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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
E. Lester Jones, Director	
	C. & G. SURVEY L. & A MAY 9 1928 Acc. No.
State: North Carolina	
DESCRIPTIVE REPORT	
<i>Topographic</i> <i>Hydrographic</i>	Sheet No. 4778
LOCALITY	
Vicinity of Ocracoke Inlet	
Pamlico Sound	
Pamlico Sound approaches to	
Ocracoke Inlet	
192 7	
CHIEF OF PARTY	
R. R. Moore	

GOVERNMENT PRINTING OFFICE

S-70 9r

Descriptive Report to Accompany Hydrographic Sheet

This sheet was done under instructions dated June 30, 1927.

The scale is 1:20,000.

The limits are N.35°09.5', W.75°54':N.35°16', W.76°00':N.35°07.5', W.76°14', N.35°01', W.76°08' and takes in the area between Field Sheet #1 and the limits of field work laid out in the instructions.

General description.

The area covered by this sheet is nearly all water, Flounder Slue Rock and North Rock being the only land areas.

The unused lighthouse on N. W. Royal shoal and the S. W. Point Royal Shoal Lighthouse are the most prominent landmarks. The latter is now a skeleton tower, the keepers house having been removed. On North Rock is a one and a half story building used as a hunters lodge.

Changes in comparison with former surveys.

This locality has changed very little in comparison with the previous survey.

Bars and channels.

The southern part of the sheet is northern edge of the extensive area of flats north of Ocracoke Inlet.

The western part of Wallace Channel from Beacon 4 to Beacon 6 and a more northern branch of this channel called Flounder Slue were sounded with 50 meter lines. The western ends of both channels are blocked by 3 feet at mean low water.

Fifty meter lines were also run in the northern entrance to Ocracoke between Nine Foot Shoal Beacon and Swash Channel Beacon. Depths in this channel vary from 7 to 13 feet, but the limiting depth is in the Swash Channel which is 6 feet.

The northern end of Teashes Hole Channel was also found to be blocked by 3 feet over the bulkhead.

Of the various branches of Blair Channel, the northern end of that just east of Beacon Island was the only one in which time was spent to see if it did lead to the sound without shoaling.

The sheet includes the eastern edge of the shoal west of Sheep Island Blue Beacon, the southern tip of Royal Shoal, and the shoal leading to Royal Shoal.

In the open areas, south of Royal Shoal, and between Royal Shoal and Howards Reef, lines about 150 meters apart were run. In general, the soundings indicate a fairly smooth bottom, gradually deepening offshore.

Tide rips were encountered in all parts of this area but were heaviest in the entrance leading to Swash Channel. The wind contrary to tide was the usual cause.

Tides and Currents.

Portable automatic gages were in operation at Ocracoke and Cary Island, although the latter gave quite a bit of trouble. The range and time of the tide was practically identical.

No attempt to measure the currents were made. They were rather strong in the channels and set with the axes, the ebb being stronger. In the open areas, they did not cause much trouble.

Anchorage.

The bight formed by Royal Shoal affords good anchorage from northerly and northeasterly winds, and is used by tugs and barges bound up the sound. Anchorage can be made east of S. W. Point Lighthouse in depths up to 15 feet with sticky bottom.

Survey methods.

The usual triangulation and topographic control was used.

According to the Director's letter dated November 16, no attempt was made to sound over the flats.

Although it was intended to develop the northern ends of the various branches of Blair Channel, the work done indicated that none of them passed the bulkhead, and there appeared to be little change. The necessity of getting one of the men to the hospital for treatment out-weighed the value of the work in these channels, so it was decided to leave them.

A statistics sheet is appended.

Respectfully submitted,

R. R. Moore

Table of Statistics for Sheet #

	Date	Vol.	Miles sdg.	No. Positions	No. Sdgs.
a	Launch Nov. 25	1	12.0	62	612
b	" 26	1	7.0	52	365
c	" 28	1,2	30.5	132	1077
d	" 29	2	32.0	140	1300
e	" 30	2,3	29.0	142	1248
f	" Dec. 6	3,4	28.6	143	1303
g	" 7	4	14.6	63	615
h	" 8	4	13.7	79	747
j	" 10	5	23.2	114	948
k	" 12	5,6	26.4	128	1162
l	" 13	6	23.2	117	1026
m	" 14	6,7	26.0	118	1050
n	" 15	7	3.5	24	173
p	" 17	7	20.6	96	782
q	" 19	9	7.0	47	311
r	" 21	9	7.5	42	260
s	" 22	9	27.4	123	972
A	ELSIE 16	8	9.5	36	324
B	" 18	8	2.0	9	65
Totals			333.7	1667	14340

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

October 3, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4778

Pamlico Sound, North Carolina

Surveyed in 1927

Instructions dated June 30, 1927 (R. R. Moore) and Director's
letter dated November 16, 1927 (R. R. Moore)

Chief of Party, R. R. Moore.

Surveyed by R. R. M.

Protracted and soundings plotted by S. H. Crowell, H. N. Hassenfuss.

