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Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

11-5613

State: *Virginia*

DESCRIPTIVE REPORT.

Hyd. Sheet No. **4040**

LOCALITY:

*Chesapeake Bay,
West side - York
River to Hampton
Roads.*

1919

CHIEF OF PARTY:

L. A. Potter.

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Des. Rep. Sht.No. _____

The tides at York Spit Lighthouse were used for the reduction of soundings from the north end southward to a line extending eastward from Back River Lighthouse, thence southward to line 29 m to 38 m, tides at Thimble Shoal Lighthouse were used, and thence southward to the limit of the sheet, tides at Old Point Comfort were used.

The low water plane at York Spit Lighthouse was established from the mean of the low waters read in 1918, rather than from the previous plane furnished, which was based on a less number of readings .

The height of B. M. No.1 on Thimble Shoal Lighthouse seems to be in error. This bench mark is on the base of the old lighthouse, which is in bad condition and has probably been changed by ice jams or the collision of a vessel. The plane was established from the mean of the low waters read during 1918, on tide staff No.3, established by the HYDROGRAPHER. Tide staffs No.1 and 2, established by the same party, do not seem to have been connected with B. M. No.1 by levels, and therefore could not be used in establishing the plane. This plane, as established by readings in 1918, differs by 0.5 foot from the plane obtained by using the height of B. M. 1 as furnished. Two additional bench marks were established as described in the tide book.

The original tide readings at Thimble Shoal Lighthouse, previous to Oct. 25, were forwarded as a part of the records of the sheet done by the HYDROGRAPHER, but copies of readings on days when work was done by the MATCHLESS are forwarded as a duplicate volume. The first volume of readings at York Spit Lighthouse were a part of the records of the York River sheet, done by Captain Latham.

COAST PILOT - The description of this area in Atlantic Coast Pilot, Section C, pp 150 and 151, is correct, with the following additions. There are a wharf and several small houses on the western end of Northend Point; a basin about $\frac{1}{4}$ mile long has been formed in the end of the point by sand dredging. The depth in the basin is sufficient for motor boats. The point of land between the southwest and northwest branches of Back River is occupied by Langley Field, a large aviation station, which is connected with Hampton by electric line. A channel has been partially dredged to a depth of 10 feet along the southeast side of Langley Field, but no work has been done in several months, and the completion of the channel is uncertain. A fixed bridge crosses Southwest Branch of Back

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River about $\frac{3}{4}$ mile above its entrance.

CHART CORRECTIONS - The two tripods formerly marking the north side of the dumping ground, and the windmill charted on Willoughby Spit are no longer in position.

Respectfully,

(L. A. Potter)

Jr. H. & G. Engineer, C. & G. Survey,

Chief of Party.

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WFC-PCH/K

January 31, 1919.

From: The District Engineer, Norfolk, Va.

To: L. A. Potter, Jr. Hyd. and Geo. Engineer, C. & G. Survey,
Commanding Schooner MATCHLESS,
Hampton, Virginia.

Subject: Dumping Ground; and soundings at Newport News Middle Ground.

1. Referring to your letter of January 24, 1919, inclosing a tracing from a section of a hydrographic sheet done by you during October, 1918, and January, 1919, showing soundings over the dumping ground on the south side of the Thimble Shoal channel, approach to Hampton Roads, and asking to be advised what part of this area is still being used as a dumping ground, etc., I have to state that the dumping ground east of Fort Wool, shown on chart No. 400, is still used, and a little more area to the south has been taken in. But, in comparing your recent soundings with the chart, only such a slight difference is noted that it is believed no change in size of area is necessary. The tracing which accompanied your letter referred to above is returned to you herewith.

2. I am forwarding to you, under a separate cover, in compliance with your request for a blue-print of the dredged channel leading northward of Newport News Middle Ground, a white print showing soundings over Newport News Middle Ground. This map was made some years ago, but is the most recent map we have of this section.

Peter C. Hains.

PETER C. HAINS,
Major General, U. S. Army, Retired,
District Engineer.

1 inclosure (Tracing, not mkd.) accomp.
1 inclosure (B.P. of 6/1 Hamp.R.)
under sep. cover.

