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Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. T. Gutzmann
Superintendent.

State: *Virginia*

DESCRIPTIVE REPORT.

Nydc Sheet No. 2862

LOCALITY:

Back River
Entrance, Branches
& Plum Tree Bar

1907

CHIEF OF PARTY:

J. B. Miller

U. S. COAST AND GEODETIC SURVEY
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2862

Department of Commerce and Labor

COAST AND GEODETIC SURVEY Str. E n d e a v o r,

Fortress Monroe, Va., April 7th 1907.

To the Superintendent,

FILE REFERRED:
ASSISTANT IN CHARGE

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Coast and Geodetic Survey,
U. S. C. & G. SURVEY,
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ANSWERED
APR 11 1907
Library and Archives.

I have the honor to send enclosed original hydrographic sheet No. 3, with descriptive report: and to return 2799, 2799 (bis), 2799 (ter), 2799 (boat); which latter are of no further use here.

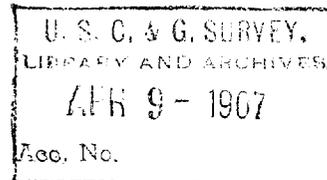
Attention is called to par. 3 of ^{the} descriptive report on hydrographic sheet 3, where it is noted that red spar No. 2, entrance to Back River, Va., is about 200 meters ENE of the edge of the channel, and is of little value as now placed: and that red spar 4 is on the wrong side of the channel; it being necessary now to leave it on the port hand on entering. These buoys appear to be misplaced, and not dragged out of proper position, as the hydrography in March 1906 showed them to be in the same position ^{s as} at present.

Very respectfully,

J. R. Miller

Assistant, Coast and Geodetic Survey,

Commanding.



Department of Commerce and Labor
Coast and Geodetic Survey

O. H. Tittmann, Supt.

Descriptive Report

of

Hydrographic Sheet No. 3

Back River and Branches, York Co., Va.

by the

C. & G. S. Str. Endeavor

J. B. Miller, Assist., Chief of Party

1907

Descriptive Report
of
Hydrographic Sheet No. 3
Back River and branches
Virginia
1907

1. This sheet includes Back River entrance and branches and joins field sheet No.2. The survey was made, in accordance with the instructions, by 200 meter soundings lines in both directions: where necessary, additional lines were run to develop the curves properly: the twelve buoys were also located. The survey depends upon points located by the Str. HYDROGRAPHER in March, 1906; and upon topographic signals in Harrison Creek and the North- and South-west Branches located by Assist. Young in Oct.-Dec., 1906, and scaled from his topographic sheet. Tides were observed at Northend Point and Amorys Wharf, using at the latter place the gauge established by the Schr. MATCHLESS in Nov., 1906. Datum planes at both gauges were derived by comparison with Thimble Shoal automatic gauge.

2. The water is generally very shallow, with many sand bars and mud flats. The shores are low, sandy, marshy, and grassy; with some pine and other trees on the slightly higher land along the branches.

3. A channel of ~~at~~ feet least depth leads to Amorys

3(cont'd). wharf at Messick:divided at Northend Point into two parts by the Middle Ground,which is a narrow shoal about 1 mile long and 200 meters wide,having a least depth of 2 feet,extending in an ENE and WSW direction,200meters north of the point. The channel south of the Middle Ground crosses it in 6 feet,west of buoy No.11;and that north of it^{which is buoyed,} crosses in $9\frac{1}{2}$ feet,at red buoy No. 4. The entrance is 0.6 mile northeast of Back River Light House,marked by black can No.1; from here it is marked by red spar No.2,which should be moved 200 meters WSW to be a proper guide; black spars No.'s 3 and 5; red spar No. 4,which is misplaced and should be left to port in entering,as if it were black and red; red spar No.6; black and red spar No.7, which should be black only; black spar No.9; black and red spar No.11; red spar No.8; black spar No.13; red spar No.10: from here the channel leads direct for Amorys wharf. No.'s 7,9,and 11 are on the north edge of the Middle Ground,and No.'s 7 and 11 are colored black and red to mark also the channel south of it. If No.4 were colored black and red as it should be,No.7 could well be removed. No compass courses are given for this channel,as it is less than 200 meters wide in some places,and should not be entered at night or in a fog.

4. There is an unmarked channel of $5\frac{1}{2}$ feet into Harrison Creek; and this depth extends for some distance in *the North and Southwest Branches.*

5. Tidal currents at Northend Point run about 2 knot ³

direction

5(cont'd). an hour at the strongest, in the general ^{direction} of the channels.

