

7171

Diag'd. on Diag. Ch. No. 1222-2

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC  
Field No. CO 1147 Office No. H-7171

LOCALITY

State Virginia  
General locality Hampton Roads.  
Locality Hampton Roads

194 7

CHIEF OF PARTY

Ronald R. Moore

LIBRARY & ARCHIVES

DATE 21 April 1947

1212

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO.

H-7171

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-7171

Field No. CO-1147

State VIRGINIA

General locality HAMPTON ROADS

Locality Area A Hampton Bar to Sewall Point Spit  
Area B Northea st end Willoughby Bank

Scale 1:10000 Date of survey April 1947

Instructions dated 9 April 1947

Vessel COWIE

Chief of party Ronald R. Moore

Surveyed by Ronald R. Moore

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

Protracted by A. G. Atwill and W.W. Feazel

Soundings penciled by W.W. Feazel

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

REMARKS: This sheet was processed in the Hydrographic Section of the N. E,  
District, Norfolk, Va.

DESCRIPTIVE REPORT

to accompany

Hydrographic Sheet H-7171

(Field No. CQ 1147),

Scale 1:10000

Ship COWIE

Ronald R. Moore, Comdg.

- A. This survey was done under Instructions for Project CS-330 dated 9 April 1947. ✓
- B. This survey is a hydrographic examination of two areas in the Hampton Roads area requested by the U.S. Army Engineers as follows:
- (A) An area in Hampton Roads between Hampton Bar and Sewall Point Spit from Elizabeth River Main Channel Buoy No. 1 to a line from Fort Wool to Old Point Comfort. ✓
- (B) The area at the northeast end of Willoughby Bank, between latitudes  $36^{\circ}59'8''$  and  $37^{\circ}00'5''$  and longitudes  $76^{\circ}14'5''$  and  $76^{\circ}16'0''$ . ✓
- Area A. <sup>(1944)</sup> This area joins Sheets H-6832 and H-6833 in vicinity of Sewall's Point; Sheet H-6930 in the vicinity of Sewall Point Spit; Sheet H-4040 <sup>(1919)</sup> in the vicinity of Old Point Comfort and Fort Wool; Sheets H-4077 and H-4078 <sup>(1918+19)</sup> in the vicinity of Hampton Bar. ✓
- Area B. This area joins Sheets H-4040 <sup>(1919)</sup> and FE No. 2, 1944. ✓
- C. This survey was made by the Ship COWIE and Launch No. 82. Both are equipped with an 808 Type recording fathometer. ✓
- D. The standard automatic tide gage at the Norfolk Naval Station in Hampton Roads was used for the reduction of soundings in both areas. No time factor was introduced. ✓
- E. The smooth sheet was plotted by the Norfolk Processing Office. ✓
- F. Control was based on triangulation executed by various Chiefs of Party from 1866 to 1944. ✓
- No topographic nor hydrographic stations were located or used. ✓
- G. There is no shore line on this <sup>beat</sup> sheet. ✓
- H. Soundings were obtained with an 808 type recording fathometer supplemented in shoal areas under 10 feet with soundings taken with a graduated pole, and in the vicinity of latitude  $37^{\circ}00'$  longitude  $76^{\circ}15'$  with a lead line. ✓
- Bar checks were taken at the beginning and end of the day and curves drawn for the correction curves. ✓
- I. All positions for the location of ship depend on three point fixes taken on triangulation stations at intervals averaging one and a half minutes. ✓

J. This survey is complete and adequate to supercede prior surveys. No holidays or excessive difference exist. Sounding lines are spaced somewhat less than 100 meters apart with 50 meter spacing in the vicinity of the Norfolk Ship Channel. Predicted tides were used for the reduction of soundings and considering this fact, the crossings are in good agreement.

K. The percentage of crosslines in Area A is about 10%. The crossings are in good agreement in so far as predicted tides were used for the reduction of soundings. No cross lines were run in Area B.

L. Comparisons with previous surveys:

Area A. This area was surveyed to ascertain to what extent the dumping ground had been filled. Comparison with H-6832 Scale 1:10000 made in 1943. The present survey just joins the previous one at the sea wall of the Naval Station. What few soundings are incident to both surveys are in agreement. *H-6832 is superseded here by H-6930 (1944)*

Comparison with H-6930 Scale 1:5000 made in 1944. This survey joins the present one from the dock at the Naval Base to Fort Wool along the western edge of Sewall Pt. Spit, and the soundings are in close agreement.

