

6812

Diag'd. on diag. ch. No. 78-2

<p>Form 504</p> <p>U. S. COAST AND GEODETIC SURVEY</p> <p>DEPARTMENT OF COMMERCE</p> <p>DESCRIPTIVE REPORT</p>	
<p>Type of Survey <u>HYDROGRAPHIC</u></p>	
<p>Field No. <u>1142</u> Office No. <u>H-6812</u></p>	
<p>LOCALITY</p>	
<p>State <u>Virginia</u></p>	
<p>General locality <u>James River</u></p>	
<p>Locality <u>Newport News</u></p>	
<p><u>194 3</u></p> <p>CHIEF OF PARTY</p> <p><u>J. Bowie</u></p>	
<p>LIBRARY & ARCHIVES</p>	
<p>DATE</p>	

6812

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-6812

Field No. 1142

State VIRGINIA

General locality JAMES RIVER

Locality NEWPORT NEWS

Scale 1:10,000 Date of survey Dec. 1942 - Jan. 1943

Instructions dated November 17, 1942

Vessel GILBERT

Chief of party J. Bowie Jr.

Surveyed by Ship's Officers

Soundings taken by ~~hydrographer~~, graphic recorder, ~~hydrographer~~

Protracted by M. J. Langley and L. E. Klinefelter

Soundings penciled by M. J. Langley

Soundings in ~~athouse~~ feet at MLW ~~athouse~~

REMARKS: This sheet was processed at the Norfolk Processing Office

116812

PRELIMINARY DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 6812 (office)
1142 (Field)

JAMES RIVER, OFF NEWPORT NEWS, VIRGINIA

PROJECT CS 255

M. V. GILBERT - JOHN BOWIE, JR., COMDG.

December, 1942 - January, 1943

Soundings in feet at M.L.W.

AUTHORITY:

The work done on this sheet was done in accordance with Amended Instructions, Project CS - 255, dated November 17, 1942. ✓

PURPOSE:

The resurvey of the James River and tributaries. ✓

CONTROL:

The control consisted of recovered triangulation stations, supplemented where necessary by signals located by topography. While the work was in progress, air photo compilations were received for this area and additional signals in the vicinity of Newport News, Virginia were identified and used. ✓

H6812

SURVEY METHODS:

Standard survey methods were followed. The 808A Portable Depth Recorder in Launch # 75 was used throughout. The soundings were scaled and recorded to the nearest 1/2 foot. Bar tests were made three times daily and any resulting corrections applied in the record book. Tides were reduced to M.L.W. and entered to the nearest half foot.

JUNCTIONS:

H-6596 This sheet joins Sheet 400^{H-6729} (field), (1941^{A2}) and Sheet 400 (field), 1940 on the south. Work was suspended before complete junctions were made. Satisfactory junctions were made with Sheet 400^{H-6729} (field), 1941^{A2}. A slight discrepancy was noted where sounding lines crossed the work done in 1940. (Discrepancies satisfactorily resolved) The sheet extends from the junction with previous work on the South to the James River Bridge on the North, and includes all of the water area of the river, east and west.

GENERAL DISCUSSION:

This sheet was turned over to R. R. Moore on January 12, 1943 for completion, as the M.V. GILBERT was instructed to stop work on this project and undertake a new assignment. Inclement weather was encountered during most of the working season on this project.

Signal PIE, the southerly of two lamp posts near the end of coal pier was located by sextant cuts after it was found that the location given on the air photo sheet did not check.

