

5969

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAR 20 1936

Acc. No.

78

529

5969

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. 1
Hydrographic }

State Virginia

LOCALITY

Nansemond River

Town Pt.

(Nansemond River Bridge to

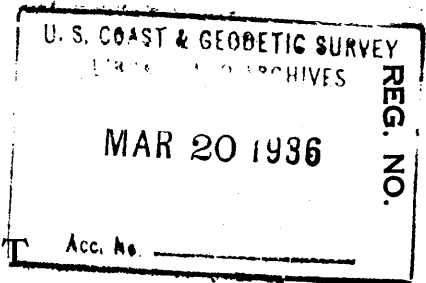
Western Branch)

193 4

CHIEF OF PARTY

J. C. Bose

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



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 H5969

REGISTER NO.

State VIRGINIA

General locality NANSEMOND RIVER¹⁷
Town Pt.

Locality Nansemond River Bridge to Western Branch.²⁷

Scale 1:10,000 Date of survey Nov. & Dec., 19 34

Vessel Launch WELKER

Chief of Party J. C. Bose

Surveyed by J. C. Bose

Protracted by E. T. Sales; A. P. Cristfield (one day)

Soundings penciled by E. T. Sales and R. H. Carstens

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water.

Subdivision of wire dragged areas by _____

Inked by Harold W. Murray

Verified by H.W.M.

Instructions dated Jan. 23, 1934; Jan. 26, 1934; Nov. 13, 1934

Remarks: _____

DESCRIPTIVE REPORT .

TO ACCOMPANY HYDROGRAPHIC SHEET (FIELD) NO. 1

LAUNCH WELKER
NANSEMOND RIVER

J. C. Bose, Chief of Party
Scale -- 1:10,000

INSTRUCTIONS:

The survey was made in accordance with Instructions dated *Project HT-173* January 23, 1934, and Supplemental Instructions dated January 26, (*Tides*) 1934 and November 13, 1934. (*Tides*).

LIMITS:

The area surveyed is that part of the Nansemond River, Virginia, which lies between latitude $36^{\circ} 47'.3$ and latitude $36^{\circ} 53'$; or between the confluence of the river and Western Branch on the south and the Nansemond River concrete bridge on the north.

SURVEY METHODS:

The conventional method of launch hydrography was used. Positions were determined by three-point sextant fixes and soundings taken by means of handlead and sounding pole. The sounding pole had a four inch wooden disc attached to its lower end to prevent its sinking into the soft muddy bottom. This pole was good in depths up to about 18 feet (unreduced). In greater depths the handlead was used. Most of the lines parallel to the channel were run with launch No. 75, while all cross lines and other lines in shoal water were run by a flat bottomed gondola, constructed by the party, and equipped with an out-board motor. All positions taken from the launch are shown in red ink while the positions of the gondola with out-board motor are shown in blue.

DISCREPANCIES:

That part of the river shown on the sheet varies in width from one mile to half a mile, from bank to bank, except for the one mile stretch lying between latitude 36° 48' and 36° 49', which is quite narrow. However, even where the river is quite wide, the channel is fairly narrow, especially where dredging has been done (shown in dashed lines on chart No. 529). The sides of the channel have a steep slope and for that reason some discrepancies in soundings occur at crossings. In all cases, a very small horizontal displacement of position will account for the discrepancy. Discrepancies of about one foot exist in some places where lines of soundings taken with handlead cross soundings taken with pole, due to the fact that the lead sank deeper into the soft bottom than the pole. The shoaler soundings were plotted, except where the deeper one was needed to define the channel better. Most of the discrepancies are in the table below:

Sdg. <i>Feet</i>	Pos.	Vol.	Page	Sdg. <i>Feet</i>	Pos.	Vol.	Page	<i>The files</i>
6-1/2	93-94 E	3	10	8-1/2	47 E	2	67	<i>dispositions of these discrepancies are acceptable, all crossings are good.</i>
5-1/2	1-2 A	4	3	7	1-2 A	1	3	
9-1/2	1-2 A	4	3	10-11	7-8 B	1	43	
5-1/2	9-10 A	4	3	8	11 B	1	44	
7-1/2	19-20 A	3	7	9	33-34 B	1	48	
7-1/2	95-96 A	3	7	5 ¹ / ₂ -6	81-82 B	1	59	
11-1/2	76-77 B	5	7	13-1/2	116-117 C	2	35	
8	13-14 E	6	24	5-1/2	77-78 E	6	40	
11	4-5 E	6	20	14-1/2	136-137 E	6	56	
7-1/2	63-64 E	6	36	10	119-120 E	6	52	