Comparison with H-4040 Scale 1:20000 made in 1918. This survey joins the present one at the eastern limits between Fort Wool and Old Point Comfort, only a few soundings in the older survey fall in the limits of the present one. Agreement is good except that the 60 foot soundings latitude  $36^{\circ}59'25''$  longitude  $76^{\circ}19'$  show about 55 to 54 feet at the present time.

Comparison with H-4077 Scale 1:5000 made in 1918. This survey joins the present one along the northern edge from longitude  $76^{\circ}20'$  eastward, and is in close agreement.

Comparison with H-4078 Scale 1:10000 made in 1918. This survey covers practically the whole area of the present one. The areas north of the northern 60 foot contour and south and east of the southern 30 foot contour are in good agreement. The area between these two contours has changed radically in places due to its use as a dumping ground with variation in depths up to 25 feet.

Comparison with chart 400 print date 12-9-46. The remarks in the previous paragraphs would apply to this comparison.

Area B. Comparison with H-4040 Scale 1:20000 made in 1918. Present surveys is in good agreement with the former one.

Comparison with F.E. No. 2 Scale 1:20000 made in 1944 shows close agreement.

Comparison with chart 400 print date 12-9-46 shows close agreement except that the 12 foot curve in the vicinity of latitude  $37^{\circ}00'$  longitude  $76^{\circ}15'$  appears to be extending to the eastward. *Present depths here less than 12 ft. are as much as 5 ft. shaller than on H-1188 (1973).*

N. There are no new dangers within the limits of the sheet.

P. The fixed aids to navigation on this sheet are:

Old Point Comfort Light House ✓  
Thimble Shoal Light House ✓  
Willoughby Spit Beacon ✓  
Hampton Beacon No. 6  
Hampton Bar Beacon ✓  
Hampton Roads Anchorage Beacon ✓

Q. The floating aids to navigation are:

	Position		Day	Letter	Depth
	Latitude	Longitude			
Elizabeth River Lighted Gong Buoy #1	36°58.42	76°20.10	137b	48 ft. ✓	
Elizabeth River Lighted Gong Buoy #3	36°57.60	76°20.17	138b	34 ft. ✓	
Elizabeth River Lighted Bell Buoy #4	35°57.58	76°20.35	139b	43 ft. ✓	
Elizabeth River Lighted Bell Buoy #5	36°57.28	76°20.20	141b	41 ft. ✓	
Sewall Point Spit Lighted Bell Buoy #2	36°59.06	76°18.68	109b	29 ft. ✓	
Willoughby Bank Lighted Bell Buoy #13	37°00.33	76°14.74	69D	43 ft. ✓	
Willoughby Bank Lighted Gong Buoy #15	37°00.32	76°15.72	68D	52 ft. ✓	
Hampton Creek Lighted Bell Buoy 1A	37°00.09	76°19.12	92b	13 ft. ✓	
Hampton Bar East End Buoy	36°59.95	76°18.90	90b	13 ft. ✓	
Hampton Bar Buoy 14	36°59.75	76°19.46	89b	26 ft. ✓	
Hampton Bar Buoy 16	36°59.26	76°20.35	84b	22 ft. ✓	
Phoebus Channel Buoy 1	36°59.98	76°18.97	91b	13 ft. ✓	
Willoughby Bay Buoy 1	36°59.11	76°18.55	106b	23 ft. ✓	
Sewall Point Spit Buoy 4	36°58.95	76°18.66	108b	9 ft. ✓	
Willoughby Bay Buoy 3	36°59.02	76°18.54	107b	9 ft. ✓	
Mooring Buoy X (USN)	36°58.76	76°20.40	85b	69 ft. ✓	
Mooring Buoy (USN)	36°59.17	76°19.98	86b	67 ft. ✓	

LIST OF SIGNALS

Checkered Tank ( Now Gray ) 1932 and 1943

Virginia Bldg. Spire (1913-32)

N.W. Tank Bldg. No. 143 NOB (1943) NOR

Willoughby Spit Beacon , 1932

Tall Tower with Wank, Fort Wool , 1943

C.V. Hotel West Tower 1932

C.V. Hotel East Cupola 1929

Old Point Comfort Light House (1866-1944)

MOORE . 1943

Phoebus W.W. Tank (1938)

Hampton (1913-43)

TIDAL NOTE

The standard automatic tide gage located at the Norfolk Naval Station was used for the reduction of soundings without correction.

