

7957

Diag. Cht. Nos. 78-3 & 1222-3

CS-350

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. Co-1652 Office No. H-7957

LOCALITY

State VIRGINIA

General locality MOBJACK BAY

Locality NORTH AND EAST RIVERS

19 52

CHIEF OF PARTY

JOHN H. BRITTAIN

LIBRARY & ARCHIVES

DATE OCT 29 1953

1667

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-7957

Field No. CO-1652

State VIRGINIA ✓

General locality ~~CHESAPEAKE BAY~~ MOBJACK ✓

Locality ~~MOBJACK BAY~~ NORTH AND EAST RIVERS ✓

Scale 1:10,000 ✓ Date of survey 14 Aug.-14 Oct. 1952 ✓

Instructions dated 13 March 1952 ✓

Vessel Ship COWIE ✓

Chief of party J. H. Brittain, ✓

Surveyed by ~~Ship's Officers~~ R. M. Borst & R. A. Parker ✓

Soundings taken by fathometer, ^{Port, 808} ~~graphic recorder~~, hand lead, ~~wire~~ pole ✓

Fathograms scaled by Ships Personnel ✓

Fathograms checked by Ships Personnel ✓

Protracted by A. Kaupa ✓

Soundings penciled by A. Kaupa ✓

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~ and are true depths ✓

REMARKS: This survey was smooth plotted in the Hydrographic Section of the Norfolk processing Office.

788

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET H-7957, FIELD NO. CO-1652

MOBJACK BAY

CHESAPEAKE BAY

SCALE 1:10,000

SHIP COWIE

J. H. BRITAIN, COMDG.

A - PROJECT:

Project CS-350; Original Instructions dated 13 March 1952. ✓

B - SURVEY LIMITS AND DATES:

The area covered by this survey is the northwestern end of Mob-jack Bay, East River and the lower half of North River. Junction is made with ^{H-7956}CO-1552 (1952) to the west, with ^{H-7955}CO-1452 (1952) to the south and with ⁷CO-1652 (1952) to the ^{SOUTH}east. Hydrographic surveys began on 14 ^{H-7958}August 1952 and were conducted at intermittent intervals through 14 October 1952. ✓

C - VESSELS AND EQUIPMENT:

Thirty-foot launch no. 102 and 25 foot hydrographic skiff no. 737 were used, both boats operating from the Ship COWIE. Launch no. 102 using 808 type fathometer #63 was used where the depth was 6 feet or over in unconfined areas. Skiff no. 737 powered by two outboard motors using 808 type fathometer #118, pole and leadline for sounding was used in shoal areas close to shore and in creeks and inlets where the depths were not sufficient for launch operation. ✓

D - TIDE AND CURRENT STATIONS:

A portable automatic tide gage was maintained at Mobjack, East River during the entire part of this survey. Tide gage records and all soundings are on Eastern Standard Time. No current stations were observed in this area of this project.

E - SMOOTH SHEET:

Projections will be constructed and sheets plotted by the Norfolk Processing Office.

F - CONTROL STATIONS:

1. The following triangulation stations were recovered and used:

<u>A</u>	<u>HYDROGRAPHIC NAME</u>	<u>NAME</u>	<u>HYDROGRAPHIC NAME</u>	<u>NAME</u>
ACK	- Black (VFC),	1936-44.	LON	- Lone (VFC), 1936-44.
ALM	- Alma (VFC),	1937-44.	LOW	- Lower (VFC), 1936-44.
ARM	- Armistead (VFC),	1937-44.	MAC	- McElroy (VFC), 1937-44.
ASK	- East (VFC),	1936-44.	MIL	- Miles (VFC), 1937-44.
BOY	- Old (VFC),	1936-44.	NOR	- NORTH R.M. (V.F.C.), 1930-36
DAR	- Cedar (VFC),	1936-44.	PIT	- Spit (VFC), 1936-44.
EAST	- East (VFC),	1936-44.	RAN	- Raines (VFC), 1937-44.
GAR	- Garnett (VFC),	1937-44.	REED	- Reed (VFC), 1936-44.
HAZ	- Hazel (VFC),	1937-44.	SIM	- Persimmon (VFC), 1936-44.
HUGH	- Hughes (VFC),	1937-44.	TOM	- Thomas (VFC), 1937-44.
INK	- Nat (VFC),	1937-44.	WAR	- Ware (VFC), 1937-44.
			WARE	- Ware (VFC), 1930-44.
			WES	- West (VFC), 1936-44.

