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

State: North Carolina

**DESCRIPTIVE REPORT**

~~Topographic~~ } Sheet No. (Field No. 1)  
Hydrographic } **5233**

LOCALITY

Chowan River, N.C.

~~WATERWAY LOCATION AND CHARACTER~~

~~CHANNEL~~

White Ldg.. to Wicoacon Creek

19 32

CHIEF OF PARTY

C.A. Egner

5233

DESCRIPTIVE REPORT  
TO ACCOMPANY HYDROGRAPHIC  
SHEET NO. 1 (FIELD),  
CHOWAN RIVER, NORTH CAROLINA.  
MOTOR VESSEL NATOMA  
C. A. EGNER, CHIEF OF PARTY,  
COMMANDING. 1932.

D E S C R I P T I V E R E P O R T

T O A C C O M P A N Y

H Y D R O G R A P H I C S H E E T N O . 1 ( F I E L D )

C H O W A N R I V E R , N . C .

----- 0 -----  
I N S T R U C T I O N S :

The work on this sheet was done as a part of the Combined Operations called for by the Instructions to the Motor Vessel NATOMA, dated January 21, 1932.

L I M I T S :

The hydrography includes that part of the Chowan River from Bull Point, two miles south of Coleraine Landing, northward to the entrance of the Wiccacon Creek. Included in this sheet are also (1) sounding of Wiccacon Creek as far as the swing bridge two miles N.W. of Harrellsville (2) entrance and approaches of Catherine Creek (3) Bennett's Creek to a point two miles above the entrance (as far as the topographic survey was carried) (4) reconnaissance sounding line of Bennett's Creek as far as Gatesville.

S U R V E Y M E T H O D S :

All of the sounding was done with the hand lead operating from two power launches. Roughly half of the work was done with each launch, both parties operating at the same time, one on a sub-sheet of the same general area. As there is practically no current in the river, the main body of the hydrography is represented by lines normal to the beach. Channel lines were also run, and in addition, cross lines checking the general system. Above Holidays Island, where the river narrows down and is moderately deep to the cypress swamp which lines

both banks, the lines were run longitudinally thus effecting a considerable saving in time and effort.

With lines spaced about 100 meters apart it is felt that the area is sounded more exhaustively than its importance warrants, particularly as the bottom is quite regular. With two parties operating simultaneously, however, no great amount of time was expended in this excess effort.

DANGERS:

As noted above, the bottom is quite regular. No dangers exist, therefore, except that in such a swampy area with fairly deep water close to the shore lines, trees are continually being washed out to appear later as snags in the body of the river. These have constantly to be watched for. Close inshore, dead stumps, barely below the surface, are dangerous to launches approaching the river banks.

CHANNELS:

The deepest water is found along the east bank as far as Cannon Ferry. This, in fact, is the old channel used for years when Cannon Ferry was a transfer point on this now little-used river. At present, however, boats use the mid-channel route, marked recently by lights  $\Delta$  WOODLEY and  $\Delta$  <sup>Peak</sup> TURN. While there is less water along this route there is sufficient for such boats as use this river. Furthermore, it is easier to navigate and better water is found along it when passing around the N.W. side of Holiday's Island. At this point, where the river narrows, there is a good depth of water, much more in fact than in the broader expanses of the river.

The controlling depth, selecting the best channels throughout the length of the river, is about 15 or 16 feet found about a mile N.E. of the point of land known as Cow Island, or two miles S.W. of the lighted beacon off Cannon Ferry.

ANCHORAGES:

Anchorage ground is found anywhere, the bottom being a soft mud and sand.

COMPARISON WITH  
PREVIOUS SURVEYS:

The area remains much the same year in and year out. Previous surveys were obviously sketchy, being of a reconnaissance nature, so close comparison is impossible. Since there is practically no current in the river, the changes that take place are due to storms and freshet conditions.