Mean low water corresponds to a height of 1.9 feet on the staff.

STATISTICS

<u>Vol. No.</u>	<u>Date</u>	<u>No. Pos.</u>	<u>Stat. Miles</u>	<u>Day letter</u>	<u>Boat</u>
1	4-8-47	136	25.4	A	COWIE
	4-10-47	155	27.1	B	COWIE
2	4-11-47	71	13.4	C	COWIE
	4-23-47	87	15.4	D	COWIE
3	4-15-47	172	27.4	a	Lch. 82
	4-17-47	141	17.8	b	Lch. 82
4	4-18-47	<u>120</u>	<u>16.3</u>	c	Lch. 82
		882	142.8		

Area .5.0 Square miles



In making this survey, movements of vessels in the area interfered considerably specially in the Hampton Roads area A when the COWIE was being used.

The COWIE is very sluggish to handle at all times, but more so when currents and wind are in a combination against her.

The weather on most of the days was overcast, very hazy and windy.

No reliance could be placed in the compass for steering courses when Launch 82 was used at times when wave action or wash from passing boats caused her to roll or pitch violently.

Respectfully submitted.



Ronald R. Moore,  
Chief of Party.

A D D E N D U M

to accompany

HYDROGRAPHIC SURVEY H-7171

(Field No. Co. 1147)

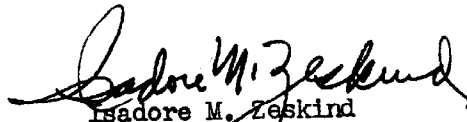
Discrepancy:

~~Lat. 36°57.87' and Long 76°19.88', 68-71 C (blue). This line appears to be about 2 ft. too short.~~

Shoreline:


No shoreline is shown on the smooth sheet, since this survey had priority and no topographic surveys of this area were available at this office. *Shoreline was transferred in the Wash. Office*

Respectfully submitted,

  
Isadore M. Zeskind  
Cartographic Engineer

Norfolk, Va.  
May 7, 1947

Approved and Forwarded

  
George L. Anderson  
Supervisor  
Southeastern District

MEMORANDUM

to accompany

Hydrographic Survey H - 7171

This survey was accomplished in accordance with a request to this Bureau by the District Engineer, U.S.E.D., Norfolk, Va.

A reproduction of the smooth sheet has been furnished the Engineers by this office and it is requested that if, after verification, and <sup>\*</sup>appreciable discrepancies be found, an ozalid of this survey by furnished this office for transmittal to the U.S.E.D., at Norfolk, Va.

\* none found

Norfolk Processing Office,  
Norfolk, Va.

*Platting  
order  
- done 1/20/47*

POST-OFFICE ADDRESS: Room 418 Post Office Bldg.,  
Norfolk 10, Virginia.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Ship COWIE

3 November 1947

To: The Director,  
U. S. Coast and Geodetic Survey,  
Washington 25, D.C.

From: Commanding Officer,  
Ship COWIE.

Subject: Additional Soundings on Hampton Bar, Virginia.

Reference: Your letter 839-bdh dated 23 September 1947.

Enclosed herewith is a photostat of Sheet H-7171 and tracing paper overlay with verified location of Hampton Bar East End Buoy (N-Ref) and additional soundings on eastern end of bar in the vicinity of this buoy. A sounding of 11 feet was obtained in approximately the same location as the 10 foot sounding previously found. The end of this bar is fairly steep.

Tides were furnished by the Supervisor, South-eastern District from the automatic gage at the Navy Base, Hampton Roads Va.

The Sounding Record and Fathogram are forwarded separately.

*Soundings in red on smooth sheet*

*Ronald R. Moore*  
Ronald R. Moore,  
Lieut. Comdr. C&GS,  
Comdg. Ship COWIE.



Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7171** .....

Records accompanying survey:

Boat sheets **1**...; sounding vols. **5**.....; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls **4**...;  
 special reports, etc. **4** Sheet Bar Check Corrections.....  
                                   **3** Sheets Tide Corrections.....  
 .....

