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| Form 504 | |
| U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE | |
| DESCRIPTIVE REPORT | |
| Type of Survey | Hydrographic |
| Field No. 1343 | Office No. H - 6836 |
| LOCALITY | |
| State | NORTH CAROLINA |
| General locality | Ocracoke Inlet |
| Locality | Wallace Channel |
| <u>1943</u> | |
| CHIEF OF PARTY | |
| Raymond H. Tryon Jr. | |
| LIBRARY & ARCHIVES | |
| DATE | |

H6836

Form 587
(Ed. Nov. 1941)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. H-681336

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.

REGISTER NO. H-681336

Field No. 1343

State NORTH CAROLINA

General locality OCRACOKE INLET

Locality WALLACE CHANNEL

Scale 1:10,000 Date of survey July, 1943

Instructions dated Nov. 2, 1942 and Supplemental Instructions Dated Dec. 28, 1942

Vessel ELSIE III

Chief of party Raymond H. Tryon Jr.

Surveyed by Raymond H. Tryon Jr.

Soundings taken by fathometer, graphic recorder, hand lead wire & Sounding Pole

Protracted by L. L. Lawrence

Soundings penciled by L. L. Lawrence

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~

REMARKS: This sheet was processed at the Norfolk Processing Office.

DESCRIPTIVE REPORT

H6836

TO ACCOMPANY

HYDROGRAPHIC SURVEY

FIELD NO. 1343

(WALLACE CHANNEL)

INSTRUCTIONS:

The work was accomplished under original Instructions dated November 2, 1942 and Supplemental Instructions dated December 28, 1942. ✓

SURVEY METHODS:

Standard methods of hydrographic surveying were used. Three point fixes were used to control the position of the sounding launch. Soundings were obtained by the 808A fathometer. ✓

As in the previous surveys on this project, every precaution was taken to see that the fathometer was functioning properly before it was used and the recorder checked the operator constantly to see that the middle reed of the tachometer was vibrating. Any lack of agreement between the clock time and fathogram time between fixes was investigated at once and the difficulty ironed out before proceeding with the hydrography. ✓

Bar checks were usually taken at least twice daily and in the case of a full day, one was also taken at lunch time. This program could not always be followed due to the swift currents running in the channel. ✓

The signals at the southeast end of the survey were located either on topographic survey A-43, ^{(1-6824 (1942, 1943))} or by previous triangulation. The fixed aids to navigation in Wallace Channel and Sheep Island Slue were located by rounds of sextant cuts taken at the aids. With the exception of Sheep Island Slue Lights 1 and 10, none of the aids in this channel were used as hydrographic signals. All the aids in Wallace Channel were used as signals. One banner signal was built on North Rock (island) which was located by sextant cuts from positions in Wallace Channel. ✓

DISCREPANCIES:

No discrepancies in signals were found. ✓

Cross lines were run only at the southeast portion of the channel as the rest of the channel was too narrow to maneuver the launch. Crossings were good. ✓

DANGERS:

Ayers Rock was located on this survey in Latitude 35°05.13', Longitude 76°03.42'. It is a 2 foot square block of concrete or stone imbeded in an oyster shoal and is covered by 0.3 foot of water at low water. The rock is surrounded by five iron stakes driven into the oyster shoal which serve to mark the spot.

83 25
|

It is recommended that Ayers Rock be charted as a ^{rock awash} ~~shoal rock~~ and not as an islet as it is now charted.

CHANNELS:

The entire survey is of Wallace Channel which runs from Wallace Channel Light 1 at the northeast end of Portsmouth Island, northward and northwestward to Pamlico Sound.

A minimum depth of 12 feet is found in the dredged portion of the channel about halfway between Beacon 10 and Light 11 in Latitude 35°06.8', Longitude 76°06.3'.

The channel is bounded on both sides by sand ^{shoals} bulkheads which are plainly visible. A break in the western ^{shoal} bulkhead occurs at Latitude 35°05.6', Longitude 76°04.6' and for a half mile northwest of this position which marks the opening of the old Wallace Channel. The area to the westward of the above position was not sounded but reconnaissance in the launch showed that 8 to 10 feet of water could be carried about as shown on the chart.

25

At Latitude 35°06.4', Longitude 76°05.9' a spoil bank emerges and lies parallel to the channel for a distance of a half mile. This bank bares from 1 to three feet.

It should be noted that Light 11 is set 168 yards southwest of the center of the channel. The best water for funning this dredged portion of the channel is found by passing Light Six 110 yards off, Light Eight 133 yards off, and Beacon Ten 37 yards off. After passing Beacon Ten, gradually put the beacon in range with Light Eight and hold this range until Light 11 is on the port quarter when a safe turn can be made. A sounding line was run on this range which line gave the greatest depths for the channel northwest of Beacon 10.