H68-13

TIDAL DATA:

In accordance with paragraph 28 of original instructions dated October 11, 1940 an automatic tide gage was installed and maintained at Latitude 36° 58.45', Longitude 78° 26.01' ✓

M.L.W. corresponds to the 1.0 foot mark. This includes a correction of plus 0.4 feet as per Director's letter of January 26, 1942, reference 36-FLM. This computation was verified by Director's letter of January 2, 1943, reference 36-McC. ✓

STATISTICS (Preliminary Report)

<u>Date</u>	<u>Day Letter</u>	<u>Stat. Mi. Sound. Lines</u>	<u>No. of Position.</u>
Dec. 4	a	23.6	106
" 7	b	25.6	95
" 11	c	36.7	154
" 15	d	30.8	133
" 17	e	18.0	76
" 18	f	26.0	102
Jan. 6	g	19.6	97
" 7	h	<u>38.4</u>	<u>161</u>
TOTALS		218.7	924

Square Statute Miles..... 15.2
Soundings.....Continuous Profile

H6812

- FOX... .Whitewashed Bridge Pier
- GUT.Southern limit of elevated span. ✓
- HIP.Northern limit of elevated span.

Air Photo Stations:

- WICKBrick stack near Warwick Hotel
- IKEiSquare Brick Chimney
- CUP.Small cupola on end of C & O Pier No. 6.
- CIN.Large red brick stack on incinerator. ✓
- EDProminent Black Stack.
- CON.End of elevated coal ramp
- PIE.Southerly of two lamp posts near
end of coal pier (established by
sextant cuts.)

Respectfully submitted,

Lorne G. Taylor
 Lorne G. Taylor, Ensign, C&GS,
 U.S.C. & G.S.M.V. GILBERT.

Approved and forwarded:

John Bowie, Jr.
 John Bowie, Jr., Lt. Comdr., C&GS,
 Commanding Officer,
 M. V. GILBERT.

W6812

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Launch Hydrography
Launch HILGARD
Field No. F1142 Office No. H-6812

LOCALITY

State Virginia
General locality Newport News
Locality Area between Newport News S.B. Co.
and northerly to the James River Bridge.
Also flats along the western shore.

194 3

~~CHEF OF PARTY~~

Officer-in-Charge
Lieut. Comdr. R. R. Moore

LIBRARY & ARCHIVES

DATE

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-6812

Field No. 1142

State VIRGINIA

General locality JAMES RIVER

Locality NEWPORT NEWS

Scale 1:10,000 Date of survey Febr. 1943
Jan. 1942 - March 1943

Instructions dated November 17, 1942

Vessel Launch HILGARD

Chief of party R. R. Moore

Surveyed by R. R. Moore

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

Protracted by M. J. Langley and L. E. Klinefelter

Soundings penciled by M. J. Langley

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

REMARKS: This sheet was processed at the Norfolk Processing Office.

H6812

DESCRIPTIVE REPORT

to accompany
H-6812 (1942-43)
SHEET NO. F1142 - PROJECT H-255

LAUNCH HILGARD

This report supplements that of Lieut. Comdr. John Bowie, Jr. ✓
from whom this sheet was received.

A large portion of the work done by this party was near ✓
the flats along the western shore and in the area between the Newport
News SB Co. northerly to the James River Bridge.

Also included ^{was} the soundings in and around the docks ✓
along the Newport News waterfront.

Soundings were not taken alongside the docks and fitting out ✓
basins of the N. N. S. B. Co. due to war conditions. (Ad. wk. recom. par. 9a, Review)

Various areas in that part of the work done by this party are ✓
obstructed by fish traps or the remains of them, some of the latter
being broken about the water line.

The area adjacent to the north end of the N. N. S. B. Co. plant ✓
is considerably changed with the construction of piers and dredging.

FATHOMETER CORRECTIONS

A portable 808 type Fathometer was used for a greater part of the
work. As the entire personnel had had no experience of any kind, some
difficulties were experienced; as not having the engine running at
sounding speed and keeping the launch on an even keel when taking bar
tests. However, it is believed that no correction should be applied,
unless a change in the initial indicates a correction should be applied. ✓
See Proc. of notes

SURVEY METHODS

The inshore lines were run with the shallow draft launch No. 100 ✓
and soundings obtained by lead line or pole.