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

Number of positions on sheet	.....	882.
Number of positions checked	.....	60.
Number of positions revised	.....	0.
Number of soundings revised (refers to depth only)	.....	9.
Number of soundings erroneously spaced	.....	7.
Number of signals erroneously plotted or transferred	.....	0.
Topographic details	Time	... 3 hrs
Junctions	Time	... 16 hrs
Verification of soundings from graphic record	Time	... 4 hrs

Verification by... **R. K. DE LAWDER** ..... Total time **87 hrs.** Date **8-21-47.**  
                                   "                  "                  Plotting Ad. Wk. **3** ..

Reviewed by... *J. F. Jordan* ..... Time **30 hrs.** Date **9-19-47.**

GEOGRAPHIC NAMES

Survey No. **B7171**

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>Hampton Roads</u>										1
<u>Hampton Bar</u>										2
<u>Small Pt. Spit</u>										3
<u>Norfolk Harbor Channel</u>										4
										5
<u>Old Point Comfort</u>										6
										7
										8
										9
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										11
										12
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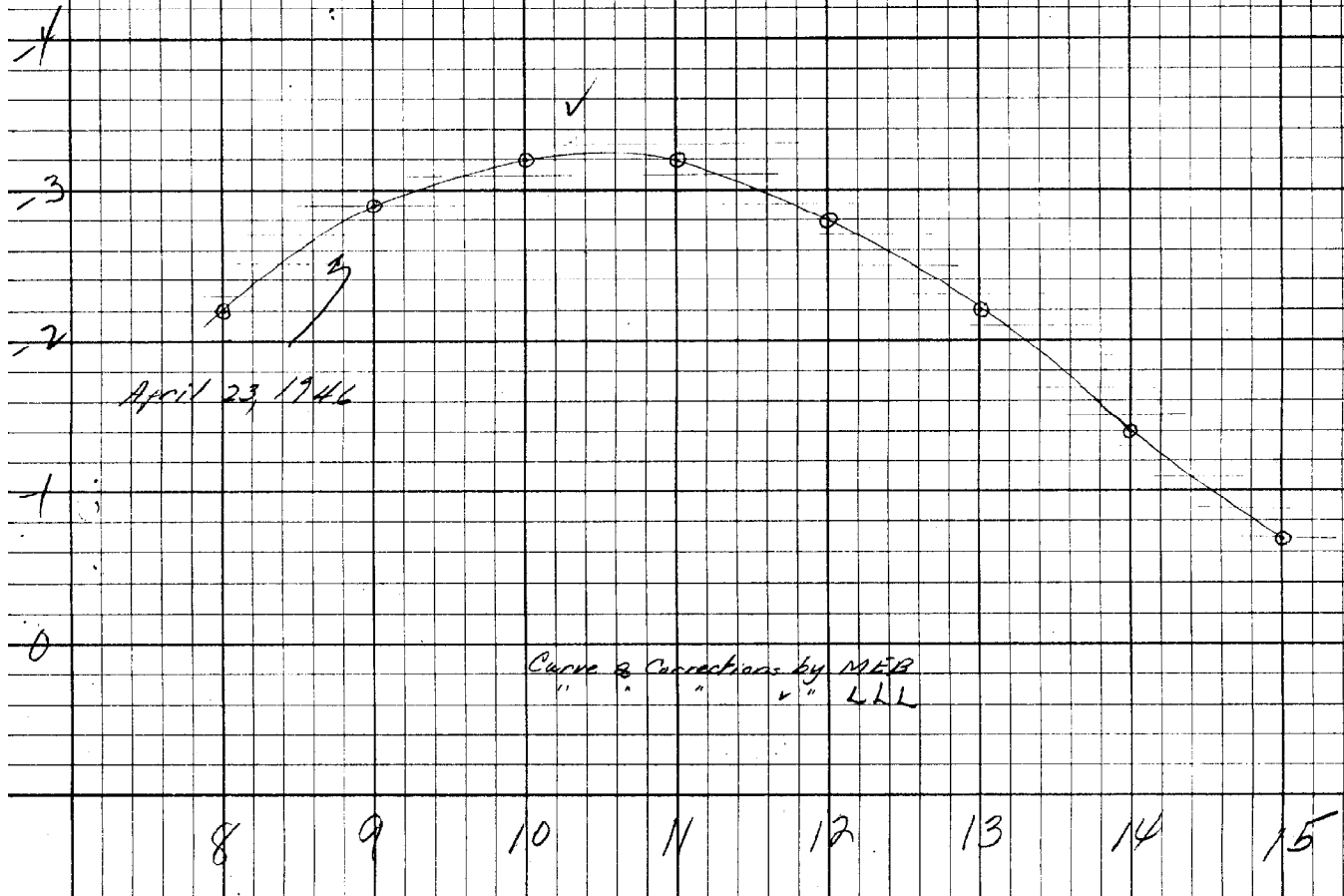
Names underlined listed approved  
by L. Heck on 9/20/47