CHANNELS:

The channel of the Nansemond River is well marked by buoys and some lights. Since the completion of the survey, additional lights have been installed by the Lighthouse Service. As the party had

already been disbanded, the more recent lights were not located. ✓

Chart No. 529 shows a controlling depth of 12 feet but the survey shows less water. The controlling depth exists on the line from the drawspan of the King's Highway. Bridge (station KINGS) to black spar buoy No. 11. The controlling depth here is 9-1/2 feet. ✓
See position 9F - 10F, Vol. 6, Page 65. The channel between spar buoys 10 and 7 has a depth of eleven feet, whereas the chart shows 13 feet. No vessels of greater draft than eight feet were seen on the river.

COMPARISON WITH PREVIOUS SURVEYS:

So far as the Chief of party knows, the only previous surveys of the Nansemond River are those made by the U. S. Engineers. This survey agrees with the Engineers' survey, except in the dredged channels, where shoaling has occurred. ✓

The smooth sheet plotter transferred the low water line from topographic sheet ⁷⁻⁶⁴²¹⁶⁽¹⁹³⁴⁾ B to the smooth sheet. This line is shown as a dashed line and, although it delineates the low water line quite well, it may extend a little too far offshore in some places because abnormally low tides occurred on some days while the topography was in progress. Therefore, if the low water line determined by the topographer does not agree with that determined by the hydrographer it is recommended that the low water line determined by hydrography be given preference. ✓

GEOGRAPHIC NAMES:

No new geographic names appear on the sheet.

DOCKS AND PIERS:

Several piers once existed on the Nansemond River but nearly all of them were destroyed by the hurricanes of August and September 1933. Since the construction of the two bridges and the highways to Suffolk, there is little need for docks and piers and it is doubtful if any of them will be rebuilt.

At Town Point only the piles of the old pier remain standing. Wilson's Wharf (Chart 529) on the west bank, has been destroyed. The pier at Newman's Point, near \odot HOW, has been destroyed by the storm and only the piles remain. The same is true of Ferry Pt. Wharf, between \odot LON and Δ Phillips, and of Trotman's Wharf. The dock at Holliday Pt., near the north end of the King's Highway Bridge, is damaged but still serviceable. All other piers shown on the hydrographic sheet are small boat landings.

J. C. Bose

J. C. Bose,
Hydrographer, Chief of Party.

STATISTICS

<u>VOL. NO.</u>	<u>STAT. MILES OF SOUNDINGS</u>	<u>NO. OF SOUNDINGS</u>	<u>NO. OF POSITIONS</u>
1	30.0	1,752	250
2	26.0	1,402	263
3	4.0	204	39
4	20.0	1,617	250
5	22.2	1,461	259
6	17.5	1,595	245
7	2.5	197	26
Total	122.2	8,228	1,332

APPROVAL OF RECORDS

The record books and smooth sheets have been examined and are approved. ✓

The field work pertaining to the hydrography was done under direct supervision of the Chief of Party. It was therefore possible to solve all questions arising from any errors in recording, etc., from first hand knowledge of the area surveyed. ✓

Immediately after completion of the field work, the Chief of Party was assigned to the ship OCEANOGRAPHER and his duties in connection with the field and office work of that vessel prevented him from exercising close supervision of the plotting of this sheet. ✓

Several random positions were replotted and checked. The soundings on the sheet were examined with regard to crossings but were not compared with all soundings in the record books. ✓

J. C. Bose
J. C. Bose,
Chief of Party.

HYDROGRAPHIC SURVEY NO. H5969

Smooth Sheet yes

Boat Sheet yes

Sounding Records 7 Vols. _____

Descriptive Report yes

Title Sheet yes

List of Signals Vol 1

Landmarks for Charts (Form 567) none *yes B.*

Statistics yes

Approved by Chief of Party yes

Recoverable Station Cards (Form 524) none

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

Remarks _____

Field Records Section (Charts).