Verified and inked by J. G. Ladd.

1. The records conform to the requirements of the General Instructions.
2. The plan and extent of development satisfy the specific instructions with the following exceptions:
 - a. The scale of the survey is 1:20,000 instead of 1:10,000 as called for in the instructions of June 30, 1927 (page 2).
 - b. The channel to the northwest of Δ Beacon Island 2 was not developed to define the 6 foot curve. This is also true of the west side of Sheep Island Slue.
 - c. All the channels were not developed with 50 meter lines.
 - d. With the exception of the channels practically the entire area outside the 6 foot curve was developed by approximately 200 meter lines. The instructions call for the development of the anchorages with 50 meter lines and it would seem that some of these areas fall within that category. It should be said, however, that most of these areas show a smooth uniform bottom.
3. The sounding line crossings are generally adequate. A number of 2 foot differences were noted.
4. The usual depth curves to and including the 6 foot curve except as mentioned above could be completely drawn.

5. The usual field plotting was done by the field party. The protracting was below standard, about 8% of the positions being erroneously plotted. Many of the errors could have easily been picked up by the plotter, had a proper reference been made to the boat sheet.
6. The junction with H. 4734 on the south is satisfactory within the limits prescribed for the inside work.
7. Additional work is required in the following places:
 - a. Additional lines in the channel between Wallace Channel Beacon No. 4 and Wallace Channel Beacon No. 6. This omission was due to an erroneous plotting of Wallace Channel Beacon No. 6 on the boat sheet.
 - b. A development of the channel about 1/2 mile northwest of Δ Beacon Island 2.
 - c. Additional development to the west of Nine Foot Shoal Beacon.
 - d. A split line about 300 meters north of lat. $35^{\circ} 06'$, between longitude $76^{\circ} 06' 1/2'$ and long. $76^{\circ} 08'$.
 - e. A development of the area inside the 6 foot curve so as to show the limits of the flats.
8. For the information of the cartographer, it should be mentioned that according to verbal information received from the surveyor, the area left unsurveyed between this sheet and H. 4734 is practically the same as shown on the present charts. This he determined from observation while running to and from the working grounds. It would seem therefore that in all such blank areas the old surveys can be used to supplement the new work.
9. Reviewed by A. L. Shalowitz, October, 1928.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

May 25, 1928.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4778

Locality: OCRACOCK INLET, N.C.

Chief of Party: R. R. Moore, 1927.

Plane of reference is M L W
2.5 ft. on tide staff at Casays Island
2.1 ft. ~~on tide staff at~~ Cracocks.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G. H. ...

Chief, Division of Tides and Currents.

Section of Field Work.

Report on sheet # H 4778

Chief of Party R.R. Moore

Surveyed by R.R. Moore

Protected by S.L. Crowell and H.N. Hassenfuss

Soundings penciled by S.L.C. and H.N.H.

Verified and checked by John G. Ladd,

1. The records conform to the requirements of the general instructions.
2. The plan and character of development fulfill the requirements of the general instructions.
4. The sounding line crossing are adequate.
5. The usual depth curves could be drawn.
6. The field platting was complete and no part of the work had to be done over by the office draftsman.
7. Out of 523 positions verified 42 of them were found to be incorrectly platted, and the majority of these positions were evident at a glance.

that they were ~~out~~ of position, and
in most cases they also disagreed
with the boat sheet.

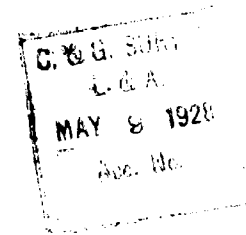
8. A number a crossing lines were
very poor and they are partly explained
but the fact that the the channel
areas are very changing and the
lines showing poor crossing were
run ~~run~~ apart, and also that
The sea is covered with
dozens of "duck blinds" which, during
the evening dusk and a cloudy
days were many times mistaken for
signals, which were nearly in line.

John S. Ladd
jr. Capt. Eng.

Sept, 14 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET



REG. NO.
4778

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. **4778**

State North Carolina

General locality ~~Ocracoke Inlet~~ Pamlico Sound

Locality Pamlico Sound approaches to ~~Inlet~~ Ocracoke Inlet

Scale 1:20000 Date of survey Nov.-Dec., 1927

Vessel Elsie III

Chief of Party R.R. Moore

Surveyed by R.R.M.

Protracted by S.H. Crowell, H.N. Hassenfuss

Soundings penciled by S.H.C. H.N.H.

Soundings in ~~fathoms~~ feet

Plane of reference MLW

Subdivision of wire dragged areas by _____

Inked by John G. Ladd

Verified by John G. Ladd

Instructions dated June 30, 1927

Remarks: _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4778

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

Number of positions on sheet .1667.
Number of positions checked .523.
Number of positions revised .42.
Number of soundings recorded 14430.
Number of soundings revised .330.
Number of signals erroneously
plotted or transferred 1 .

Date: ----- Sept 12 -----
Cartographer: ----- John G. Ladd -----