# Tides

# 7171

April 23

2.6	0839	✓
2.8	0900	✓
3.0	0936	✓
3.2	1116	✓
3.0	1146	✓
2.8	1212	✓
2.6	1234	✓
2.4	1252	✓
2.2	1311	✓
2.0	1326	✓
1.8	1341	✓
1.6	1353	✓



83

*Hum*

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~XXXXXXXX

November 12, 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in  
1 volume of sounding records for

HYDROGRAPHIC SHEET 7171

Locality - Hampton Roads, Virginia

Chief of Party: R. R. Moore in 1947  
Plane of reference is mean low water, reading  
3.6 ft. on tide staff at Hampton Roads  
13.4 ft. below B. M. 6 (1927)

Height of mean high water above plane of reference is 2.5 feet

Condition of records satisfactory except as noted below:

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



DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7171

FIELD NO. CO-1147

Virginia, Hampton Roads  
Surveyed in April and October 1947      Scale 1:10,000  
Project No. CS-330

Soundings:

808 Fathometer  
Leadline  
Pole

Control:

Sextant fixes on shore signals

Chief of Party - R. R. Moore  
Surveyed by - R. R. Moore  
Protracted by - A. G. Atwill and W. W. Feazel  
Soundings plotted by - W. W. Feazel and R. K. DeLawder  
Verified and inked by - R. K. DeLawder  
Reviewed by - G. F. Jordan, November 18, 1947  
Inspected by - H. W. Murray

1. Shoreline and Signals

The shoreline originates with planimetric maps T-8303 and T-8314.

Previous triangulation stations furnished the control for this survey.

2. Bottom Configuration and Depth Curves

The bottom is generally smooth and is adequately defined by the usual depth curves.

3. Sounding Line Crossings

The agreement of soundings at crosslines is very good.

4. Junctions with Adjoining Surveys

An excellent junction is effected with H-6930 (1944) on the east. The junction with H-6833 (1943) on the south is very good except in Norfolk Harbor Channel where dredged depths of the U. S. Engineers in 1945 (Bp. 40644) had already superseded the depths here on H-6833.

The soundings charted adjacent to the limits of the present survey are in harmony with present survey depths.

5. Comparison with Prior Surveys

H-446 (1854), H-447 (1854)  
H-1188 (1873), H-2849 (1907)  
H-2849a (1910), H-2861 (1907)  
H-2866 (1907), H-3923 (1917)  
H-3982 (1917), H-4040 (1918)  
H-4077 (1919), H-4078 (1919); Scales 1:5,000 to 1:40,000

A comparison of these prior surveys with the present survey shows that while the bottom on the western side of Hampton Roads remains unchanged, shoaling has taken place in the middle and on the eastern side. In prior 40 to 100-foot depths, present depths are as much as 20 ft. shoaler. The width between the 60-ft. curves has narrowed from about 800 to 300 meters in the vicinity of lat.  $36^{\circ} 59'$ , long.  $76^{\circ} 20'$ .

For comparative purposes, H-1188 (1873) is the most satisfactory prior survey. Soundings on the other prior surveys are more irregular in depth and in quantity, and appear unreliable. The depth curves on H-1188 practically coincide with those on the present survey, except in dredged areas and in the areas noted in the preceding paragraph.

The 41-ft. sounding on H-4077 (charted) at lat.  $36^{\circ} 59.83'$ , long.  $76^{\circ} 18.78'$ , falls in 64 feet at the limit of present hydrography. Inasmuch as the sounding preceding the 41 feet on the same line and a note referencing one of the preceding soundings to a buoy indicate questionable control of the sounding line, the 41 should be deleted from the chart. ✓

The foregoing prior surveys are superseded by the present survey.