INVESTIGATION OF CHARTED ROCKS:

In accordance with paragraph 13 of the original instructions, investigation was made of the charted rocks in Latitude 35°05.25', Longitude 76°05.7'; Latitude 35°05.25', Longitude 76°05.6'; Latitude 35°04.9', Longitude 76°05.8'.

Sounding lines were run in the dinghy with an outboard motor with soundings by pole. When the water was too shallow for running, wading was resorted to and detached positions were taken in the area.

Depths of from 1 to 2½ feet were obtained in the vicinity of the first position listed above (Mt. Vernon Rock on the chart). It is recommended that the rock symbol charted in this position be expunged from the chart.

No shoal depths were found at the second position listed above. An oyster shoal covered by 1 to 1½ feet was found 115 meters south southwest of the position. The shell in the latter position is quite sparse and in such shallow water is not a danger to navigation. It is therefore recommended that this second rock symbol be expunged from the chart.

Depths of from 1 to 2 feet were found at the third position listed above. 125 meters southeast of the position, however, a sand and shell bar bares 1½ feet at low water. It is recommended therefore that the rock awash symbol be expunged from the chart and the bare shoal shown instead.

ANCHORAGES:

There are no good anchorages in the area. Swift currents and hard sand bottom make poor holding ground for any craft except in fair weather.

COMPARISON WITH PREVIOUS SURVEYS:

The dredged portion of the channel at the northwest end has held up well except for an encroachment about 100 meters long which has filled to 12 feet (See Channels above).

The depths in the remainder of the channel are within a foot of those charted with the exception of the 13 foot sounding charted in Latitude 35°05.47', Longitude 76°03.50' which falls in 8 feet. This shoal is an encroachment of the bulkhead from the west which has filled the channel at this point narrowing the 12-foot portion to about 180 meters in width.

GEOGRAPHIC NAMES:

No new geographic names are recommended for this area.

STATISTICS:

| | |
|---------------------------------------|------|
| Number of Positions - - - - - | 666 |
| Number of Soundings - - - - - | 3268 |
| Statute miles sounding line - - - - - | 79.2 |
| Area, sq. statute miles - - - - - | 1.5 |

Respectfully submitted,

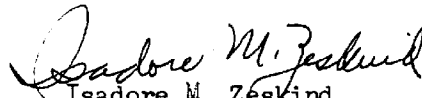
Raymond H. Tryon Jr.
 Raymond H. Tryon Jr.
 H. & G. Engineer

H6836

A D D E N D U M

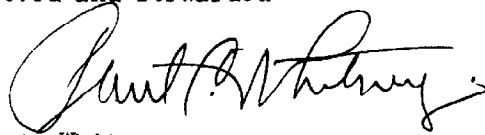
This sheet was processed at the Norfolk Processing Office.

Respectfully submitted,


Isadore M. Zeskind
Associate Cartographic Engr.

Norfolk, Va.
August 31, 1943

Approved and forwarded


Paul C. Whitney
Supervisor, S.E. District

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. 6836

Records accompanying survey:

Boat sheets ¹...; sounding vols. ³...; wire drag vols.;
 bomb vols.; graphic recorder rolls ⁴...;
 special reports, etc.

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

| | |
|---|------------|
| Number of positions on sheet | .666. |
| Number of positions checked | ...5. |
| Number of positions revised | ...1. |
| Number of soundings recorded | .3268 |
| Number of soundings revised (refers to depth only) |0 |
| Number of soundings erroneously spaced |0 |
| Number of signals erroneously plotted or transferred |0 |
| Topographic details | Time |
| Junctions | Time |
| Verification of soundings from graphic record | Time |

Verification by J.A. McCormick. Total time 25. hrs. Date Oct. 7, 1943.

Review by J.A. McCormick. Time 8. hrs. Date Oct. 9, 1943.

Remarks

Decisions

| | Remarks | Decisions |
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| 1 | | U.S.G.B |
| 2 | For title only | 350760 |
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| 11 | Location of tide staff | 351759 |
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H6836

GEOGRAPHIC NAMES

Survey No. H-6236

| Name on Survey | Source | | | | | | | | | | | |
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| | A | B | C | D | E | F | G | H | K | | | |
| <u>North Carolina</u> | | | | | | | | | | | | 1 |
| <u>Ocracoke Inlet</u> | | | | | | | | | | | | 2 |
| <u>Wallace Channel</u> | | | | | | | | | | | | 3 |
| <u>Portsmouth I.</u> | | | | | | | | | | | | 4 |
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| <u>Ocracoke</u> | | | | | | | | | | | | 11 |
| <u>Casey I.</u> | | | | | | | | | | | | 12 |
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Names underlined in red approved
by L. Heck on 10/14/43

H6836

RECEIVED

H. 836

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY }
 DESCRIPTIVE REPORT } No. H
 PHOTOSTAT OF } No. T

{ received
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 { verified
 { reviewed
 { approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

| ROUTE | | Initial | Attention called to |
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| 20 | | | |
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RETURN TO

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| 82 | |
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R.C.E.
JAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

September 15, 1943

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 6836

Locality Ocracoke, Wallace Channel, North Carolina

Chief of Party: R. H. Tryon, Jr. in 1943
Plane of reference is mean low water reading
1.8 ft. on tide staff at Casey Island
1.7 ft. below B. M. 2

Height of mean high water above plane of reference is 0.5 ft.