POST-OFFICE ADDRESS: U.S.S.Matchless... Hampton, Virginia

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

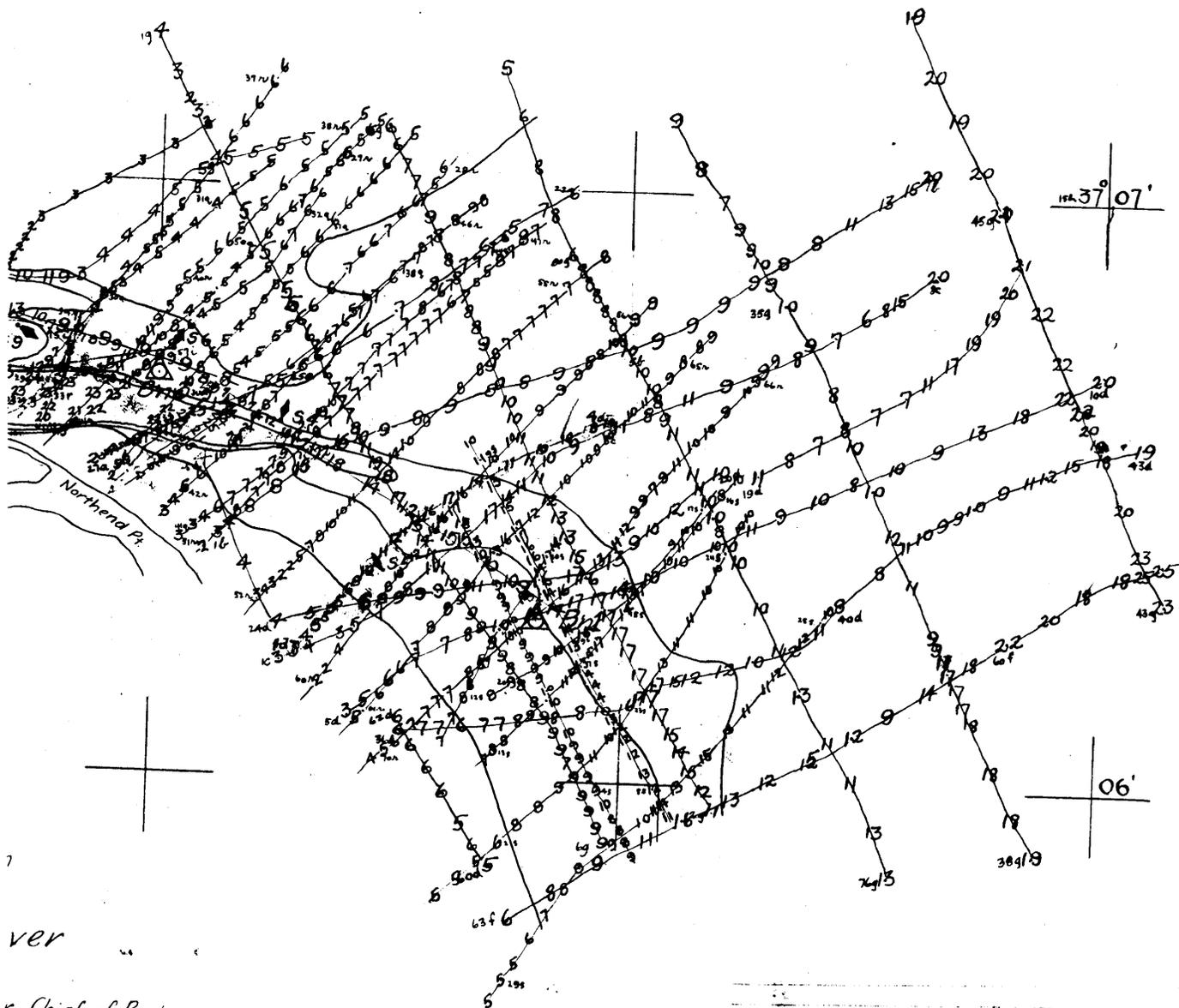
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

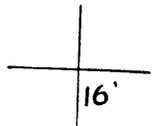
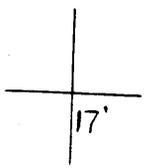
February 10 1919