6. Comparison with Wire Drag Surveys

Wire drag survey H-7176 (1946-47) overlaps the north-eastern part of the present survey. Effective drag depths do not conflict with the present survey depths.

7. Comparison with Chart 400 (Print date May 26, 1947)a. Hydrography

Charted hydrography originates principally with the aforementioned surveys and partial application of the present survey before verification and review. The 29-ft. sounding at lat.  $36^{\circ} 59.43'$ , long.  $76^{\circ} 19.82'$ , was an unverified sounding on the present survey and should be corrected to 30 feet. The present survey supersedes the charted hydrography. ✓

A field examination (F.E. 2, 1944) in the vicinity of lat.  $37^{\circ} 00'$ , long.  $76^{\circ} 15'$  shows hydrography (scale 1:20,000) which falls entirely within the present survey. Comparison with the present survey indicates that no changes in bottom have occurred. The present survey, however, adequately supersedes this field examination.

b. Aids to Navigation

The aids on the present survey and on the charts are in substantial agreement and, except for one buoy, adequately mark the features intended. This red and black buoy, at lat.  $36^{\circ} 59.95'$ , long.  $76^{\circ} 18.90'$ , would more adequately mark the shoal at the east end of Hampton Bar if changed to a black buoy and moved 50 meters southeast where it would be east of a 10-ft. sounding (charted) on the present survey. The Light List records the buoy in 13 feet.

c. Dredged Channels

Depths on the present survey do not conflict with the controlling depths in dredged channels. To be noted, however, is the 8-ft. sounding which falls on the edge of the dredged channel (10-ft. controlling depth) at lat.  $36^{\circ} 58.96'$ , long.  $76^{\circ} 18.66'$ . This sounding is between buoy N-4 and the channel. *ok.*

CHANNEL LEGEND COVERS MIDDLE HALF  
ONLY. LAM.

8. Condition of the Survey

The Descriptive Report and sounding records are complete and comprehensive. The smooth plotting was well executed.

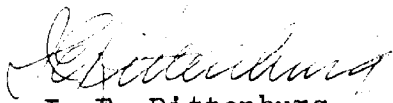
9. Compliance with Project Instructions

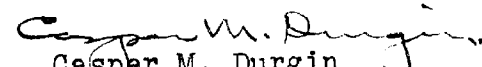
The survey adequately complies with the Project Instructions.

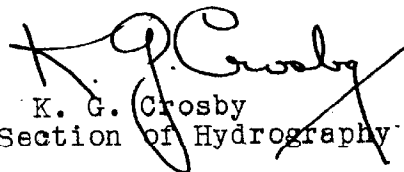
10. Additional Field Work

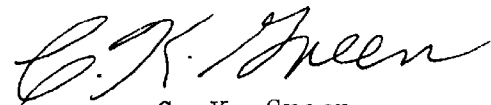
This is an excellent basic survey and no additional field work is recommended.

Examined and approved:

