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Diag. Ch. No. 1222-2

C. & G. SURVEY,
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MAR 5 1910
Acc. No.

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. H. Littmann
Superintendent.

State: *Va.*

DESCRIPTIVE REPORT.

Hyd = Sheet No. *3041*

LOCALITY:

*Approaches to Hamp-
ton Roads*

190

CHIEF OF PARTY:

W. C. Hodgkins

3041

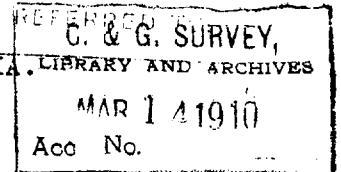
DESCRIPTIVE REPORT

COAST AND
GEODETIC SURVEY

MAR 12 1910

to accompany Hydrographic Sheet No. 3041.

RESURVEY OF PART OF APPROACHES TO HAMPTON ROADS, VIRGINIA.



Scale 1:20000.

Surveyed in December, 1909, January and February, 1910,

by the party on the Steamer "BACHE", commanded by

Assistant W. C. Hodgkins.

This resurvey covers the bar lying to the southwestward of the shoal called the Tail of the Horseshoe and obstructing the principal approach to Hampton Roads for vessels of great draft.

The weather during the time spent on this sheet was very unfavorable for hydrography, being generally either too hazy to permit signals to be seen or too rough and windy for accurate soundings.

In the beginning of the work tides were observed at Thimble Shoal Light-House; but owing to the destruction of that building by collision and fire on the morning of December 27, it became necessary to make the remainder of the tidal observations at a staff established on the Government Wharf at Fort Monroe.

Toward the end of the work a few readings, for comparison, were obtained at a staff fixed to a pile beacon near the eastern end of Willoughby Bank.

It seems unnecessary to give any detailed information in regard to so well known a region, but it may be mentioned that the commerce of Norfolk and Newport News is very extensive and apparently growing.

Respectfully submitted,

W. C. Hodgkins

Assistant, Coast & Geodetic Survey,
Commanding.

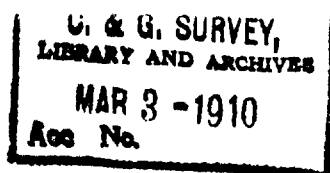
March 10, 1910

To the Superintendent,

Coast and Geodetic Survey,

Washington, D. C.

3041



The errors in the determination of depth have max. magnitudes of about ± 1 ft. There is no evidence of systematic errors affecting certain days' work, lines in one direction or particular locality - It is probable, therefore, that they are the resultants of the many small component accidental errors, almost impossible to eliminate from work of this character -

- (a) Variation in length of lead line in course of work -
- (b) Error resulting from heading off course made good -
- (c) Personal error in reading marks and in handling lead -
- (d) Personal error in allowance for swell & chop -
- (e) Varying conditions due to change in heading - whether leadsmen is on windward or leeward side -
- (f) Currents and wind

The area involved is rather exposed and has max tidal current of $1\frac{1}{2}$ to 2 knots -

The work is good as a whole and the errors noted are probably due in great measure to current, but this is mere conjecture as the tide and sounding records have not yet been received -

J. W.

3-1-10

MAR 14 1910

Acc No.

STATISTICS SHEET No. 3041 H.

Date. 1909.	Vol.	Letter.	Miles.	Positions.	Angles.	Sound'gs.	Boat.
Dec. 23	1	A	6.5	27	54	159	BACHE.
" 24	1	B	6.7	31	62	190	"
" 28	1	C	12.5	58	115	330	"
" 31	1	D	1.00	4	8	19	"
1910							
Jan. 12	1	E	11.3	63	126	450	"
" 16	2	F	28.0	123	260	828	"
" 19	2	G	34.0	138	276	806	"
" 20	3	H	5.5	21	42	130	"
" 22	3	I	22.5	99	198	588	"
" 24	4	K	30.0	153	306	903	"
" 26	3	L	6.0	31	62	191	"
Feb. 2	3	M	10.0	44	88	262	"
" 4	4	N	27.3	144	288	828	"
" 5	5	O	27.0	129	258	734	"
" 10	5	P	11.0	56	112	307	"
" 11	5	Q	3.5	22	44	112	"
" 17	5	R	15.0	73	146	432	"
" 17	6	R	16.5	59	114	379	"
" 23	6	S	16.5	76	152	448	"
" 26	6	T	13.5	66	132	369	"
TOTAL.	6	19	304.3	1437	2843	8463	"