F - CONTROL STATIONS: (CON'T.)

2. Topographic stations were taken from the following air photo manuscripts:

ABE - RS-431	CUE - RS-432	FEZ - RS-432	IDA - RS-433
ACE - 433	CUR - 431	FIX - 432	IRK - 434
ANN - 432	CUT - 432	FLY - 431	JAP - 433
ANT - 432	DAD - 431	FOE - 432	JAR - 431
APT - 434	DAN - 431	FOP - 430	JAY - 433
ARE - 431	DAR - 434	FRO - 432	JIB - 432
AVA - 432	DAW - 432	FRY - 432	JIM - 434
AXE - 432	DAY - 434	GAB - 431	JOB - 430
BAB - 432	DEB - 430	GEM - 432	JOY - 432
BAD - 431	DER - 432	GET - 431	JUG - 432
BAG - 431	DIM - 431	GIN - 430	KAY - 431
BED - 434	DIX - 431	GOB - 431	KEN - 432
BOA - 432	DOL - 432	GOO - 431	KEP - 433
BOB - 431	EBB - 431	GUM - 431	KEY - 434
BUG - 431	EEL - 432	GUS - 432	KIN - 431
BUM - 432	EGO - 431	GUT - 431	LAG - 431
BUS - 430	ELF - 430	HAT - 432	LAP - 432
BUT - 431	END - 431	HAY - 432	LIP - 432
CAD - 431	ERG - 432	HIM - 431	LIT - 432
CAR - 431	EVA - 431	HOD - 431	LE ^o - 434
CAM - 430	EVE - 431	HOE - 431	LET - 432
CAW - 434	FAG - 431	HOP - 431	LOG - 431
CON - 432	FAR - 431	HOW - 430	LOP - 432
	FAY - 431	HUB - 432	

F - CONTROL STATIONS: (CON'T.)

MAD - RS-432	PIT - RS-432	SOL - RS-432
MAR - 432	PLY - 430	TAG - 432
MOO - 431	PON - 434	TAN - 432
MO P - 432	PUL - 434	TAR - 431
MOT - 432	PUP - 432	TAP - 433
MUG - 432	RAM - 429	TIP - 433
MUM - 430	RED - 434	TIT - 429
NAP - 431	REV - 432	TON - 432
NIL - 430	RID - 432	TOP - 432
NIX - 434	RIM - 432	TUB - 431
NOR - 431	RIV - 433	USE - 433
NOT - 433	ROD - 433	VAN - 429
NOW - 431	RON - 43 2 ⁴	VIA - 432
NUT - 432	ROT - 43 2 ²	WAS - 432
ODE - 431	RUB - 430	WAX - 431
OLD - 434	SAL - 433	WAY - 431
ONE - 431	SEV - 433	WED - 432
OUT - 432	SHO - 433	WEE - 432
OWL - 434	SIC - 432	WIG - 433
PAL - 432	SIP - 432	WIN - 432
PAT - 432	SIR - 429	WIT - 432
PAW - 432	SIS - 432	YAM - 432
PEA - 433	SIT - 430	YES - 433
	SKY - 432	ZAG - 433

G - SHORELINE AND TOPOGRAPHY:

The shoreline on the boat sheet was transferred from air photo manuscripts RS-429 through RS-434 which cover this area. The air photos were taken recently and the shoreline on the manuscripts is correct. All of the topographic signals were radial plotted from the air photos on the manuscripts and then transferred directly to the boat sheet.

It was not practical to define the entire low water line by soundings due to the small range of tide and the attendant difficulty of getting the sounding vessel close to the beach without long periods spent dragging bottom or going aground. However, the sounding lines were run close to and parallel to the beach wherever possible.

H - SOUNDINGS:

Depths were measured with 808 type recording fathometer, handlead and pole. Bar checks were taken daily from the launch and skiff to depths where satisfactory results could be obtained. Fathometer corrections have been determined from the bar checks and entered in the sounding volumes by the field party. The leadline was checked daily with no corrections found.

A check on the boat sheets of the overlap between fathometer, leadline and pole shows no more than 1 foot differences.