GEOGRAPHIC NAMES:

Those noted on the sheet are reproduced from existing charts checked where possible from local sources. ✓

LANDINGS:

Coleraine Landing is the only point of importance within the confines of this sheet. Considerable fishing is based hereon, and a local freight business between Edenton and Murfreesboro makes regular stops at a well kept dock, serving the town of Coleraine, two miles away. A good bathing beach is found here, also. ✓

Cannon Ferry used to have some importance before the advent of the automobile and the construction of the Chowan River bridge and that on Route 30 at Winton. All cross river traffic now uses one or the other of these bridges. Considerable fishing is still based on Cannon Ferry, but with small boats only, as very little water is now found off these wharves. ✓

Up the river, Mt. Pleasant Wharf and Taylor Wharf are now no longer of importance for the same reason that destroyed the business of Cannon Ferry. ✓

WICCACON AND  
BENNETTS CREEKS:

The Wiccacon Creek was surveyed to the steel swing bridge two miles above Harrellsville. Three sounding lines were run, center line and close inshore on either side of the center. Only the center line of soundings could be put on the sheet. Boats go up this creek as far as Tar Ferry, which is a short distance from Harrellsville and serves that town with a water freight service of small importance. A hand operated ferry crosses the creek at this point. There is a surprising depth of water in this creek, plenty for boats able to make the sharp turns, which, rather than the depth of water, is the limiting factor. It can be said, however, that this creek really has little importance. ✓

Bennett's Creek is similar, reaching Gatesville twelve miles above the mouth. This creek is deep, too, but narrow, and has little importance although one oil company (Texas Company) serves its storage tanks at Gatesville by means of barges which go up this creek. It was obvious, however, that this fact did not warrant a survey of the creek to Gatesville considering the time and effort (control) necessary to tie it down properly. Therefore, the survey was carried a matter of only two miles at which point cypress swamps confined the river to a narrow passage. ✓

TIDES:

There is no such thing. This river is an arm of Albermarle Sound, is fresh water, and therefore, having no access to the sea fluctuations in the water level are caused only by meteorological conditions. ✓


Arbitrary planes were established by agreement with the U.S. Engineer's for this general area. An automatic gage established at Edenton served as a standard and provided a basis for simultaneous comparison with two other gages on the river itself, one of which was set up at Cannon Ferry. These comparisons were hardly that in fact due to variable winds and the more exposed conditions of some sections of the river. As this variance in level was never great, particularly during the good weather experienced while the hydrography was being done, little difficulty was encountered in getting good agreements in all cases of sounding lines which crossed each other. ✓

FISH NETS  
AND STAKES:

There is a law in North Carolina which permits fish nets to be set out on stakes to one third the channel width from either side. This leaves the center third clear. Well and good, if the channel is in the center, which it frequently is not. ✓

Our only source of trouble in this hydrography was due to these stakes and nets. This was particularly annoying when sounding on longitudinal channel lines. But, of course, the main value of this river is in its fishing and those who navigate soon find their way about. ✓

Respectfully submitted,

  
C. A. Egner  
Chief of Party  
Commanding M. V. NATOMA.

HYDROGRAPHIC STATISTICS  
 CHOWAN RIVER, N.C.  
 SHEET NO. 1

DATE 1932	DAY	VOLUME	BOAT	STATUTE MILES SOUNDINGS	NUMBER OF SOUNDINGS	NUMBER OF POSITIONS
5/13	a	1	Launch	7.5	298	49
5/16	b	1	"	13.8	476	82
5/17	c	1	"	5.8	204	36
5/18	d	1	"	4.0	163	31
5/19	e	1	"	2.5	107	23
5/23	f	1	"	12.5	407	75
5/23	f	2	"	1.0	50	9
5/24	g	2	"	16.0	675	120
5/25	h	2	"	29.8	1092	197
5/25	h	3	"	7.2	232	42
5/26	j	3	"	31.6	1062	192
5/27	k	3	"	17.5	571	97
5/27	k	4	"	6.9	235	42
5/16	a	1	M/S	24.0	964	197
5/17	b	1	"	18.4	799	153
5/17	b	2	"	10.8	334	59
5/18	c	2	"	9.2	397	82
5/19	d	2	"	25.2	1017	189
5/19	d	3	"	6.4	259	50
5/20	e	3	"	29.2	1196	223
5/23	f	4	"	16.1	644	117
5/24	g	4	"	30.2	1166	215
5/25	h	4 <sup>5</sup>	"	35.3	1336	246
5/26	j	5	"	14.0	510	99
5/26	j	6	"	18.0	664	120
5/27	k	6	"	20.2	780	116
6/2	l	7	"	6.0	296	56
6/3	m	7	"	11.0	128	4
TOTALS				430.1	16,062	2,921