HYDROGRAPHIC SHEET NO. **H5969**
.....

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

Number of positions on sheet	1,332
Number of positions checked	10
Number of positions revised	✓
Number of soundings recorded	8,228
Number of soundings revised	4
Number of signals erroneously plotted or transferred	✓

Date: *April 10, 1936*

Verification by *Harold W. Murray*
April 28/36
Review by *B. Riseyari*

Time: *23 1/4 hrs.*

Time: *31 hrs.*

Remarks

Decisions

	Remarks	Decisions
1		
2	Campbells Creek ON Chart 529	Campbell Creek
3		
4		
5	Sleepy Hole ON Quad (evidently refers to cluster of houses)	Sleepy Hole Pt
6	Hollidays Pt per U.S.G.A. (June, 1940)	
7	Hollidays Pt ON Smithfield Quad	<u>Holliday Pt</u>
8		
9		
10		
11	Trotmans Whf ON Chart 529	<u>Trotman Wharf</u>
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES

Survey No. H5969

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
	On Chart No. 529	On previous survey No.	On U. S. Quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
<u>Town Point</u> ✓	*		✓								1
<u>Campbell Creek</u> *			*								2
<u>Newmans Point</u> ✓	*		✓								3
<u>Ferry Point</u> ✓	*		✓								4
<u>Sleepy Hole Pt.</u> ✓	*							✓			5
<u>Nansemond River</u> ✓	*		✓								6
<u>Holiday Point</u> ✓	*							✓			7
<u>Shackley Island</u> ✓	*		✓					✓			8
Glebe Shoal											9
<u>Glebe Point</u> ✓	*		✓								10
<u>Trotman Wharf</u> *			*								11
<u>Western Branch</u> ✓	*		✓								12
<u>Add</u>											13
<u>Great Shoal</u> ✓	*							✓			14
<u>Wills Island</u>			*					✓			15
<u>Dumpling I.</u> ✓	*		✓					✓			16
<u>Sack Pt</u> ✓			*								17
<u>Ferry Pt. Wharf</u> *	*		✓								18
<u>Cedar Creek</u> ✓	*		*								19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined in red approved
by K.T.A on 4/13/36

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOGRAPHIC~~

No. H5969
~~NO. 77~~

received March 20, 1936
 registered April 4, 1936
 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
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	
----	--

C. K. Green *April 6 - '36*

Lae

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 7, 1936.

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 5969

Locality **Mansemond River Bridge to Western Branch, Mansemond River, Va.**

Chief of Party: J. C. Bose in 1934

Plane of reference is **mean low water reading**

1.8 ft. on tide staff at **Nix's Club**

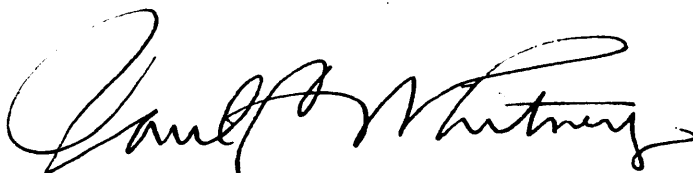
6.2 ft. below B.M. 1

1.5 ft. on tide staff at **Kings Highway Bridge**

9.3 ft. below B.M. 1

Height of mean high water above plane of reference is 3.0 ft. at **Nix's Club** and 3.2 ft. at **Kings Highway Bridge**.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

Verification Report on H-5969(1934)

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual. ✓

2. Shore Line and Signals

a. The plane table survey covering this area and referred to in the D. R. has not been received in this office at this date. ✓
T-64216(1934) and T-64222(1934) completely covering this area have been received.
all shore line detail including the N.W. line were transferred and inked by the writer. J.C.M.M.
Only the mark & L.W. line was shown in pencil on the sheet by the field party. April 14, 1936

b. The entire area is covered by air photos. Due to lack of funds and the facts that the photos are not in the office, the working up of this data will be held up indefinitely. ✓

3. Sounding Line Crossings

The numerous ^{cross} lines shown on the survey were run at right angles to the channel. In view of the rapid changes in depth encountered, the agreement is exceptionally good. ✓

4. Depth Curves.

The usual depth curves may be satisfactorily drawn within the limits of the survey including portions of the low water line. Half foot soundings were freely used in smoothing out irregularities. ✓