6. The common report that the channels are subject to change with every storm was not found to be verified, and doubtless arises from the fact that the abruptly shelving beach at the extremity of Northend Point builds out or washes away temporarily in some storms for a distance of twenty or thirty feet, but soon returns to nearly its former shape. Scarcely any variation in the bottom from former surveys was found.

7. There is a considerable fishing and farming population living along both the North- and South-west Branches and Harrison Creek. All the area inside Northend and Plum Points is good oyster and clam ground. The town of Fox Hill is on the east side of Harrison Creek near its entrance; and the town of Messick on the north side of the Northwest Branch, at its entrance. The traffic is wholly composed of gasoline and sailing boats carrying fish and oysters. A small gasoline boat runs weekly between Messick and Hampton bringing mail and supplies.

Respectfully Submitted, Apr. 8, 1907.

*J. B. Miller
Asst. C. & G. S.*

*To the Superintendent,
C. & G. Survey
Washington, D. C.*

FORM 167.

Department of Commerce and Labor

COAST AND GEODETIC SURVEY

Washington, 4/12, 1907

Respectfully { returned }
 { referred } to
 { forwarded }

11-583

Archives —

Should be
filed with Discip.
Report of Hyd. Sheet
No. 2562

G.S.P.



U. S. C. & G. SURVEY.
LIBRARY AND ARCHIVES.
APR. 4- 1907
Ass. No.

Hydrographic Signals and Buoys.
Sheet 3
Back River, Va.

1907

C. & G. S. Ste. Endeavor

J. P. Miller, Assist., Com'd'g.

Hydrographic Sheet No. 3

Back River, Va.

Hydrographic Signals and Buoys.

Object	Lat.	D.M.	Long.	D.P.	Remarks	
Pile 0	37	05	76	15	1170 311	Flag on net sta ^{ke}
Can 0		05		15	331	" " " "
Net 0		05		15	1109 679	" " " "
Flag 0		04		20	1553 175	"
					418 1307	
B U O Y S						
C 1	37	05	76	15	1186 664	Meters indefini ^{te} for all buoys
S 2		06		15	1426 1424	
S 3		06		16	496 1354	
S 4		06		17	1242 608	
S 5		06		16	798 1252	
S 6		06		17	1513 337	
S 7		06		17	1405 445	
S 8		06		18	1031 819	
S 9		06		17	479 1371	
S 10		06		18	506 1344	
S 11		06		17	999 851	
S 13		06		18	698 1152	
					87 629 843	

Rack River, Va.
Plane table points,
from top sheet by
F. A. Young, Assist., F. D. G. Observer.
1907.

Data from Topographic sheet, Scale 1:20,000; Back River, Va., 1907,

Back River, Va.

Scaled by J.B.M.

Note: B. is black; W. is white; read from top of pole downwards.

P o i n t.	Lat.			Long.		
<u>Northwest branch.</u>	o	'	<i>m.</i>	o	'	<i>m.</i>
1.	37	05	1007	76	20	655
			843			827
2. B. W.			1252			1347
			598			135
3. W. B. W.	37	06	44			975
			1806			507
4. W. B.			442	21		328
			1408			1154
5. W. B.			1234			490
			616			992
6. W. B.			1220	22		75
			630			1407
7. W.			1451			453
			399			1029
8 (2) W.			947			1246
			903			236
<u>Southwest branch.</u>						
9. W.	37	05	504	76	19	1099
			1346			383
10. W.			407			487
			1443			995
11. W. B. W.		04	1419	20		788
			431			694
12. B. W. B. W.			1001			424
			849			1058
13. (3) W.			790			1298
			1060			184
14. B. W.			145	21		33
			1705			1449
15. W. B. W.			193			660
			1657			822
16. W. B.	37	03	1409			225
			441			1257

by F. A. Young, Chief of Party; F. D. G. Observer.

Back River, Va.

Scaled by J.R.M.