DISCREPANCIES

The 1 foot sounding in Lat. 36° 56.9', Long. 76° 26.9' was not
found after considerable development. The party of Lieut. Comdr. Bowie
had a 3 foot sounding but even this was not verified. The shoalest
soundings reduced to 5 feet. This may be an oyster bank, as they are
prevalent in the vicinity, which has been removed by oyster dredging. ✓
par. 5a (1) Review

11 FEB 1942

SIGNALS

In addition to the signals enumerated on the report of ✓
Lieut. Comdr. John Bowie, Jr., the following are added:

Triangulation

BUX - Buxton Hospital Cupola 1942

Topographic

DIG - Southern limit of aluminum painted section
of bridge

VET - Banner on beach

TEEN - Banner in tree

END - Outer end fish trap

Hydrographic

LAG - Flagpole at housing development east end
James River Bridge

Photo Compilation

HIG - Higher of two tanks

TAS - Weather signal mast

OD - SE of two floodlight towers east end of Pier 9

A table of statistics and summary of cost apportionment is
attached.

Respectfully submitted

R. R. Moore

R. R. Moore

Lieut. Comdr. C&GS

Officer-in-Charge Launch HILGARD

H6812

STATISTICS TO ACCOMPANY SHEET NO. F1142 - PROJECT H-255

DAY	DATE	ST. MILES	POSITIONS	SOUNDINGS	VOL
j	Feb. 18, 1943	9.4	38		6
k	Feb. 19	20.0	116		6
l	Feb. 23	11.4	71		6
m	Mar. 2	3.0	36		7
n	Mar. 9	11.1	81		7
p	Mar. 10	17.9	98		7
q	Mar. 12	8.0	90		7
r	Mar. 15	20.5	129		8
s	Mar. 18	9.7	92		8
t	Mar. 24	13.7	80	629	8
b	Mar. 25	<u>12.0</u>	<u>91</u>	<u>548</u>	9
	TOTALS	136.7	812	1177	

ADDENDUM

SHEET H-6812 PROJECT CS-255

SIGNALS:Hydrographic Signal "Pie": Lat. $36^{\circ}57.98'$ Long. $76^{\circ}25.85'$

This signal is the southeast flood light tower on the offshore end of the C. & O. Coal Pier. The location of this signal as shown on airphoto compilation T-8055 is erroneous, as it is believed this is the location of a coal chute and not the floodlight. This signal was relocated by sextant cuts (See Vol. 9, pg. 21) by this office. (relocation accepted)

Topographic Signal "Teen": Lat. $36^{\circ}56.60'$ Long. $76^{\circ}29.15'$

The location of this signal as shown on the smooth sheet was taken from the boat sheet as it is neither shown on the airphoto compilation nor the graphic control sheet. (Signal "Teen" is from T-6871 (1941); its position has been checked)

PIER "K": Lat. $36^{\circ}57.90'$ Long. $76^{\circ}25.35'$

This pier appears to be erroneously located on airphoto compilation sheet T-8055. It was relocated by sextant cuts (See Vol. 9, pg. 21) by this office. The new location shown on the smooth sheet is about ⁸⁰~~35~~ meters northwest of that shown on the airphoto compilation. According to local information this pier is about 18 months old and no pier within recent times existed at the airphoto compilation location. (This pier originally compiled on T-8055 from plans furnished by U.S.E., - not from photos; Ref. page 6, par 29-2 of T-8055 D.R.) The new location is accepted.

