

(2) U. S. Army Engineers survey, B. P. 28766 (1935) of the western channel of Winyah Bay is a reproduction of the soundings on the present survey on a 1 to 6,000 scale supplemented by additional soundings taken by the U. S. Engineers in the channel at lat. 33° 15.5', long. 79° 15.0'. The soundings by the Engineers are in good agreement with the soundings taken by this Bureau and show a controlling depth of 13 to 14 feet in this portion of the channel. Attention is, however, called to the fact that according to chart letter 559 (1935) the dredging in this section has been completed with a controlling depth of 17.7 feet. The controlling depth opposite the end of the training wall in lat. 33° 17.7', long. 79° 16.0' is shown to be about 14 feet on the present survey but this area is marked "to be dredged" on Blueprint 28766 (1935).

(3) The controlling depth of the old channel (abandoned in 1912) lat. 33° 18.0', long. 79° 16.8', 120° true, is now 11 feet, whereas the chart shows 13 to 14 feet. See paragraph 2 on page 4 of the Descriptive Report.

9. Field Plotting.

The field plotting is satisfactory, except that numerous notes pertaining to piles and docks were not inked on the smooth sheet.

10. Additional Work Recommended.

This survey is satisfactory and no additional work is required.

11. Note to Compiler.

Attention is called to paragraph 8c(1) of this review regarding controlling depth in the entrance channel to the Sampit River and paragraph 8c(2) the controlling depth in the western channel of Winyah Bay.

12. Superseding Old Surveys.

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

H- 373 (1853) in part.
H-1318 (1876) " "

13. Reviewed by - Leo S. Straw, September 25, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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

T. O. Dalbert
Chief, Division of Charts.

T. S. Borden
Chief, Section of Field Work.

G. W. Lude
Chief, Division of H. & T.

## Addenda to Review of H-5816 (1935)

7. Comparison with Prior Surveys.

A shoal area of approximately 530 m. in length and 140 m. in width with depths of 4 to 7 3/4 feet, hard bottom (single $4\frac{1}{4}$ foot charted) is shown on both H-373 (1853) and H-1318 (1876) in lat. 33° 20.4', long. 79° 16.6'. It falls in depths of 10 to 13 feet on the present survey which survey indicates a general deepening of 3 to 6 feet over the entire area. This evidence indicates that the shoal area has been worn down and should be disregarded in future charting.

The $4\frac{1}{2}$ foot sounding, hard bottom (4 feet charted) originating with H-1318 (1876) in lat. 33° 21.5', long. 79° 16.3' falls in depths of about 11 feet, soft bottom on the present survey and close to the edge of the channel shown here. The $4\frac{1}{2}$ was obtained on line and is supported by a single $5\frac{1}{2}$ foot sounding (not plotted) obtained about 20 m. ESE which sounding falls directly between two 12 foot depths on the present survey spaced about 40 m. apart. Nearby depths on the present survey show a uniform shoaling of 1 to 4 feet and indicate that the area is of a changeable character. In view of this fact and the elapsed time between the 1876 and the present survey, it is quite probable that the shoal has also been subjected to change. The $4\frac{1}{2}$ has not been carried forward and should be disregarded in future charting.

In connection with the above shoals, a characteristic of hard bottom is shown on H-1318 in both cases. The previous survey, H-373 (1853) as well as the present survey show characteristics of hard and soft in the same general vicinity with the term "soft" generally predominating. It follows from this and other facts noted in the preceding paragraphs that the degree of hardness implied by the term "hard" on the 1876 survey is in doubt.

Reviewed by - Harold W. Murray, Oct. 13, 1936.

Inspected by - A. L. Shalowitz.

Applied to chart 836 Feb. 11, 1936 J.S.L.
Applied to New chart #787 June 1937 J.S.L.