P o i n t.	Lat.			Long.		
	o	'	"	o	'	"
17. W. B.	37	03	1064 786	76	21	928 554 ✓
18 (2) W.			262 1588			1052 430 ✓
Wind mill.	37	04	749 1101			76 1406 ✓
" "			525 1225			580 902 ✓
" "			605 1245			715 767 ✓
" "	37	03	1468 382	76	21	1224 258 ✓
" " (tall), with tank in tower		04	683		21	657
<u>Harrison's Creek.</u>			1167			825 ✓ _m
19. W. B.	37	05	519 1331	76	18	725 757
20. W.			320 1530			477 1005 ✓
21 (2) W.		04	1713 137			535 947 ✓
22. B. W.			1379 471			341 1141 ✓
23. B. W. B.			1296 554 ✓			479 1003 ✓
24. (3) W.			876 974			246 1236 ✓
25. (2) W. (2) B.			1012 838			305 1177 ✓
26. W. B.			747 1103			430 1052
27.			671 1179			300 1182 ✓ _m

Back River, Va.

Sailed by J.B.M.

P o i n t.	Lat.			Long.		
	o	'	m.	o	'	m.
28. W. B.	37	04	559	76	18	483
			1291			999
29 W. B. W.			246			382
			1604			1100
Point @ (2) W.		05	626			1134
			1224			348
Amory's wharf, derrick.	37	06	344	76	20	256
			1506			1226

All these points are unmarked and temporary, except the wind mills, and Amory's wharf; they are given here to accompany the hydrographic sheet of Back River.

Department of Commerce and Labor

COAST AND GEODETIC SURVEY

O.H. Tittmann, Superintendent.

H Y D R O G R A P H Y

of

B A C K R I V E R , V I R G I N I A ,

Entrance, Branches, and Plum Tree Bar,

by the

C.&G.S. Str. ENDEAVOR; J.B. Miller, Assistant, Chief of Party

Begun January 3, 1907; Ended February 28, 1907

Scale, 1:10000.

2862

Angles plotted, J.B.M.
Soundings " J.B.M.

1907

Sheet No. 3.

Date.	Letter.	Vol.	Soundings.	Angles.	Miles.	Hours.	Boat used.
Jan. 3,	a	2	2021	270	15.0	7.5	Stbd. Dinghy.
" 3,	a	1	1806	404.	20.0	7.8	port "
" 15,	b	2+3	1183	168	10.9	6.2	" whaleboat.
" 15	b	1	366	84	5.7	4.2	Gasoline launch.
" 16	c	3	47	6	1.0	.2	Port whaleboat.
" 17	d	4	859	66	9.0	3.0	Stbd. dinghy.
" 18	e	4	592	104	6.0	3.5	" "
" 18	e	3	887	140	7.4	3.5	Port whaleboat.
" 19	f	4	739	152	6.0	3.0	Stbd. dinghy.
" 19	f	3+6	1007	174	8.8	3.5	Pt. whaleboat.
" 25	g	6	1063	198	9.0	3.5	Pt. whaleboat.
" 30	h	6+7	1513	239	13.0	7.8	Pt. whaleboat.
" 30	h	5	1900	416	16.9	7.8	Pt. dinghy.
" 31	i	5	234	42	3.5	.8	*ENDEAVOR.
Feb. 25	j	7	942	203	8.8	3.5	Pt. whaleboat.
" 26	k	5+10	867	202	9.2	3.5	Pt. dinghy.
" 26	k	7+8	2596	432	19.5	7.5	Pt. whaleboat.
" 26	l	10	1730	310	14.3	7.5	Pt. dinghy.
" 27	l	8+11	1843	270	13.5	8.2	Pt. whaleboat.
" 27	m	9+10	1020	116	9.0	5.5	Pt. dinghy.
" 28	m	11	871	52	5.8	2.8	Pt. whaleboat.
" 28	n	9	745	56	6.0	3.0	Pt. Dinghy.

13 days11 Vols.24,831 Sdgs.4104 Angles218.3 ^{Leag.} Mi.103.8 Hrs.13.0 sq. stat. mi.251.4 ^{Leag.} Stat. Mi.

2862

V.E.C.
May 11, 1907.

HYDROGRAPHIC SHEET 2862.

Back River, Virginia, by party of Assistant J. B. Miller
in 1907.

TIDES

	Northend Point	Bradshaws Wharf	Amorys Wharf
Mean low water, or plane of reference on staff	ft. 1.6	ft. 1.7	ft. 2.6
Lowest tide observed " "	0.9	1.0	1.9
Highest " " " "	5.5	5.6	6.5
Mean range of tide	2.3	2.4	2.4

Hyd Sheet No 2862

Jan. 28, 1908.

The area within the limits of this survey
has been well covered. The crossings are good.

The records were well kept.

H. L. Simons