  
I. E. Rittenburg  
Chief, Nautical Chart Branch

  
Casper M. Durgin  
Chief, Division of Charts

  
K. G. Crosby  
Chief, Section of Hydrography

  
C. K. Green  
Chief, Division of Coastal Surveys

*HWM*

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

26 May 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in  
4 volumes of sounding records for

HYDROGRAPHIC SHEET

7171

Locality - Hampton Roads, Virginia

Chief of Party: R. R. Moore in 1947

Plane of reference is mean low water, reading

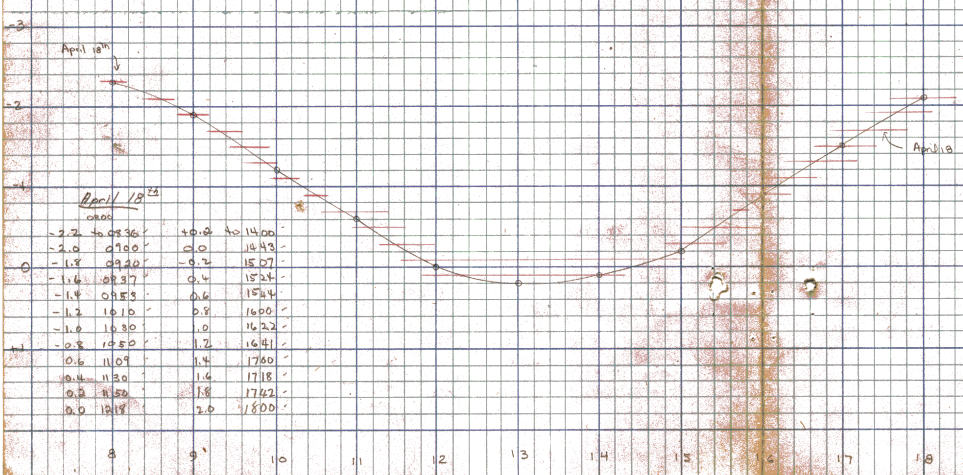
3.6 ft. on tide staff at Hampton Roads

13.4 ft. below B. M. 6 (1927)

Height of mean high water above plane of reference is 2.5 feet.

Condition of records satisfactory except as noted below:

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



April 18<sup>th</sup>

-2.2	0.0836	10.2	14.00
-2.0	0.100	0.0	14.43
-1.8	0.120	0.2	15.07
-1.6	0.137	0.4	15.24
-1.4	0.153	0.6	15.44
-1.2	0.160	0.8	16.00
-1.0	0.1630	1.0	16.22
-0.8	0.1650	1.2	16.41
0.6	0.169	1.4	17.00
0.4	0.170	1.6	17.18
0.2	0.170	1.8	17.42
0.0	0.169	2.0	18.00

Curves by AGA  
 " " MEB  
 Corrections by MEB  
 " " ASK

75<sup>m</sup> M Tide Curves H-7171

April 11<sup>th</sup>

April 11<sup>th</sup> 0.5 ft

April 11<sup>th</sup> 0.2 ft

April 11<sup>th</sup>

0.5	8:50
1.0	10:06
1.5	11:24
2.0	14:05
1.5	15:21
1.0	16:20
0.5	17:48
0.0	18:00

-0.6	8:41	✓	1.6	14:43	✓
0.8	9:18	✓	1.4	15:12	✓
1.0	9:45	✓	1.2	15:36	✓
1.2	10:12	✓	1.0	16:00	✓
1.4	10:42	✓	0.8	16:31	✓
1.6	11:18	✓	0.6	17:00	✓
1.8	12:00	✓	0.4	17:35	✓
2.0	13:36	✓	0.2	18:00	✓
1.8	14:14	✓			

April 17<sup>th</sup>

April 15<sup>th</sup>

April 17<sup>th</sup>

April 15<sup>th</sup>

April 17<sup>th</sup> 0.2 ft

April 15<sup>th</sup> 0.2 ft

2.0	8:14	✓	1.6	13:36	✓
1.8	8:41	✓	1.8	14:12	✓
1.6	9:19	✓	2.0	15:00	✓
1.4	10:00	✓	2.2	16:00	✓
1.2	12:24	✓	2.4	18:00	✓
1.4	13:00				

2.4	8:36	✓	1.4	14:28	✓
2.2	9:00	✓	1.6	14:49	✓
2.0	9:24	✓	1.8	15:12	✓
1.8	9:48	✓	2.0	15:36	✓
1.6	10:12	✓	2.2	16:00	✓
1.4	10:35	✓	2.4	16:24	✓
1.2	11:00	✓	2.6	16:47	✓
1.0	13:47	✓	2.8	17:08	✓
1.2	14:08	✓	3.0	17:32	✓
			3.2	18:00	✓

Curves & corrections  
AGM  
MEB

# NAUTICAL CHARTS BRANCH

SURVEY NO. H7171

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5-26-47	400	<i>[Signature]</i>	Before <del>After</del> Verification and Review <i>Partially applied</i>
			Before After Verification and Review
3/10/48	400	L. O. McGinn	<del>Before</del> After Verification and Review <i>Completely applied.</i>
3/12/48	1222	S. G. McGinn	<del>Before</del> After Verification and Review ✓
6/10/48	481	W. MacSwan	<del>Before</del> After Verification and Review
8/6/56	<i>Revised</i> 481	<i>[Signature]</i>	<del>Before</del> After Verification and Review
8/24/70	78	S. S. McMillan	<del>Before</del> After Verification and Review <i>fully applied</i> <i>Try chd 1222. Day #57</i>
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

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.