

7714

Diag'd. on Diag. Ch. No. 78-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
Field No. Wa-1146 Office No. H-7714

LOCALITY
State VIRGINIA
General locality CHICKAHOMINY RIVER
Locality SHIELDS PT. TO BIG MARSH PT.

194 6-'47
CHIEF OF PARTY
L.C. Johnson

LIBRARY & ARCHIVES
DATE May 25, 1949

7714

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.

REGISTER No. H-7714

Field No. Wa-1146

State VIRGINIA

General locality CHICKAHOMINY RIVER

Locality SHIELDS PT. TO BIG MARSH PT.

Scale 1:10,000 Date of survey 12/7/46 to 1/30/47

Instructions dated _____

Vessel WAINWRIGHT

Chief of party L.C. JOHNSON

Surveyed by L.C. JOHNSON & C.A. CHENWORTH

Soundings taken by ~~fathometer~~, graphic recorder, hand lead, ~~wire~~

Fathograms scaled by Field Party

Fathograms checked by " "

Protracted by S.M. Tarkington

Soundings penciled by S.M. Tarkington

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~

REMARKS: _____

DESCRIPTIVE REPORT
(Compiled by Norfolk Processing Office)
To Accompany

HYDROGRAPHIC SURVEY H-7714 (Field No. WA-1146)

Scale 1:10,000
Ship WAINWRIGHT

L. C. JOHNSON
COMDG.

A. PROJECT NO. CS-255
Instructions dated

B. SURVEY LIMITS AND DATES.

This survey makes a junction with H-7021 at Lat. ~~37-19~~^{37-18.2} and ~~233'~~^{233'} extends up the Chickahominy River and its tributaries to Lat. ~~37-22~~.

The field work was done between December 7, 1946 and January 30, 1947.

C. VESSELS AND EQUIPMENT.

Ship WAINWRIGHT was used as a base for operations and the hydrography was done with Launch 116 and a skiff. Portable fathometer 808J No. 63, was used in Launch 116. Skiff soundings were taken with a pole.

D. TIDE AND CURRENT STATIONS.

There were no current stations occupied. Portable tide gages were established at Shipyard Landing and at Lanexa. ^(off survey) There were no time corrections applied to tides.

E. SMOOTH SHEET.

The smooth sheet ^{projection} was made by hand at the Norfolk Processing Office. Shore line and topographic details were verified in accordance with paragraph 757.

F. CONTROL STATIONS.

There were no triangulation stations recovered on this survey. Shoreline, topographic details and signals were taken from air-photo compilations no. T-8074, T-8075, T-8079, T-8080 and T-8081.
(1944) (1944) (1943) (1944) (1944)

G. SHORELINE AND TOPOGRAPHY.

See paragraph F.

H. SOUNDINGS.

8087 fathometer no. 63 was used on most of this survey and the pole was used to supplement it in the shoaler areas.

I. CONTROL OF HYDROGRAPHY.

Topographic stations were taken from air-photo compilations and these were supplemented, where necessary, with hydrographic signals cut in with a sextant. ✓

J. ADEQUACY OF SURVEY.

The survey was not completed, however, the coverage appears adequate to supersede prior surveys from the southerly limits to Lat. 37-22.5. ✓

K. CROSSLINES.

The percentage of crosslines appears adequate to check hydrography. ✓

L-M. COMPARISON WITH CHART.

A comparison was made with Chart No. 530 and the current survey agrees very well. The small scale of Chart 530 makes a detailed comparison impossible.

See TP 5 & 6
of Review

FLOATING AID TO NAVIGATION

H-7714

Designation on SS	Designation on CS. 530 corrected to May 1949	Name in Light List	Lat.	Long.	Date of Location	Pos.No.	Depth of Water
BS-9	S-9	Chickahominy River Buoy 9	37° 18'	620 m. 76° 52'	865 m.	Dec. 10, 1946 1d	15 ft. ✓
RS-10	S-10	Chickahominy River Buoy 10	37° 18'	1488.5 m. 76° 52'	800 m.	Dec. 17, 1946 1e	✓
BS-11	S-11	Chickahominy River Buoy 11	37° 22'	163.5 m. 76° 54'	284 m.	Jan. 29, 1947 36m	10.5 ft. ✓
BS-13	S-13	Chickahominy River Buoy 13	37° 22'	619 m. 76° 53'	1286 m.	Jan. 29, 1947 55m	12 ft. ✓
BS-15	S-15	Chickahominy River Buoy 15	37° 22'	1354.5 m. 76° 54'	596.5 m.	Jan. 29, 1947 56m	11 ft.