Revised on top sheet 6/10/47

FATHOGRAMS:

Initials, - It was not always possible to definitely determine the "initials" on the fathograms submitted by the HILGARD, due to excessive fluctuation of the initials between barchecks. (This condition exemplified by blue "j" day on next page)

Times, - Difficulty was also experienced on some days in determining the speed of the fathometer. Time corrections run as high as 28% 17% (23 - 36 m day, Vol. 7, Pg. 8), and 11% (9 - 14 q day, Vol. 7, Pg. 54). (Corrections as high as 17% were found due to excessive motor speed of fathometer)

Position Markings, - Positions at times ~~appear to have been~~ hand marked. (Ex. pos. 19 m, Mar. 2, 1943)

DISCREPANCIES:

Latitude $37^{\circ}00.2'$ and Longitude $76^{\circ}28.17'$, 12-13 f (blue), 23 ft. A note in sounding volume # 3, pg. 59 states that a 23 ft. sounding falls directly under the James River Bridge and is to be further investigated. This sounding plots about 20 meters north of the bridge, and the records do not show that it was further investigated. (Review, pars. 7c & 9c)

Latitude $36^{\circ}58.05'$ and Longitude $76^{\circ}28.40'$, j day (blue).
 Soundings for this entire day appear to be 2 ft. too deep.
 The tide reducers originally entered by the field party would
 cause these soundings to reduce to depths which would agree
 with the adjacent hydrography. However, the hourly heights
 furnished by the Washington Office were used by this office
 to compute the tide reducers, and these tide reducers were
 found to be 2 ft. deeper than those originally entered by
 the field party. (Tide reducers checked by Tides Div. & found correct)
 (Soundings adjusted by amount of initial changes throughout the day)
 Latitude $36^{\circ}59.8'$ and Longitude $76^{\circ}26.9'$, 74-76 f (blue).
 Soundings on this line appear to be 1 ft. too shoal.
 (0.5 ft. initial correction applied; sdgs. now in agreement)

Respectfully submitted,

Isadore M. Zeskind

Isadore M. Zeskind
 Associate Cartographic Engr.

Norfolk, Va.
 July 29, 1943

Approved and forwarded:

*The hydrography accomplished by the
 party was not entirely
 satisfactory. The party gave
 considerable trouble*

Paul C. Whitney
 Supervisor S. E. District

Surveys Section (Chart Division)

H6812

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets ¹.; sounding vols. ⁹....; wire drag vols. ⁰....;
 bomb vols. ⁰....; graphic recorder rolls ¹⁶....;
 special reports, etc. ... none.....

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

Number of positions on sheet	..736.
Number of positions checked	..205.
Number of positions revised1.
Number of soundings recorded	..177.
Number of soundings revised (refers to depth only)	..91.
Number of soundings erroneously spaced0.
Number of signals erroneously plotted or transferred0.
Topographic details	Time .4 hr.
Junctions	Time 12 hr.
Verification of soundings from graphic record	Time .8 hr.

Verification by *R. K. DE LAUDER*.....Total time 174 hr. Date 9-18-47.

Review by *J. A. Dinmore*..... Time 78 hrs. Date 5/12/47.

H6812

Remarks

Decisions

	Remarks	Decisions
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GEOGRAPHIC NAMES
 Survey No. **H6812**

Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Virginia</u>										USGB	1
<u>Newport News</u>		(location of tide staff)									2
<u>James River</u>											3
<u>James River Bridge</u>											4
<u>Small Boat Harbor</u>											5
											6
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Names underlined in red approved
 by L. Heck on 5/13/47

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT PHOTOSTAT OF	}	No. H H6812 No. T	{	received August 3, 1943 registered August 3, 1943 verified reviewed approved
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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	Pg 2 of addendum	EKG	
40			
62			
63			
✓ 82b	Pg 1 of addendum	PKJ	
83			
88			
90			

RETURN TO

82	R. W. Knox
----	------------

✓ R. W. Knox

LAC
MCC

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 6, 1943

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 6812

Locality Newport News, James River, Virginia.

Chief of Party: John Bowie, Jr. in 1942-1943
Plane of reference is mean low water reading
1.01 ft. on tide staff at Newport News
30.9 ft. below B. M. 3 (1909)

Height of mean high water above plane of reference is 2.6 ft.