I - CONTROL OF HYDROGRAPHY:

Sounding lines were controlled by three point fixes using natural objects or signals erected along the shoreline. Satisfactory results were obtained from using these signals.

J - ADEQUACY OF SURVEY:

The survey is considered complete, adequate for charting purposes and to supersede^s all prior surveys. Junctions with adjoining surveys are satisfactory, no holidays exist and depth curves can be adequately drawn at the junctions. ✓

K - CROSSLINES:

Crosslines are in good agreement, the percentage is estimated at 10 percent. ✓

L-M - COMPARISON WITH PRIOR SURVEYS:

A comparison with Chart 494 shows the following:

1. The wreck (no. 15, preliminary review) in East River across from Williams Wharf was found still in existence. ✓ ✓

2. A wreck was found toward the head of East River at Lat. $37^{\circ}26.48'$; Long. $76^{\circ}21.49'$ in about 3 feet of water. About Three feet of the wreck shows above MHW. ✓ ✓

3. The 18 foot sounding ^{in ϕ $37^{\circ}22.23'$ λ $76^{\circ}20.58'$} (no. 1, preliminary review) was searched for but not found. The controlling depth in this area was 22 feet and is assumed to have been a misplaced sounding. ✓ *Review, par. 5.*

4. The markers (no. 15, preliminary review) were found as plotted on the chart. ✓

5. The 1 foot sounding circled on preliminary review at Lat. $37^{\circ}25.50'$; Long. $76^{\circ}24.25'$ ^{$45'$} was found ^{about 100 meters west} as charted, but there is a small unmarked channel into the creek. ✓

6. The 18 foot sounding circled on the preliminary review at Lat. $37^{\circ}20.85'$; Long. $76^{\circ}22.55'$ ^{$22.55'$} was developed, but a minimum of 21 feet was found. ✓ *Review, par. 5.*

L-M - COMPARISON WITH PRIOR SURVEYS: (CON'T.)

7. A wreck with just the stem above MLW was found at Lat. $37^{\circ}22.4\overset{2}{3}'$; Long. $76^{\circ}20.92'$. This stem is used to mark the channel which is used by local fishermen.

In general there seems to be little change between the present survey and the chart and previous surveys.

N - DANGERS AND SHOALS:

No evidence of dangers or shoals were found in the channels, except for small markers bounding oyster grounds. Crab and fish nets are spotted along the shorelines, but they are temporary. No other important dangers or shoals not already shown on Chart 494 were found in the area covered by this survey.

O - COAST PILOT INFORMATION:

This information is covered in a separate report by the Commanding Officer, Ship COWIE.

P - AIDS TO NAVIGATION:

Sextant fixes were obtained at floating aids. Positions of fixed aids were obtained by air photo processes.

1. Spit buoy "1" (Lat. $37^{\circ}23.66'$; Long. $76^{\circ}24.33'$) in 22 feet of water.

2. North and Ware Rivers Junction Buoy (Lat. $37^{\circ}21.65'$; Long. $76^{\circ}23.50'$) in 17 feet of water.

Q - LANDMARKS FOR CHARTS:

No new landmarks for charts are recommended for the area covered by this survey.

R - GEOGRAPHIC NAMES:

Geographic names shown on Chart 494 for this area are adequate and no additional names are recommended. ✓

U-Y - MISCELLANEOUS:

In featureless shoal areas, soundings were spaced every 30 seconds apart on the boat sheet. Intermediate soundings were plotted only when needed to define underwater features. ✓

Z - TABULATION OF APPLICABLE DATA:

The Coast Pilot Report has been forwarded to the Washington Office. A list of signals is attached in Volume I of the sounding records. A tabulation of other data is attached. ✓

Respectfully submitted,

Robert M. Borst

Robert M. Borst,
Ensign, USC&GS,
Ship COWIE.