LUC

April 8, 1933

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
11 volumes of sounding records for

HYDROGRAPHIC SHEET 5233

Locality White Landing to Wiccacon Creek, Chowan River, N. C.

Chief of Party: C. A. Egner in 1932.  
Plane of reference is mean low water, reading  
2.0 ft. on tide staff at Cannon Ferry  
2.3 ft. below B. M. 1

~~Note: There is practically no periodic tide in this locality and the  
plane of reference was taken 0.5 foot below mean river level as~~

NOTE: See (\*) below

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 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.

*Paul Whitney*  
Chief, Division of Tides and Currents.

(\*) There is practically no periodic tide in this locality and the plane of reference was taken 0.5 foot below mean river level as determined from observations by this party. This is in accordance with an agreement with the U. S. Army Engineers for the plane of reference in Albemarle and Pamlico Sounds.

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REG. NO. 5233

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

REGISTER NO. **5233**

State North Carolina

General locality Chowan River

Locality White Ldg.,  
~~XXXXXXXXXXXX~~ to Wiccacon Creek

Scale 1:20,000 Date of survey May - June, 19 32

Vessel NATOMA

Chief of Party C. A. Egner

Surveyed by J.C. Sammons, J.T. Jarman, John C. Bull.

Protracted by L. A. Sinclair

Soundings penciled by C. A. Egner

Soundings in ~~fathoms~~ feet

Plane of reference Arbitrary, Chowan River data.

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by V. D. Behn

Verified by V. D. Behn

Instructions dated January 21, 1932, 19 32

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

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5233

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

Number of positions on sheet	.29.21
Number of positions checked	...8.0
Number of positions revised	....13
Number of soundings recorded	16062
Number of soundings revised	...167
Number of signals erroneously plotted or transferred	.....0

Date: *Feb 1, 1934*  
Cartographer: *Victor D. Beha*

# Section of Field Records.

Feb 1, 1934.

Report on H 5233  
Chief of Party C.A. Egner  
Protracted by S.A. Sinclair  
Verified and inked by V.D. Behr

Surveyed May-June 1932  
Surveyed by J.C. Sammons  
T. Jarman  
J.C. Bull.  
Sounding plotted by C.A. Egner.

The records conform to the general instructions except that paragraphs 76 of chapter 1 in the Hydrographic Manual was not always followed. In some cases there existed some doubt as to the time or what sounding a particular note referred to.

The usual depth curves could be completely drawn, except for a few cases. These cases all involved the 6' curve and were all close to shore. Practically no depth curves were drawn in Wicacow due to the fact that the soundings were very congested. The depth curves as drawn in the field were incorrect.

The field plotting was complete except for the following omissions

- 1) Trees and stumps shown on the topographic sheet were not all transferred to this sheet
- 2) The geographic position of a triangulation station was not recorded on this sheet and the datum was not shown

The only adjacent sheet is H 5202, which joins

the north end of this sheet. The junction was drawn on H-5202 since it is drawn to a larger scale. The junction is satisfactory, except for one case in which a 24' sounding from this sheet (H-5233) fell on a 29' sounding on H-5202. Due to the difference in scale a slight error in the records for H-5233 could account for this discrepancy.

There are a number of cases in which positions plot up on shore. This is probably due to the fact that the shore land in the area covered by this sheet is very swampy; so that the shore line is more or less indefinite. These positions are all indicated on the sheet (by pencil notes) together with either a suggested change in shore line or a suggested change in the plotting of the positions.

The bottom characteristics as plotted on the sheet, in the field, were not shown close to the associated soundings.