5. Junctions with Contemporary Surveys.

a. There are no contemporary surveys to the south-
ward of the present survey. ✓

b. The junction on the north with H-5968 (1934)
will be considered in the verification of that sheet. ✓

6. Field Plotting.

Field protracting and plotting were exceptionally
accurate. ✓

7. Remarks. *

8. Verified & Inked by Harold W. Murray April 10, 1936

* Remarks: Detail shown on this sheet in ink such as trees, fish
stake, pipe, etc. were inked by the field party. They
undoubtedly originated with the topographic survey, since only a
few references are contained in the sounding records. ✓
H.W.M.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5969 (1934) FIELD NO. 1

Nansemond River Bridge to Western Branch Nansemond River, Va.
Surveyed in Nov. - Dec. 1934
Instructions dated Jan. 23, 1934 (OCEANOGRAPHER).

Hand Lead Soundings

3 Point Fixes on Shore Signals

Chief of Party - J. C. Bose
Surveyed By - J. C. Bose
Protracted By - E. T. Sales, A. P. Cristfield
Soundings Penciled By - E. T. Sales, R. H. Carstens
Verified and Inked By - M. W. Murray

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual. No copy of Special Chart for Lighthouse Service has been received in the office.

The Descriptive Report is complete as to essential details and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The instructions for the project have been satisfactorily complied with except that a few sounding lines in the blank inshore areas would have been desirable; for examples, in lat. $36^{\circ} 51.5'$ long. $76^{\circ} 31.7'$ and in the vicinity of the boat landing at Ferry Point.

3. Shoreline and Signals.

The shoreline and signals originate with T-6421-b (1934) and T-6422-a (1934).

4. Sounding Line Crossings.

The numerous crosslines are generally in good agreement.

5. Depth Curves.

The usual depth curves may be satisfactorily drawn, including portions of the low water line.

6. Junctions with Contemporary Surveys.

The junction with H-5968 (1934) on the North is satisfactory. No survey to the Southward of this sheet is contemplated. However, the present survey is in good agreement with the latest Engineers' Survey of 1931 (Bp. 24960) in this area.

7. Comparison with Prior Surveys.

a. H-529 (1854-55)

This survey is on a scale of 1:20,000 and covers a small portion of the present survey at its northern limit. In general, the agreement of the depths with those of the present are generally good. However, there has been a shoaling of about 1 to 2 feet in the lower part of the channel area and some parts of the inshore areas. There are no outstanding features that need consideration and since the present survey is on a larger scale and well developed, the old work should not be used for charting purposes.

b. H-1213 (1874)

This survey, on a scale of 1:10,000, covers the entire area of the present survey. Comparison shows a number of changes in the river has occurred as a result of dredging operations. Except in the dredged areas, the depths on the old survey are in general fair agreement with the present ones. There are no shoals on the old survey that should be carried forward on H-5969 (1934).

In view of the natural as well as artificial changes that have taken place and the fact that the present survey has adequately covered the common area, it should supersede the old work for charting purposes.

c. H-3037 (1909), H-3039 (1909)

These surveys, on a scale of 1:10,000 together cover the entire area of the present survey; the former covering the area south and the latter north of lat. $36^{\circ} 52.2'$. A number of changes have taken place in the river, particularly in the vicinity of the channel which has been improved by dredging. In general, outside the dredged areas, the depths on the old surveys are in fair agreement with those of the present. No shoals appear on those sheets which should be shown on H-5969 (1934).

The wharves shown on the old surveys have been destroyed. (See Descriptive Report page 4) and only the piles remain.

Since the river shows some natural as well as artificial changes have taken place in a generally soft bottom, the old surveys should be superseded by the present survey which is more in detail.

8. Comparison with Chart No. 529 (New Print dated August 12, 1935)

a. Hydrography.

(1) Within the area of the present survey the charts are based on surveys discussed in the foregoing paragraphs and the U. S. Engineers' surveys of 1928 (Bps. 22, 106, 22,107) and 1932 (Bps. 24,957 to 24,962). The 1928 Engineers' survey affects the section of the channel area shown on the chart between Holliday Pt. and Trotman Wharf, as well as the section north of Newmans Pt., while the 1932 Engineers's survey

affects the remaining portions of the river covered by the present survey. In general, these surveys are in fair agreement with the present work except in the dredged channels where some shoaling has occurred.