Condition of records satisfactory except as noted below:

C. R. Green
Chief, Division of Tides and Currents.

lac
HCE

TIDE NOTE FOR HYDROGRAPHIC SHEET

September 18, 1943.

~~Division of Hydrography and Topography.~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 6835

Locality Ocracoke, Big Foot Slough, North Carolina.

Chief of Party: R. H. Tryon, Jr., in 1943
Plane of reference is mean low water reading
3.4 ft. on tide staff at Ocracoke
6.5 ft. below B. M. 6

Height of mean high water above plane of reference is 1.2 feet.

Condition of records satisfactory except as noted below:

Ham

Acting Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6836

Field No. 1343

North Carolina; Ocracoke Inlet; Wallace Channel
Surveyed July 1943; Scale 1:10,000
Instructions dated November 2, 1942
(Project CS 299)

Soundings:

808 Recorder

Control:

Three-point fix on shore signals

Chief of Party - R. H. Tryon, Jr.
Surveyed by - R. H. Tryon, Jr.
Protracted by - L. L. Lawrence
Soundings plotted by - L. L. Lawrence
Verified and inked by - J. A. McCormick
Reviewed by - J. A. McCormick
Inspected by - H. R. Edmonston, October 9, 1943

1. Shoreline and Signals

Shoreline and topographic signals are from T-6924 (1942-43). Cuts used in the location of hydrographic signals are recorded and indexed in the sounding volumes.

2. Sounding Line Crossings

Excellent.

3. Depth Curves

Excellent.

4. Adjoining Surveys

An excellent junction was effected with H-6834 (1943) on the southeast.

5. Previous Surveys

H- 321 (1852), 1:10,000; H- 538 (1858), 1:40,000;
H- 613 (1857), 1:20,000; H- 661 (1857-58), 1:20,000;
H-1364 (1877), 1:20,000; H-1871 (1887-88), 1:20,000;
H-2798 (1905), 1:20,000; H-3902 (1916), 1:20,000;
H-4734 (1927), 1:10,000; H-4778 (1927), 1:20,000;

The lower end of the channel has followed the changes in the shoreline of Portsmouth Island. By 1877, the eastern end of Portsmouth was fairly close to its present position and the channel had assumed considerable similarity to its present condition except for the last two miles at the upper end which have been deepened by dredging. Three rocks awash (charted) near Lat. 35°05', Long. 76°06' on H-4734 were searched for by the present field party but not found. They probably were shell banks rising only a foot or two from the surrounding sand and are of no importance. In the Descriptive Report, the field party makes definite recommendations that they be removed from the charts.

6. Comparison with Chart 1231 (Print of May 20, 1943)
Chart 1232 (Print of July 13, 1943)

Depths charted in this area are from the 1927 surveys discussed in the preceding paragraph. Spoil areas and depth of dredged channel are from U. S. Engineers' B.P. 26757 of 1942. Controlling depth determined by the present survey was 12 feet as compared with 14 feet previously reported by the Engineers. Survey positions of navigational aids in the area supersede the positions now charted. The latter are in fair agreement with those on the survey but there are some differences which should be eliminated.

7. Compliance with Project Instructions

Satisfactory.


8. Additional Field Work Recommended

None.

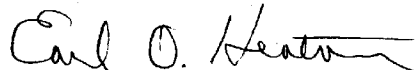
9. Superseded Surveys

| | | | |
|--------|---------|--------|---------|
| H- 321 | in part | H-1871 | in part |
| H- 538 | " " | H-2798 | " " |
| H- 613 | " " | H-3902 | " " |
| H- 661 | " " | H-4734 | " " |
| H-1364 | " " | H-4778 | " " |

Examined and approved:


 Chief, Surveys Branch


 Chief, Division of Charts


 Chief, Section of Hydrography


 Chief, Division of
 Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H6836

Record of Application to Charts

| DATE | CHART | CARTOGRAPHER | REMARKS |
|-------------------------|------------|--------------------|---|
| <i>(see back cover)</i> | | | Before After Verification and Review |
| <i>9/7/45</i> | <i>419</i> | <i>L.A. McGinn</i> | Before After Verification and Review |
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M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

applica 7 ch 1231 - Oct 16/43 N.P.B.
Applied to chert 418. October 27, 1943. Sam.
" " 1232 Apr 1944 K.B.