STATISTICS FOR HYDROGRAPHIC SURVEY H-7714 (1946)

SHIP WAINWRIGHT

PROJECT NO. CS-255

	Vol. No.	Day	Date	Pole Soundings	No Positions	Statute Miles
UNCH 116	I	a	12/7/46	0	26	3.8
	I	b	12/8/46	0	53	8.8
	I	c	12/9/46	0	123	15.1
	I & II	d	12/10/46	0	94	11.4
	II	e	12/17/46	0	76	9.9
	II	f	12/19/46	0	48	6.3
	II	g	1/7/47	0	4	0.3
	II & IV	h	1/8/47	0	74	7.2
	IV	j	1/10/47	0	145	15.9
	IV	k	1/12/47	0	59	5.7
	IV	l	1/28/47	0	63	4.6
	V	m	1/29/47	0	199	20.4
	V	n	1/30/47	0	29	2.0
	Totals for Launch				0	993
SKIFF #701	II	a	12/17/46	220	49	4.9
	III	b	12/19/46	188	60	4.9
	III	c	1/12/47	5	5	0.3
Totals for Skiff				413	114	9.1
GRAND TOTAL				413	1107	117.5

Total Square Statute Miles Sounding - 4.0

LIST OF SIGNALS

H-7714

TOPOGRAPHIC SIGNALS

Source - Air-photo Compilation T-8074

ACT (318)	FEZ (316)	NAY (246)	VIA (301)
BAH (319)	GED (311)	PAD (251)	WAD (308)
CAM (313)	HAT (310)	SAD (249)	WED (303)
DAW (257)	ION (309)	TAP (305)	YER (304)
DIT (314)	LAM (248)	USE (306)	ZIG (312)
EON (315)	MAL (247)	VAL (307)	

Source - Air-photo Compilation T-8075

PIX (298)	SAX (299)	YET (244)	ZAG (245)
REV (297)	THY (300)		

Source - Air-photo Compilation T-8080

ABE (175)	EAT (177)	KED (235)	ODD (240)
BAG (231)	FAR (256)	KEN (239)	OFF (169)
BAT (166)	GAD (233)	LAD (254)	PAL (241)
CAR (174)	HAG (255)	LAX (171)	QUD (237)
COD (180)	HEM (177A)	MAG (253)	RAG (238)
DEB (181)	JAP (320)	MAN (170)	WAG (167)
EAR (232)	JIM (172)	OAK (236)	ZOO (178)

Source - Air-photo Compilation T-8081

EGG (165)	GIG (183)	JAY (198)	LAY (199)
FIN (182)	HEX (164)	KIM (163)	NIG (162)
			RAT (200)

Source - Air-photo Compilation T-8079

TAN (242)

HYDROGRAPHIC SIGNALS

ALP	Vol. IV	Page 45	NED	Vol. I	Page 10
ANN	" "	" 12	NEW	" IV	" 13
BOB	" V	" 36	PLY	" "	" "
CAB	" IV	" 39	RAM	" "	" "
DAY	" "	" 12	RIP	" "	" 12, 13, 14.
FIG	" "	" "	SAG	" "	" 13
GAG	" "	" "	TAX	" "	" 14
KEY	" "	" "	VAN	" "	" "
LIP	" I	" 11, 35.	YAM	" "	" "
MAR	" IV	" 45			

ADDENDUM

To Accompany

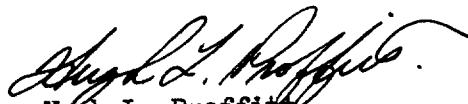
HYDROGRAPHIC SURVEY H-7714 (Field No. WA-1146)

The body of this Descriptive Report was compiled by the Norfolk Processing Office, as the survey is incomplete, and a report was not furnished by the Field Party.

Soundings.

Shoal soundings, taken with the fathometer, appear questionable, as there is no check on soundings less than six feet. *Appear to be O.K. on smooth sheet.*

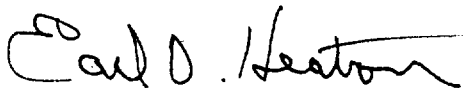
Respectfully submitted,



Hugh L. Proffitt
Cartographer

Norfolk, Virginia
19 May 1949

Approved and forwarded.



Earl O. Heaton
Supervisor, S.E. Dist.

RAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

• June 14, 1949

~~Division of Hydrography and Topography~~

Division of Charts: R. H. Carstens

Plane of reference approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 7714

Locality Chickahominy River, James River, Virginia

Chief of Party: L. C. Johnson in 1946-47
Plane of reference is mean low water, reading
2.1 ft. on tide staff at Shipyard Landing
10.6 ft. below B. M. 1 (1946)

1.8 ft. on tide staff at Lanexa
25.3 ft. below B. M. Q262 (1942)

Heights of mean high water above plane of reference is as follows:

Shipyard Landing = 2.2 feet
Lanexa = 2.6 feet

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division of Tides and Currents.~~

GEOGRAPHIC NAMES

Survey No. H-7714

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
<u>Virginia</u>										USGB	1
<u>Chickahominy River</u>											2
<u>Shields Point</u>											3
<u>Blacksump Creek</u>										USGB	4
<u>Yarmouth Creek</u>											5
<u>Shipyard Creek</u>											6
<u>Little Creek</u>											7
<u>Shipyard Landing</u>											8
<u>Parsons Creek</u>											9
<u>Old Neck Creek</u>											10
<u>Uncles Neck Creek</u>											11
<u>Hog Neck Creek</u>											12
<u>Watts Point</u>											13
<u>Big Marsh Point</u>											14
<u>Diascund Creek</u>											15
											16
											17
											18
											19
<u>Lenexa</u>											20
											21
											22
											23
											24
											25
											26
											27
											M 234

Names underlined in red are approved.

6-13-49

L. Heck

(location of one tide gage)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7714

Records accompanying survey:

Boat sheets ¹...; sounding vols. ⁵....; wire drag vols.;
 bomb vols.; graphic recorder rolls ⁷ enyel.
 special reports, etc.

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

Number of positions on sheet			.1107.
Number of positions checked			...47.
Number of positions revised			...2.
Number of soundings revised (refers to depth only)			...6.
Number of soundings erroneously spaced			...5.
Number of signals erroneously plotted or transferred			...0.
Topographic details	Time		...8.
Junctions	Time		...5.
Verification of soundings from graphic record	Time		...15.
Verification by <i>Luigi Beskine</i>			35
Verification by <i>Robert C. Richard</i>	Total time	151...	Date 8/12/49
Reviewed by <i>Luigi Beskine</i>	Time	62	Date 10-20-49

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7714

FIELD NO. WA-1146

Virginia, Chickahominy River, Shields Pt. to Big Marsh Pt.
Surveyed in Dec. 1946 - Jan. 1947 Scale 1:10,000
Project No. CS-255

Soundings:

808-J Fathometer
Sounding Pole

Control:

Sextant fixes on shore signals

Chief of Party - L. C. Johnson
Surveyed by - L. C. Johnson and C. A. Chenworth
Protracted by - S. M. Tarkington
Soundings plotted by - S. M. Tarkington
Verified and inked by - R. C. Richard
Reviewed by - I. M. Zeskind, October 20, 1949
Inspected by - R. H. Carstens

1. Shoreline and Signals

The source of the shoreline and signals is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement.

3. Bottom Configuration and Depth Curves

The depth curves north of lat. $76^{\circ} 22.5'$ are not adequately delineated in some places by the sparse development in this part of the present survey. South of this latitude the depth curves are adequately delineated except inshore where development to the low-water line was not accomplished because of trees and the small range of tide over the mud shoals.

This is a survey of a winding river which has many creek tributaries. A natural channel flanked by shoals and steep-to banks extends throughout the surveyed area. Depths along the axis of the channel range from a least depth of about 9 ft. to a depth as great as 59 ft. in some of the channel deeps.

4. Junctions with Contemporary Surveys

An adequate junction was made with H-7021 (1944) on the south.

The project survey on the north is not registered at the present time.

5. Comparison with Prior Surveys

H-1225a (1873-74), 1:20,000

H-1225b (1875) , 1:20,000

A comparison between the prior and present surveys reveals that a number of changes in the bottom have occurred principally in the deeps at the bends of the river and in several inshore areas. In lat. $37^{\circ} 21.32'$, long. $76^{\circ} 54.91'$, there are present depths of 14-24 ft. where the prior depth was 39 ft. The islands shown on the present survey in lat. $37^{\circ} 21.1'$, long. $76^{\circ} 54.4'$, has increased to about 4 times the size shown on the prior survey. Examples of changes in shoreline occur in the vicinity of lat. $37^{\circ} 20.7'$, long. $76^{\circ} 52.55'$, where the present shoreline has accreted about 180 meters, and in the vicinity of lat. $37^{\circ} 20.95'$, long. $76^{\circ} 52.7'$, where the present shoreline has eroded about 50 meters.