Date.....	Letter	Volume	Positions	Soundings	Miles Statute	Vessel
Sept. 17 1918..	a	1	70	646	13.0	Launch
" 18 "	b	2	10	112	2.5	"
" 19 "	c	1	63	647	17.0	"
" 20 "	d	2	62	562	12.0	"
" 23 "	e	2	79	715	24.3	"
" 24 "	f	1	86	790	26.0	"
" 25 "	g	2	84	642	32.2	"
" 26 "	h	3	77	791	23.0	"
" 27 "	i	3	68	603	17.3	"
Oct. 15 "	j	4	43	482	12.7	"
" 16 "	k	4	21	219	6.3	"
" 17 "	l	4	79	853	24.3	"
" 18 "	m	4	67	567	19.5	"
" 21 "	n	5	6	24	0.8	"
" 23 "	p	5	93	773	23.4	"
" 24 "	q	5	73	682	18.0	"
" 28 "	r	6	87	788	22.0	"
" 29 "	s	5	56	428	12.1	"
" 30 "	t	6	106	692	28.7	"
Jan. 7 1919	u	7	64	468	14.3	"
" 8 "	v	7	71	489	13.9	"
" 9 "	w	7	15	112	3.5	"
" 10 "	x	7	50	260	6.7	"
" 11 "	y	7	46	314	9.2	"
" 14 "	z	7	12	40	1.5	"
Total.....			1488	12,899	384.2	

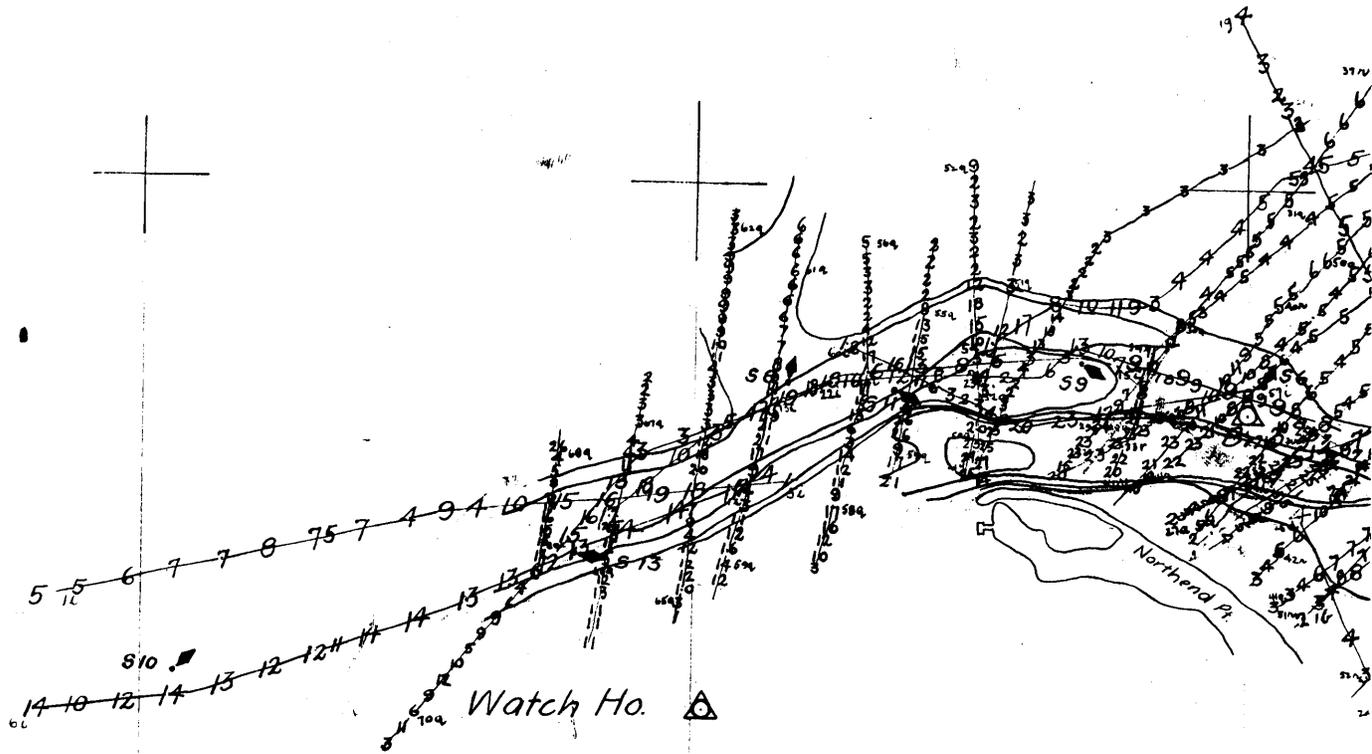


ver
 Chief of Party

Back River Lt. Sta. \triangle



$\frac{37^{\circ} 05'}{76^{\circ} 15'}$



Soundings Taken
at
Entrance to Back River

September, - 1918
October,

L.A. Potter, Chief of Party

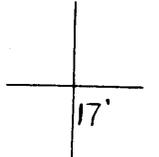
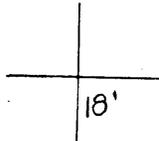
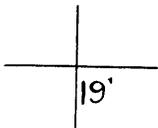
Preliminary Field Information

Subject to Correction

Forwarded to assist in verification
of hydrographic sheet.