Condition of records satisfactory except as noted below:

NOTE: Work for b day (blue) in Vol. No. 1 was rejected by field party on account of no tide record available. Inferred tide reducers have been entered in the sounding volume for this days work in order that the line may be reduced and used if desired. ✓

Reference page 2 Addendum j day (blue). Tide reducers furnished by Washington office have been rechecked and found correct.

E. J. Green
Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO H-6812

FIELD NO. 1142

Virginia, James River, Newport News
Surveyed in Dec. 1942 to Mar. 1943 Scale 1:10,000
Project No. CS-255

Soundings:

808 Depth Recorder
Hand lead
Pole

Control:

Three-point fixes on shore
signals

Chief of Party - J. Bowie, Jr. and R. R. Moore
Surveyed by - R. R. Moore and L. C. Taylor
Protracted by - M. J. Langley and L. E. Klinefelter
Soundings plotted by - M. J. Langley
Verified and inked by - R. K. DeLawder
Reviewed by - T. A. Dinsmore, May 12, 1947
Inspected by - H. W. Murray

DP 38155
Mar 1944

1. Shoreline and Signals

The shoreline is from topographic quadrangles T-8304, T-8305 and T-8313 of 1942.

The abandoned pier (charted) at lat. $36^{\circ} 58.53'$, long. $76^{\circ} 26.16'$ does not appear on T-8304 (1942). It has been retained on the present survey because notes in the sounding records indicate breaks occur in sounding lines because of pier remains.

The signals originate with previously established triangulation stations, graphic control sheet T-6871 (1941) and air-photographic surveys T-8055, T-8056 and T-8062. The fixes for supplementary hydrographic signals are recorded in the sounding volumes of the present survey.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated. Depths along the axis of the river channel vary from 35 feet at lat. 37° 00.0', long. 76° 27.78' to 71 feet at lat. 36° 58.15', long. 76° 26.18'.

Dredging along the pier area on the northeast shore has created bottom irregularities and sharp changes from one depth level to another. The flats to the southwest and to the north, while generally smooth, show irregular shoals and depressions resulting from mostly natural and occasionally artificial causes.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-6596 (1940) and H-6729 (1941-42) on the south, and with H-6928 (1943-44, 1946-47) on the northwest. There are no contemporary surveys on the east, however, charted information here will make an adequate junction with the present survey.

5. Comparison with Prior Surveys

a. H-447 (1854)	1:20,000	H-1179a (1871-72)	1:20,000
H-529 (1854-55)	1:20,000	H-1188 (1873)	1:20,000
<u>H-877 (1865)</u>	<u>1:10,000</u>	<u>H-1213 (1874)</u>	<u>1:10,000</u>

These sparsely developed early surveys cover most of the present survey. Except for noting a general agreement in the principal features of the area and the outline of the main river channel, there is little basis for close comparison between the surveys of this early period and the present. Major discrepancies noted are as follows:

- (1) The 1-ft. sounding (uncharted) falling in present 3-ft. depths at lat. 35° 56.96', long. 76° 26.88' should be disregarded. This prior sounding, originating with H-1213, is considered disproved by close development on the present survey.
- (2) The uninvestigated 3-ft. sounding (charted) falling in present 9-ft. depths at lat. 36° 59.80', long. 76° 27.02' should be disregarded. This prior sounding, originating with H-1179a, was obtained on line between 8- and 10-ft. soundings and is considered to be 1 fm. in error.