The following discrepancies in depths are specifically noted:

- (1) The 27-ft. sounding charted in lat. $37^{\circ} 20.95'$, long. $76^{\circ} 52.80'$, from H-1225a, should be disregarded. This sounding is considered displaced and should actually fall about 35 meters eastward where comparable depths occur on the present survey.
- (2) The 4-ft. sounding charted in lat. $37^{\circ} 22.40'$, long. $76^{\circ} 56.00'$, from H-1225b falls in present depths of 14-15 ft. and should be disregarded. This sounding is considered displaced and should actually fall about 70 meters westward where comparable depths occur on the present survey.

Numerous bottom characteristics together with one sounding have been carried forward in those areas where no apparent change has occurred. The present survey with these additions is adequate to supersede these prior surveys within the common area, except

north of lat. $37^{\circ} 22.5'$, where the present survey is still incomplete.

6. Comparison with Chart 530 (Latest print date 5/23/49)

A. Hydrography

The charted hydrography originates principally with the previously discussed surveys supplemented by several critical soundings from the present survey before verification.

Except in the area north of lat. $37^{\circ} 22.5'$, which is not completely surveyed, the present survey supersedes the charted hydrography.

B. Aids to Navigation

The present positions of aids to navigation differ from the charted positions by as much as 200 meters, but still adequately mark the features intended. No new dangers were revealed by the present survey.

7. Condition of Survey

- (a) The field plotting was accurately done.
- (b) The sounding records and Descriptive Report are complete and comprehensive.
- (c) As noted in the Descriptive Report the area north of lat. $37^{\circ} 22.5'$, is not completely surveyed.
- (d) No descriptions could be found for the following signals which fall outside of the low-water line: SAG, PLY, GAG, CAB, DAY and ALP. They are assumed to be temporary signals.
- (e) Development in the vicinity of the 6-ft. sounding in lat. $37^{\circ} 22.39'$, long. $76^{\circ} 53.88'$, is not adequate to disprove the sounding. The 6-ft. sounding which falls in present depths of 10-14 ft. has, therefore, been carried forward on the present survey.

8. Compliance with the Project Instructions


The present survey adequately complies with the project instructions, except as noted in paragraph 7c, d and e above.

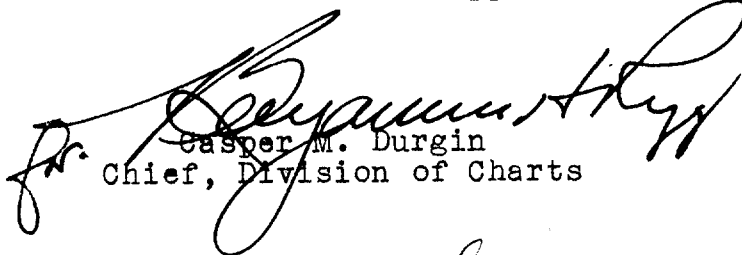
9. Additional Field Work Recommended

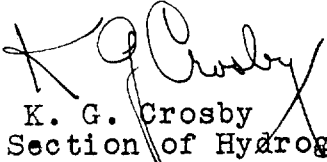
This survey is considered to be basic for the area lying south of lat. $37^{\circ} 22.5'$, except as noted in paragraph 7e above. The area lying north of this latitude is not completely surveyed. It is recommended that the following additional work be accomplished:


- (a) Additional sounding lines be run in the unsurveyed area in the vicinity of lat. $37^{\circ} 22.5'$, long. $76^{\circ} 54.2'$.
- (b) Diascund Creek be surveyed.
- (c) Additional sounding lines be run on the east side of the river north of lat. $37^{\circ} 22.9'$.
- (e) The 6-ft. prior sounding in lat. $37^{\circ} 22.9'$, long. $76^{\circ} 53.88'$ in 7(e) above be either verified or disproved.

Examined and approved:


H. R. Edmonston
Chief, Nautical Chart Branch


Casper M. Durgin
Chief, Division of Charts


K. G. Crosby
Chief, Section of Hydrography


W. M. Scaife
Chief, Division of Coastal Surveys