The descriptive report for the topographic sheet states that scattered off lying trees were indicated by "random conventional symbols". In transferring these trees to this sheet the stump symbol was used.

In volume 11 (May) soundings are recorded for work done in Bennett's

Creek north of  $\odot$  Folk. No topography  
is available for this area

Channel line to  
Saterville highway bridge;  
depth varying from 9 to 20 feet ~~at~~

On page 1 of volume 9 a series of cuts are recorded, the purpose of which, according to a note on page 24 of this same volume, was to verify the position of  $\Delta$  Thicket. No conclusions were given as to the result of these cuts, some of the cuts do not check very well. However it is felt that these discrepancies would not cause any appreciable error in the plotting of the hydrography

Soundings from position 1a to 27a inclusive, in Wicacow Creek, were taken by H. W. Murray.

The quality of the field drafting was good.

Respectfully submitted

Veto D. Behm

SECTION OF FIELD RECORDS  
Review of Hydrographic Sheet No. 5233.  
Chowan River, White Landing to Wicacoan Creek, North Carolina.  
Surveyed May - June 1932.  
Instructions dated Jan. 21, 1932 (NATOMA).

Chief of Party - C. A. Egner.  
Surveyed by - J. C. Sammons, J.T. Jarman, John C. Bull.  
Protracted by - L. A. Sinclair.  
Soundings penciled by - C. A. Egner.  
Verified and inked by - V. D. Behn.

1. Records conform to the requirements of the Hydrographic Manual except that not enough bottom characteristics were noted in the records of the Motor Sailer.

2. The plan and extent of development conform to the regulations and satisfy the specific instructions.

3. Soundings are consistent and the depths at crossings of lines are in good agreement. In a few places sounding positions fell slightly inside the shoreline as transferred from the topographic sheet (T. 4676). The Descriptive Report for that sheet calls attention to the difficulty of delineating the shoreline of the cypress swamp areas. On the hydrographic sheet the shoreline was adjusted to the hydrography but the differences are negligible for all practical purposes. Attention is especially directed to the existence of stump and snags as well as a number of cypress trees outside the shoreline as shown on these sheets. These stumps and the fish stakes are the dangers and hindrances to free navigation in the river. *Provide note for snags but do not chart in dir. ones shown on sheet. D.*

4. Depth curves can be drawn satisfactorily.

5. Junction with H. 5202 to northward is satisfactory. The apparent discrepancy noted in the verifier's report is accounted for by the steep bottom slope in the vicinity of the 24 foot sounding.

There are no contemporary surveys to southward.

6. Comparison with H. 1230 (1874) shows a fair general agreement of details with about 1 to 2 feet less water in some places. This changes both the 12 and the 18 foot curves, but without affecting the navigability of the channels.

7. Field protracting and penciling of soundings were satisfactory. No reference triangulation station and datum were shown. Some details shown on the topo. sheet were transferred to this sheet in the office.

△ Thicket is plotted 20 m to far south on the topographic sheet and as a consequence the topographic signals depending on this station are somewhat out of position. The effect on the hydrography is not sufficient to warrant an attempt to adjust the discrepancy.

A mid-channel line of soundings was run up Bennetts Creek to Gates-

H. 5233 - 2.

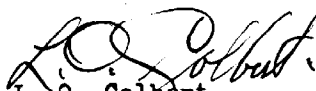
ville Bridge. Shoreline not being available, the line (m day Vol. 11) has not been plotted on the sheet.

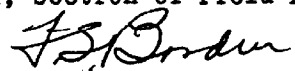
In Wiccacon Creek, mid-channel soundings are in correct position. The side lines are indicated by dots and the depths shown outside the shoreline.

8. Recommendation. This sheet (H. 5233) should supersede all previous information for charting the area represented by it.

No further surveys are deemed necessary at this time.

9. Reviewed by - R. J. Christman, March 10, 1934.

  
L. O. Colbert,  
Chief, Section of Field Records.

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

Examined and approved:

  
L. O. Colbert,  
Chief, Division of Charts.

  
G. H. Hude  
Chief, Division of H. & T.