Approved and Forwarded:

J. H. Brittain
J. H. Brittain,
Comdr., USC&GS,
Comdg. Ship COWIE.

LAUNCH NO. 102:

<u>VOL. NO.</u>	<u>DATE</u>	<u>DAY</u>	<u>NO. OF POSITIONS</u>	<u>STAT. MILES</u>
I	9/23	a	198	33.0
I & II	9/25	b	203	40.0
II	9/26	c	98	18.6
III	10/2	d	200	33.8
III	10/3	e	27	4.9
IV	10/7	f	99	14.3
IV	10/8	g	157	27.6
IV	10/10	h	8	0.6
V	10/14	j	<u>35</u>	<u>4.1</u>
TOTAL:			1025	176.9

SKIFF NO. 737:

VI	8/14	a	77	14.3
VI	8/15	b	97	15.7
VI	8/18	c	73	11.5
VII	8/19	d	192	28.9
VI & VIII	8/20	e	197	29.0
VII	8/21	f	184	26.4
IX	8/26	g	137	19.5
IX & X	8/27	h	215	28.3
X	8/28	j	157	20.7
X	8/29	k	66	6.9
XI	9/23	l	20	2.9
XI	9/24	m	175	25.8
XI	9/25	n	12	1.7
XI & XII	10/1	p	<u>131</u>	<u>20.7</u>
TOTAL:			1733	252.3
GRAND TOTALS:			2758	429.2

TOTAL AREA: 15.0 Sq. Miles.

TIDE NOTE

A portable automatic tide gage at Mobjack, East River, Lat. 37°22'27"; Long. 76°20'45"; was used for obtaining tide reducers for this survey. Height of MLW was 4.6 feet above zero of tide staff at this gage.

FATHOMETER CORRECTIONS: (LAUNCH NO. 102)

"a" day - 23 Sep't. 1952 - Fathometer 808 - No. 63.

A - SCALE

/ 0.4 to 6.0 ft.

/ 0.2 to 8.5

0.0 to 15.0

- 0.2 to 25.0

- 0.4 to 35.0

- 0.6 to ----

"b" day - 25 Sep't. 1952 - Fathometer 808 - No. 63.

A - SCALE

0.0 to 13.0 ft.

- 0.2 to 20.0

- 0.4 to 26.0

- 0.6 to 33.0

- 0.8 to 39.0

- 1.0 to 46.0

- 1.2 to ----

"c" day - 26 Sep't. 1952 - Fathometer 808 - No. 63.

A - SCALE

/ 0.2 to 7.5 ft.

0.0 to 18.0

- 0.2 to 25.0

- 0.4 to 30.5

- 0.6 to 35.5

- 0.8 to 40.5

- 1.0 to ----

FATHOMETER CORRECTIONS: (CON'T.) (LAUNCH NO. 102)

"d" day - 2 October 1952 - Fathometer 808 - No. 63.

A - SCALE

0.0 to 20.0 ft.

-0.2 to 40.0

-0.4 to ----

"e" day - 3 October 1952 - Fathometer 808 - No. 63.

A - SCALE

/ 0.2 to 7.0 ft.

0.0 to 13.5

- 0.2 to 20.5

- 0.4 to 40.0

- 0.6 to ----

"f" day - 7 October 1952 - Fathometer 808 - No. 63.

A - SCALE

/ 0.2 to 7.0 ft.

0.0 to ----

"g" day - 8 October 1952 - Fathometer 808 - No. 63.

A - SCALE
0.0 to 20.0 ft.

- 0.2 to 25.0

- 0.4 to 30.5

- 0.6 to 36.0

- 0.8 to 41.5

- 1.0 to ----

"h" day - 10 October 1952 - Fathometer 808 - No. 63.

A - SCALE
0.0 to 13.5 ft.

- 0.2 to 20.3

- 0.4 to ----

FATHOMETER CORRECTIONS: (CON'T.) (LAUNCH NO. 102)"j" day - 14 October 1952 - Fathometer 808 - No. 63.A - SCALE

0.0 to 15.0 ft.

- 0.2 to 22.5

- 0.4 to 28.0

- 0.6 to 33.5

- 0.8 to 39.0

- 1.0 to ----

(SKIFF NO. 737)

"g" - 26 August 1952 - Fathometer 808 - No. 118 -A - SCALE

0.0 to 13.5 ft.