(2) The spoil areas originating with the 1932 Engineers' Bps. 24,958 and 24,960, fall in unimportant areas on the present survey which are in general, mud flats. The present soundings that fall in these areas should be used for charting purposes.

(3) The two islets in lat. 36° 47.8', long. 76° 33.6' have merged, becoming a single patch of marsh.

(4) The present survey has adequately covered the area and, being a later survey and because of the changes that have taken place, should supersede Bps. 22,106, 22,107 and 24,957 to 24,960 in future charting.

b. Controlling Depths.

The controlling depth of 12 feet charted for Nansemond River is from Chart Letter 460 (1933). The present survey shows 9 feet the controlling depth in approximate lat. 36° 50.27', long. 76° 32.61' but for a very restricted channel in lat. 36° 50.27', long. 76° 32.67', 9½ feet is the controlling depth, which is in agreement with Chart Letter 119 (1936).

c. Aids to Navigation.

(1) With the exception of Glebe Shoal Bn, Buoys "S10", "S11", "S14", "S16" (charted "N16") and "S23" (charted "S25") the following charted buoys are not in agreement with the positions as located by the present survey.

"S7"	was located	50 M. N.E.	of	charted pos.;	originates	with	L.H. NtoM	30,	1932.
"S8"	"	"	75 "	"	"	"	"	"	; charted source cannot be traced.
"S9"	"	"	110 "	N.	"	"	"	"	; Originates with L.H. NtoM 30, 1932.
"S12"	"	"	100 "	N40E tr	"	"	"	"	"
"S13"	"	"	60 "	N.E.	"	"	"	"	; Charted source cannot be traced.
"S15"	"	"	120 "	N.	"	"	"	"	; Originates with L.H. NtoM 32, 1915.
"C17"	"	"	80 "	N.W.	"	"	"	"	; Charted source cannot be traced.
"S18"	"	"	145 "	S7°W tr	"	"	"	"	; Originates with L.H. NtoM 30, 1932.
"S19"	"	"	40 "	N.	"	"	"	"	"
	(Charted	"S21")							
"S20"	was located	145 "	S10°W tr	"	"	"	"	"	"
"S21"	"	"	125 "	W.	"	"	"	"	; Charted source cannot be traced.
	(Charted	"S23")							
"S22"	was located	150 "	S20°W tr	"	"	"	"	"	; Originates with L.H. NtoM 30, 1932
"S25"	"	"	40 "	S.W.	"	"	"	"	; Charted source cannot be traced.
	(Charted	"S27")							

(2) All of the above aids adequately mark the channel with the following exceptions:

Red Buoy "S12" falls in the channel; should be moved westerly about 40 meters.

Black Buoy "S9"; should be moved easterly about 15 meters.

" " "C17" falls in the channel; should be moved easterly about 35 meters.

Black Buoy "S19" (Charted "S21") is well inside the 6 foot curve and should be shifted westward.

Black Buoy "S21" falls on wrong side of channel; should be moved easterly about 55 meters.

(3) The following aids have been charted from H to M. 29, July 11, 1935, which information is subsequent to the present survey:

Bn. (Vic. of Sleepy Hole Pt.) Lat. 36° 50.61', long. 76° 31.68' and New Buoy "C19" north of Trotman's Wharf. Bn. (Ferry Pt.) in lat. 36° 51.3', long. 76° 31.59'. The beacons adequately mark the features intended. The above N. to M. also states that buoys S19, S21, S23, S25 as shown on the sheet have been re-numbered S21, S23, S25 and S27 respectively.

9. Field Plotting.

Field protracting and plotting were well done.

10. Additional Field Work Recommended.

No additional work is required.

11. Superseding Old Surveys.

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

- H-529 (1854-55) in part.
- H-1213 (1874) " "
- H-3037 (1909) " "
- H-3039 (1909) " "

12. Reviewed by - G. Risegari, April 1936.

Inspected by - E. P. Ellis, May 22, 1936

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

L. O. Pollock
Chief, Division of Charts.

Fred. L. Peacock
Chief, Section of Field Work.

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

*photostat sent to
L. W. Service 5th District
July 22 - '36 - ckg*

Applied to Drawing Ctr 529 - 7/15/37

PJC