- (3) The uninvestigated 5-ft. sounding (charted) in lat. $37^{\circ} 00.03'$, long. $76^{\circ} 27.07'$ should be disregarded. This prior sounding, originating with H-1179a, is actually 5.8 ft. in the old sounding records. Present 7-ft. depths are considered adequate for charting.
- (4) Two uninvestigated 6-ft. soundings (charted) have been carried forward from H-1179a to the present survey at lat. $37^{\circ} 00.24'$, long. $76^{\circ} 27.15'$ and lat. $36^{\circ} 57.20'$, long. $76^{\circ} 26.94'$. The latter is charted as a 5 but since the sounding is 5.8 ft. in the old sounding records, it has been carried forward as 6 feet. In both instances, the soundings were ably supported by adjacent depths of like value on the old survey. Present development is considered inadequate to disprove the prior soundings.

b. H-3045 (1910) 1:20,000 H-3788a (1915) 1:20,000
H-3788 (1915) 1:10,000 H-4011 (1918) 1:2,500

H-3045 is a reconnaissance survey showing a few sounding lines crossing the river about a mile apart. Agreement of depths is exceptionally good, except along the pier area opposite Newport News which has since been artificially improved.

H-3788 covers the small boat harbor in the vicinity of lat. $36^{\circ} 58.0'$, long. $76^{\circ} 24.85'$ and a small approach area thereto. Present depths are 1 to 4 ft. shoaler than prior depths.

H-3788a shows closely spaced sounding lines overlapping a small area on the present survey in the vicinity of lat. $36^{\circ} 56.7'$, long. $76^{\circ} 24.5'$. Prior depths here of 29 feet have now shoaled about 2 feet.

*Being dredged
see L104(1945)
L.A.M.*

H-4011 is a reconnaissance survey covering a portion of the pier area at Newport News. Because of inadequate control, a recommendation that the survey be rejected is contained in its review. Prior depths in the berths and adjacent to piers are now considered valueless for purposes of comparison.

c. H-4078 (1918-19) and H-4085 (1919) 1:10,000

These surveys cover the eastern portion of the present survey and extend northwestward through the river channel area to within a mile of the James River bridge.

Extensive harbor improvement, pier construction and dredging has taken place along the northeast shore subsequent to these surveys. No satisfactory comparison can therefore be made of that area.

Exceptionally good agreement of depths generally exists throughout the remaining area. Small detached shoals and depressions such as occur in the vicinity of lat. $36^{\circ} 58.0'$, long. $76^{\circ} 27.3'$ are similarly characterized on both the prior and present surveys. Some differences are, however, noted. In the mid-channel deep defined by the 60-ft. curve at lat. $37^{\circ} 58.15'$, long. $76^{\circ} 26.18'$, prior depths of 75 feet are now superseded by maximum depths of 71 feet. Prior depths of 32 feet in a former small depression at lat. $36^{\circ} 56.85'$, long. $76^{\circ} 24.85'$ are now superseded by 28-ft. depths. The latter depression is one of several such instances where small prior depressions are now filled-in.

d. H-6682 (1940) 1:5,000

This survey contains a small development of the main channel in the vicinity of lat. $36^{\circ} 58.6'$, long. $76^{\circ} 26.6'$. Depths are in excellent agreement except in lat. $36^{\circ} 58.6'$, long. $76^{\circ} 26.55'$ where prior 61-to 62-ft. depths are now superseded by 55-to 59-ft. depths.

Except for a few bottom characteristics and the two soundings retained, the present survey is adequate to supersede the prior surveys.

6. Comparison with Chart 400 (Latest print of Dec. 9, 1946)
Chart 529 (Latest print of June 1, 1946)

a. Hydrography

Charted hydrography originates principally with the present survey prior to verification and review. Verification reveals numerous 1 to 2 ft. corrections to charted unverified soundings. Critical depths, charted from prior surveys, have been considered in preceding paragraph 5 and require no further consideration.

- (1) A sunken wreck (chart 400) falls in present 40-ft. depths at lat. $36^{\circ} 57.63'$, long. $76^{\circ} 25.40'$. Described as a fishing boat, the wreck has been applied to the chart by hand correction from H. O. Notice to Mariners No. 13 (1946). This information is subsequent to the present survey.