Preliminary tidal plane.

Back



LIBRARY

Place with descriptive report
of hydrographic sheet No. 4040

ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 41-EMK

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

Drawing Section. *F*

April 29, 1919.

Division of Hydrography and Topography: *✓* *Her*

Division of Charts: *✓*

Tidal reductions have been approved in
7 volumes of soundings for

HYDROGRAPHIC SHEET 4040

Chesapeake Bay, York River to Hampton Roads, Va.
L. A. Potter 1918 - 1919,

Plane of reference is
Mean low water, reading

2.0 ft. on staff #2 at York Spit Lighthouse.
5.6 ft. on staff at Northend Point.
3.9 ft. on staff #3 at Thimble Shoal Lighthouse.
2.4 ft. on staff #4 at Thimble Shoal Lighthouse.
3.9 ft. on staff at Old Point Comfort.

L. P. Shidy

Acting Chief, Section of Tides
and Currents.

Hydrographic Sheet No. 4040.
Chesapeake Bay - West side. York River to Hampton Roads.
"Virginia"

The work on this sheet was protracted in whole and pencil plotted in part by the field party; The work has been carefully verified and the protracting found to be quite correct; ^{28 P.S.} The plotting however was not as good as it might have been and would appear to be due to a lack of experience by the draftsman he having apparently lost sight of the fact that the time as entered in the records was for the purpose of approximately locating each sounding.

The work of the field party is considered good although quite open but appears to develop the shoals and channels satisfactorily.

Crossings are in most cases good and coincide but in a few cases they do not coincide and it does not appear possible to reconcile the differences.

The entrance to York River was compared with a previous survey Sheet No. 2862 and the curves adjusted to suit conditions of both sheets.

The entrance to Hampton Roads cannot be finally adjusted until Sheets Nos. 4077 + 4078 are completed and approved.

Conditions at Thimble Shoal Light and vicinity cannot be definitely settled until Sheet No. 3923 is finally approved.

John D. Torrey
6/20/19.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4040

State Virginia.

General locality Chesapeake Bay, west side.

Locality York River to Hampton Roads.

Chief of party L. A. Potter.

Surveyed by W. H. Overshiner and H. P. Odsey.

Date of survey Sept. 18, 1918⁸ to Jan. 11, 1919.

Scale 1:20000.

Soundings in feet.

Plane of reference Mean low water.

L.M. Gelber

Protracted by H.P. Odsey. Soundings in pencil by L.M. Gelber

C.E. Christopherson

Inked by J. D. Torrey. Verified by J. D. Torrey.

Records accompanying sheet (check those forwarded):

Des. report, 6 Tide books, _____ Marigrams, 2 Boat sheets,

7 Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet 1 blue print, dredged.

channel to Langley Field.

Remarks:

Review of hyd. sheet No. 4040
York River to Hampton Roads
L.A. Petter, Chief of Party
Surveyed by W. H. Overshiner, G. Olsen, and H. P. Odessey
in 1918

The character and scope of the survey are in accordance with the instructions.

The operations are subject to the following criticisms:

The failure of sounding lines to follow the scheme of development, resulted in unnecessary duplication in places and gaps in others.

The protracting was not well done. Lines which were erroneously plotted crooked on the smooth sheet were passed over without any attempt at rectification, although they were plotted correctly on the beat sheet.

In plotting soundings the spacing was frequently not based on the time interval.

The positions on the sheet were not numbered on the sheet as directed by paragraph 328 of General Instructions.

Remarks in the sounding books relative to beginning and ending of lines should be in the column at extreme right of page. Only in a few instances did the notes indicate the beginning and ending of the lines as specified in par. 295 of General Instructions.

The party organization and information notes were not recorded on "e", "n", and "r" days.

In about one-half the records the exact time of sounding was not given. See par. 305 of General Instructions.

Running the sounding line some time before taking the first angle and continuing the line after taking the last angle, as was often done in this survey, is a departure from the usual practice and seems to have more objections than merits. This is particularly of the inshore ends of the lines.

The beat sheets should be destroyed as soon as the sheet is approved.

The descriptive report is an excellent one.

August 3, 1919.

E. P. E.