- 0.2 to 20.0

- 0.4 to 27.0

- 0.6 to ----

E I N O

FLOATING AIDS TO NAVIGATION

H-7957

<u>1952 LIGHT LIST</u>	<u>LAT.</u>	<u>LONG.</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
North And Ware Rivers Junction Buoy	37-21.65	76-23.50	16	33c	7/26/52
Spit Buoy 1	37-23.67	76-24.53	15	132p	10/ 1/52
Ware Pt. Shoal Buoy 2	37-21.75	76-25.06	8	76d	8/19/52
Pultz Bar Buoy 2	37-21.58	76-20.77	11	195e	8/20/52

UNOFFICIAL AIDS

B & W Spar Buoy	37-21.35	76-22.01	22	173a	9/23/52
B & W Spar Buoy	37-22.43	76-23.58	19	1h	10/10/52
B & W Spar Buoy	37-20.38	76-22.23	21	4f	10/ 7/52
B & W Spar Buoy	37-20.49	76-22.55	19	83f	10/ 7/52
B & W Spar Buoy	37-21.35	76-24.92	21	74d	8/19/52

NOTE: Most of these buoys were plotted on references from sounding lines.

LIST OF SIGNALS
H-7957

TRIANGULATION STATIONS

ACK	BLACK (VFC), 1936-44	MAC	MCELROY (VFC), 1937-44
ALM	ALMA (VFC), 1937-44	MIL	MILES (VFC), 1937-44
ARM	ARMISTEAD (VFC), 1937-44	NOR	NORTH R.M. (VFC), 1930-36
ASK	EAST (VFC), 1936-44	PIT	SPIT (VFC), 1936-44
BOY	OLD (VFC), 1936-44	RAN	RAINES (VFC), 1937-44
DAR	CEDAR (VFC), 1936-44	REED	REED (VFC), 1936-44
EAST	EAST (VFC), 1936-44	SIM	PERSIMMON (VFC), 1936-44
GAR	GARNETT (VFC), 1937-44	TOM	THOMAS (VFC), 1937-44
HAZ	HAZEL (VFC), 1937-44	WAR	WARE (VFC), 1937-44
HUGH	HUGHES (VFC), 1937-44	WARE	WARE (VFC), 1930-44
INK	NAT (VFC), 1937-44	WES	WEST (VFC), 1936-44
LON	LONE (VFC), 1936-44		
LOW	LOWER (VFC), 1936-44		

TOPOGRAPHIC STATIONS Source RS-429

Sir Tit Top Van Ram

Source RS-430

Bus Cam Deb Fop Gin Job Mum Nil Ply Rub Sit

Source RS-431

Abe	Are	Bad	Bag	Bob	Bug	But	Cad	Car	Cur	Dad
Dan	Dim	Dix	Ebb	Ego	End	Eva	Eve	Box Fag	Far	Far
Fay	Fly	Gab	Get	Gob	Goo	Gum	Gut	Him	Hod	Hoe
Hop	Jar	Kay	Kin	Lag	Log	Moo	Nap	Now	Ode	One
Tar	Tub	Wax	Way							

Source RS-432

Ann	Art	Ava	Axe	Bab	Boa	Bum	Con	Cue	Cut	Daw
Der	Dol	Eel	Erg	Fez	Fix	Foe	Fro	Fry	Gem	Gus
Hat	Hay	Hub	Jib	Joy	Jug	Ken	Lap	Lip	Lit	Let
Lop	Mad	Mar	Mop	Mot	Mug	Nut	Out	Pal	Pat	Paw
Pit	Pup	Rev	Rid	Rim	Rot	Sic	Sip	Sis	Sky	Sol
Tag	Tan	Ton	Top	Via	Was	Wed	Wee	Win	Wit	Yam

Source RS-433

Ace	Ida	Jap	Jay	Kep	Not	Pea	Riv	Rod	Sal	Sev
Sho	Tap	Tip	Use	Wig	Yes	Zag				

Source RS-434

Apt	Bed	Caw	Dar	Day	Irk	Jim	Key	Leo	Nix	Old
Owl	Pon	Pul	Red	Ron						

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-7957 (Field No. Co-1652)

GENERAL

No Unusual difficulties were experienced during the smooth plot of this survey.

COMPARISON WITH CHART 494

Lat. 37-21.30 Long. 76-23.25 Charted 12' sounding was not found on this survey. ✓ *chart 14 ft. from present survey* ✓

Lat. 37-20.85 Long. 76-24.00 Two detached 18' soundings charted in this area were not found on this survey. *Review, par. 5.*

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer.