New zone!
fan

- (2) Three "hulks" (chart 400) fall in present 10-to 12-ft. depths at lat. $36^{\circ} 57.72'$, long. $76^{\circ} 24.92'$. Originating with T-8055, the feature is described as two hulks on the west and three dolphins within the eastern enclosure. Notes in the sounding records of the present survey refer to the feature as a wreck. To conform with the symbolization shown on the present survey, and with T-8304 (1942) which has been field edited, it is recommended that the feature be charted as a stranded wreck.
- (3) The dolphin (not charted) shown on the present survey at lat. $36^{\circ} 57.80'$, long. $76^{\circ} 25.27'$ has been subsequently removed. (See Chart Letter 190 of 1944).

b. Dredged Channels

Present survey depths in the Newport News Channel (lat. $36^{\circ} 57.3'$, long. $76^{\circ} 24.5'$) are in a few instances 1-2 ft. shoaler than the charted controlling depth of 40 feet (Engineer Blueprint 41654, 1946). The Engineers survey was accomplished subsequent to the present survey and therefore supersedes the present survey.

c. Aids to Navigation

Disagreements between the present survey and charted aids are noted as follows:

- (1) The bell buoy located on the present survey at lat. $36^{\circ} 57.63'$, long. $76^{\circ} 24.54'$ is charted about 45 meters southwestward. Either position is adequate. A light has been added to the buoy subsequent to the present survey. (H. O. Notice to Mariners No. 41, 1946).
- (2) The lighted buoy marking the north inner limits of Newport News Channel on the present survey at lat. $36^{\circ} 57.32'$, long. $76^{\circ} 24.68'$ is charted about 70 meters eastward from it's survey position. The charted position is preferred. The buoy is now a lighted bell buoy by authority of H. O. Notice to Mariners No. 25 (1945).
- (3) The lighted buoy marking the south inner limits of Newport News Channel at lat. $36^{\circ} 57.20'$, long. $76^{\circ} 24.67'$ on the present survey is charted about 50 meters westward of it's survey position. Either position is adequate.

- (4) The buoy at lat. $36^{\circ} 57.88'$, long. $76^{\circ} 26.72'$ on the present survey is charted about 65 meters northward. Either position is adequate.
- (5) The two buoys shown on the present survey at lat. $36^{\circ} 57.55'$, long. $76^{\circ} 27.0'$ and lat. $36^{\circ} 57.65'$, long. $76^{\circ} 26.78'$ were not individually located. Their positions were determined by estimated distances from passing sounding lines. These uncharted buoys have not been previously charted. Falling in an oyster bed area, the buoys are probably maintained by private interests.
- (6) Four charted buoys are not located on the present survey. Their charted positions are as follows:

Spar (red and black)	lat. $36^{\circ} 56.74'$, long. $76^{\circ} 24.03'$.
Spar "E" (white)	lat. $36^{\circ} 56.94'$, long. $76^{\circ} 24.68'$.
Spar "F" (white)	lat. $36^{\circ} 57.15'$, long. $76^{\circ} 25.47'$.
Spar "82N"	lat. $36^{\circ} 57.02'$, long. $76^{\circ} 25.72'$.

These buoys have been continuously charted in their present positions for more than ten years. Their identities have been verified in the Light List.

- (7) The light charted at lat. $36^{\circ} 57.80'$, long. $76^{\circ} 25.40'$ was established subsequent to the present survey (Chart Letter 190, 1944).

Other aids shown on the present survey are in substantial agreement with those charted and adequately serve the purpose intended.

d. Bridges

Clearances of the vertical lift span and the fixed span of the James River Bridge are not shown on the present survey or on air photographic surveys. The fenders charted at the fixed span in lat. $36^{\circ} 59.56'$, long. $76^{\circ} 28.92'$ from a survey in 1927 by the James River Bridge Corporation (bp. 22271) are not apparent on aerial photograph No. 7736 taken in November 1941.

7. Condition of Survey

- a. The Descriptive Report and sounding records are complete. The Processing Office Addendum to the Descriptive Report is particularly pertinent.
- b. The smooth plotting was good.

- c. The work of "b" day (Dec. 7, 1942) was rejected by the hydrographer. No tide reducers were available for that day because of a defective tide gage. Inferred tide reducers were later entered for the day's work by this office. Since the area had, however been adequately covered by subsequent work; it was not considered necessary to further utilize this day's work.
- d. The survey shows adequate coverage of the area and close development of some shoals. However, the two charted 6-ft. soundings carried forward on the present survey from H-1179a (1872) together with the other uninvestigated soundings discussed in par. 5a should have been investigated.

The Processing Office notes that a 23-ft. sounding obtained between 31- and 35-ft. soundings on line at lat. $37^{\circ} 00.20'$, long. $76^{\circ} 28.17'$ was referenced in the sounding records for later investigation but there is no record of further investigation. Falling near the vertical lift span, the questionable sounding appears to be a probable side echo from the north bridge tower support. The sounding is being retained.

Detailed comment regarding fluctuating initials and excessive fathometer speeds (17%) of the 808 Fathometer encountered on this survey are contained in the Processing Office notes.

Due to war conditions, as stated in the Descriptive Report, soundings were not obtained alongside the docks and in the fitting-out basins of the Newport News Shipbuilding Co., in the vicinity of lat. $36^{\circ} 59.0'$, long. $76^{\circ} 26.5'$.

There is no record that the charted clearances of bridge spans were verified in compliance with par. 3836 of the Hydrographic Manual.

8. Compliance with Project Instructions


The survey adequately complies with the project instructions except for par. 16 of the original instructions (Oct. 11, 1940), which states that all critical charted depths should be investigated and recommendations be included in the Descriptive Report with reference to their retention or rejection for charting purposes.

9. Additional Field Work

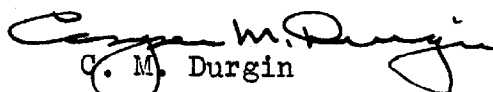
As a matter of record, additional field work is recommended as follows:

- a. Completion of hydrography alongside the docks and in the fitting-out basins of the Newport News Shipbuilding Co., in the vicinity of lat. $36^{\circ} 59.0'$, long. $76^{\circ} 26.5'$. ? Navy
- b. The two 6-ft. soundings discussed in par. 5a (4) and carried forward on the present survey from H-1179a (1872) at lat. $37^{\circ} 00.24'$, long. $76^{\circ} 27.15'$ and lat. $36^{\circ} 57.20'$, long. $76^{\circ} 26.94'$ should be investigated for least depth.
- c. The questionable 23-ft. sounding (par. 7c) at lat. $37^{\circ} 00.20'$, long. $76^{\circ} 28.17'$ should be investigated. A 26-ft. sounding about 125 meters to the southwest of the 23, near the south bridge tower, appears similarly questionable and should also be investigated.
- d. Verification of the charted clearances of the two bridge spans at lat. $37^{\circ} 59.55'$, long. $76^{\circ} 28.93'$ and at long. $37^{\circ} 00.17'$ ~~long.~~ $76^{\circ} 28.19'$

Examined and approved:


I. E. Rittenburg

Chief, Nautical Chart Branch


C. M. Durgin

Chief, Division of Charts


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Chief, Section of Hydrography


C. K. Green

Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H 6812

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
	400	Various	Before After Verification and Review
3/11/48	400	<i>F.A. McGinn</i>	Before After Verification and Review <i>Completely applied.</i>
			Before After Verification and Review
	529	various	Before After Verification and Review
			Before After Verification and Review
	529	<i>F.A. McGinn</i>	
3/11/48	529	<i>F.A. McGinn</i>	Before After Verification and Review <i>Completely applied.</i>
3/12/48	1222	<i>F.A. McGinn</i>	Before After Verification and Review ✓
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

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A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.