Norfolk, Va.
27 October 1953

Approved & Forwarded:

Roswell C. Bolstad
Roswell C. Bolstad
Supervisor, S.E. Dist.

GEOGRAPHIC NAMES

Survey No. H-7957

#1

Name on Survey

	A	B	C	D	E	F	G	H	K	
	On Chart No.	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		
✓ Virginia									B.G.N.	1
✓ Nobjack Bay									.	2
✓ North River										3
✓ East River										4
										5
✓ Page Creek										6
✓ Ware River									B.G.N.	7
✓ Ware Neck Point										8
✓ Silver Creek										9
✓ Davis Creek										10
✓ Lone Point ✓										11
✓ Blackwater Creek										12
✓ Hampton Creek ✓										13
✓ Greenmansion Cove										14
✓ Oakland Creek ✓										15
✓ Raymond Creek ✓										16
✓ Sidley Creek ✓										17
✓ Sates Creek ✓										18
✓ Diggs Creek ✓										19
✓ Godsey Creek ✓										20
✓ Minter Point ✓										21
✓ Whites Creek ✓										22
✓ Nobjack ✓										23
✓ Thomas Creek ✓										24
✓ Raines Creek ✓										25
✓ Miles Creek ✓										26
✓ Woods Creek ✓										27

(position here correct)

(hide station)

GEOGRAPHIC NAMES

Survey No. H-7957

#2

Name on Survey

	A	B	C	D	E	F	G	H	K	
	On Chart No.	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>Put in Creek</u> ✓									B.M.	1
<u>Williams Wharf</u> ✓									"	2
<u>Weston Creek</u> ✓										3
<u>Tabbs Creek</u>										4
<u>West Landing Creek</u> ✓										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red are approved
11-5-53. L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ~~H-7957~~.

Records accompanying survey:

Boat sheets ~~..1..~~; sounding vols. ~~..12..~~; wire drag vols.;
 bomb vols.; graphic recorder rolls ~~8~~ Env.;
 special reports, etc. ~~1 Smooth Sheet; 1 Descriptive Report;~~

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

Number of positions on sheet
Number of positions checked	12...300
Number of positions revised	2...1
Number of soundings revised (refers to depth only)	4...-
Number of soundings erroneously spaced	0...41
Number of signals erroneously plotted or transferred	1...7
Topographic details	Time
Junctions (<i>Incorporation of</i>)	Time 2.....
Verification of soundings from graphic record	Time 4...8.

Prelim. Verification - J.A. Dinsmore - - - 61 5-5-54
 Verification by *Karl E. Hanson*... Total time *7.9*. Date *8-3-56*

Reviewed by *J.A. Dinsmore*..... Time *33*..... Date *5-20-54*

Depth Curves and Junctions by: *J.A. Dinsmore* - 32 hrs. - 6-3-57
 Review Addendum by: *J.A. Dinsmore* - 2 hrs. - 6-3-57

DIVISION OF CHARTS
REVIEW SECTION - NAUTICAL CHART BRANCH
REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7957

FIELD NO. CO-1652

Virginia, Mobjack Bay, North and East Rivers

Project No. CS-350

Surveyed - Aug. - Oct. 1952

Scale 1:10,000

Soundings:

Control:

808 Fathometer
Hand lead
Pole

Sextant fixes on
shore signals

Chief of Party - J. H. Brittain
Surveyed by - R. M. Borst and R. A. Parker
Protracted by - A. Kaupa
Soundings plotted by - A. Kaupa
Preliminary Verification by - T. A. Dinsmore
Verified and inked by -
Reviewed by - T. A. Dinsmore 20 May 1954
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline and signals originate with the unreviewed manuscripts of air-photographic survey revision sheets RS-429, 430, 431, 432, 433 and 434 of 1951.

2. Sounding Line Crossings

Depths at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. The low-water curve was determined where practicable.

Although much of the bottom is smooth and undulating, abrupt changes in depths occur in several localities. This is particularly exemplified in lat. $37^{\circ}23.67'$, long $76^{\circ}24.34'$, where depths drop sharply from 2 to 35 ft. in about 50 meters and in lat. $37^{\circ}22.15'$, long. $76^{\circ}23.60'$, where depths of 3 and 30 ft. fall in juxtaposition. Prominent sand spits extending far offshore constrict the river channels in many localities.

4. Junctions with Contemporary Surveys

The present survey junctions adequately with the following surveys:

H-7958 (1952) on the southeast
H-7955 (1952) on the south
H-7956 (1952) on the west

The transfer of junctional soundings is deferred pending the complete verification of the above and present surveys at which time a further inspection of the junctions will be made.

5. Comparison with Prior Surveys

H-446 (1854) 1:40,000
H-984 (1868) 1:20,000
H-3288 (1911) 1:20,000

These prior surveys covered the area of the present survey during the periods indicated. A comparison of the prior and present depths reveals only minor differences of 1-2 ft. The prior surveys did not cover the inshore areas nor develop the creek channels.

Specific comment is made of the following discrepancies:

The 18-ft. sounding in lat. $37^{\circ}22.23'$, long. $76^{\circ}20.58'$, on H-3288 should be disregarded. Falling in depths of 22-23 ft. on both the prior and present surveys, the unsupported 18-ft. sounding is disproved by the present development. The prior sounding is considered to be out of position and should actually fall on the slope about 100 meters westward where comparable depths were obtained on the present survey.

The 18-ft. unsupported sounding in lat. $37^{\circ}20.84'$, long. $76^{\circ}22.57'$, on H-3288 should be disregarded. Falling in present depths of 21 ft., the prior 18-ft. sounding is disproved by close development on the present survey. The prior sounding is considered to be in error.

In undeveloped areas where no bottom changes are apparent, supplemental soundings have been carried forward to the present survey from the prior surveys. Numerous bottom characteristics have also been retained from the prior surveys. With these additions, the present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 494 (Reconstr. Drawing of 1954)

A. Hydrography

Charted hydrography originates with the present survey prior to verification and review. No discrepancies are noted at this time. After the present survey has been completely verified, a further comparison with the chart will be made.

B. Aids to Navigation

The charted aids are in substantial agreement with the aids located on the present survey and adequately mark the features intended.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The preliminary verification and inspection indicates that the smooth plotting was generally accurate.
- c. The preliminary verification of the survey was confined to sounding-line crossings and unnatural bottom configuration. A pattern of sounding lines covering the general area has been verified and inked. Completion of the verification and inking is deferred until some future date at which time the shoreline will be checked and a further inspection of the depth curves will be made.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional field work is requested. As a matter of record, it is noted that several piers and pier ruins charted from prior surveys were not investigated in the field nor disposed of by the hydrographer.

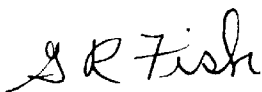
Examined and Approved:



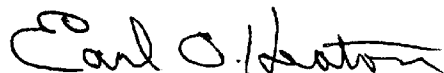
H. R. Edmonston
Chief, Nautical Chart Branch



H. Arnold Karo
Chief, Division of Charts



G. R. Fish
Chief, Section of Hydrography



Earl O. Heaton
Chief, Division of Coastal Surveys

Addendum to Review

H-7957 (1952)

Inked by - P. G. Harrison
Review Addendum by - T. A. Dinsmore 6/3/57
Inspected by - R. H. Carstens

The verification and inking of this survey sheet is now complete.

Junctions with Contemporary Surveys

Adequate junctions were effected with H-7958 (1952) on the southeast and H-7956 (1952) on the west. The transfer of junctional soundings with H-7955 (1952) on the south is deferred pending the complete verification of that survey.

Comparison with Chart 494 (Latest print date 7/9/56)

Charted hydrography originates with the present survey after preliminary verification and review. No discrepancies are noted. Numerous piling not disproved by the present survey are adequately charted from 1942-45 topographic surveys.

Condition of Survey

Completion of the verification reveals that the smooth plotting was accurately done, except that where zigzag sounding lines were run, allowance for changes in speed of the boat on the turns was not adequately made in smooth plotting

Approved:



Chief, Chart Division

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

4 November 1953

Division of Charts: R. H. Carstens

Plane of reference approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 7957

Locality Chesapeake Bay, Virginia

Chief of Party: J. H. Brittain in 1952
Plane of reference is mean low water, reading
4.6 ft. on tide staff at East River, Mobjack Bay
5.0 ft. below B. M. 1 (1952)

Height of mean high water above plane of reference is 2.4 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section of Tides

Chief, Division of Tides and Currents.

