

7885

Diag. Cht. No. 77-3

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. CO-1750 Office No. H-7885

LOCALITY

State MARYLAND

General locality NANTICOKE RIVER

Locality WETIQUIN CREEK TO MARSHALL POINT

1945

CHIEF OF PARTY

John Bowie, Jr.,

LIBRARY & ARCHIVES

DATE JAN 21 1952

B-1870-1 (1)

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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-7885

Field No. CO-1750

State MARYLAND

General locality NANTICOKE RIVER

Locality WETIPQUIN CREEK TO MARSHALL POINT

Scale 1:10,000 Date of survey August - Sep't. 1950 to Oct.

Instructions dated 28 February 1949

Vessel Ship COWIE

Chief of party John Bowie, Jr.

Surveyed by J. Bowie, Jr. & H.D. Reed.

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

Fathograms scaled by Personnel of Ship COWIE

Fathograms checked by " " " "

Protracted by A.G. Atwill

Soundings penciled by A.G. Atwill

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.

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DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H -7885 FIELD NO. CO-1750

NANTICOKE RIVER, MARYLAND

PROJECT CS-287

SCALE - 1:10,000

SHIP COWIE

John Bowie, Jr., Comdg.

A. PROJECT:

Project CS-287. Amended instructions dated 28 February 1949.

B. LIMITS AND DATES:

The area covered by this survey lies wholly in the Nanticoke River. The southern boundry is at Lat. $38^{\circ} - 20'$ and continuing north in the river to the northern limits at approximate Lat. $38^{\circ} - 25.3'$. Junction is made with 1950 surveys ^{H-7884} CO-1650 at the southern limits and ^{H-7886} CO-1850 at the northern limits. Field work was accomplished during the period 22 September - 25 October 1950 inclusive.

C. VESSELS AND EQUIPMENT:

30' Launch #102 and 25' Skiff #737 were used on this survey, both operating from the Ship COWIE. Launch #102 using 808 type fathometer #63 was used in deep water, Channels and inshore to an average depth of 6 ft. In addition the launch was also used in some of the larger creeks. The skiff was used in the shoal water areas close to the shoreline and in the remaining creeks. Hand lead and pole were used in sounding from the skiff.

D. TIDE AND CURRENT STATIONS:

Portable automatic tide gages were maintained at Roaring Point during the time operations were conducted in the south end of the area covered by this survey. Later as the work progressed up the river a portable automatic gage was established and maintained at Vienna.

(See tide note with this report).

No current stations were occupied in the area.

E. SMOOTH SHEET:

Projection ^{was} ~~will be~~ constructed and sheet plotted in the Norfolk Processing Office.

F. CONTROL STATIONS:

Triangulation Stations GOVER, 1907 and EARLE, 1907 were recovered and used.

Topographic stations used are from air photo surveys T-8106 and T-8121. The positions of stations ADA and N.W. Corner of Old Sandy Hill Wharf, were found to be in error and they were relocated in the field using hydrographic methods.

Hydrographic stations were located by intersection of sextant cuts or by three point sextant fix and check angle. Control was satisfactory after the topo stations mentioned above were relocated. (See Vol. I, Launch sounding records, for list of signals and tabulation of cuts and fixes).

G. SHORELINE AND TOPOGRAPHY:

Shoreline on the boat sheet ^{and smooth sheet} was transferred from the air photo compilations covering this area (T-8106, T-8120, T-8121) and is generally satisfactory. Erosion of the shoreline was not as apparent in this comparatively narrow stream as in the more open areas to the south. Some differences in the shoreline were noted while the survey was in progress that will probably require adjustment when plotting the smooth sheet. They are: (1) Long Point and shoreline southwestward to the mouth of the first creek. Signal LONG is on the point at the high water line and the line of soundings running SW along the shoreline is closer in than it plots on the boat sheet, averaging about 10 meters off the high water line. In this area the deeper water extends to within about 5 meters of the high water line. See boat sheet, Pos. 78 - 82, "c" day, skiff #737. (2) Chapter Point: Position 106c, Launch 102 plots inshore from HWL on boat sheet. Believe shoreline is in error here and ^{should} ~~shall~~ be adjusted when plotting smooth sheet. Launch was about 10 meters off shore at this position. (3) Penknife Point: Signal PEN is on the point at the HWL. Shoreline should be adjusted to fit position of signal.

shoreline revisions indicated below

(1) shoreline corrected

(2) adjusted position on smooth sheet indicates no change

(3) shoreline corrected

There is a minor change in the shoreline at the mouth of the first creek north of Penknife Point. This is noted on the boat sheet.

shoreline corrected

Signal ABE is located on the HWL. Shoreline should be adjusted to fit position of signal.

Except for some minor changes in some of the creeks, it is not believed that any further adjustment of the shoreline will be necessary.

no other changes were indicated

H. SOUNDINGS:

Depths were measured with the 808 type recording fathometer, hand lead and pole. Bar checks were taken daily from the launch. Fathometer corrections have been determined from the bar checks and entered in the sounding volumes by the field party.

I. CONTROL OF HYDROGRAPHY:

Sounding lines were controlled by three point sextant fixes on shore objects except when sounding in some of the creeks where it was not possible to obtain a fix. In such cases positions were marked at identifiable points in the shoreline and noted in the sounding record. After relocation of several of the topographic stations, three point fix control gave satisfactory results. (See PP "F" above). It was necessary to replot some of the hydrography after the above signals were relocated. (See boat sheets).

J. ADEQUACY OF SURVEY:

This survey is considered complete and adequate to supersede prior surveys for charting. Junctions with adjoining surveys are satisfactory and no holidays or excessive differences exist. Depth curves can be adequately drawn.

K. CROSSLINES:

About 5% of crosslines were run except in the narrow section of the Nanticoke River near the northern limits of the sheet. Satisfactory crosslines were obtained.

L-M. COMPARISON WITH PRIOR SURVEYS: CHART:

Preliminary Review Item (Chart 1224, 7/17/50)

(1) Controlling depths in dredged channels.

A 9 foot dredged channel is shown on chart 1224 extending approximately from Oyster Bar Light northeastward to the vicinity of Nanticoke River Upper light. A spur channel with a depth of 5 ft. is shown extending from the main channel into the mouth of Wetipquin Creek. A least depth of ¹¹~~10~~ feet was found in the approximate area occupied by the 9 ft. channel on the chart. A least depth of 4 feet was found from this channel to the ^{mouth}~~mouth~~ of Wetipquin Creek.

channel not visible on fathograms & has been deleted from Chart 1224

11 ft. controlling depth has been applied to the chart

(20) Ruins of Pier.

The remains of this old pier were found to be still in existence Sep't. 1950 and correctly shown on the chart. (See boat sheet).

lat. 38°21.3'
long. 75°51.3'

Due to the small scale of the chart and the narrow width of the river in this area only a general comparison could be made between the survey and chart. This showed that the width and controlling depths of the river channel as determined by this survey are approximately in agreement with the information shown on the chart. Some ^{scouring}~~scumming~~ was noted in the channel especially in the vicinity of LONG, CHAPTER AND PENKNIFE POINTS. A narrow trench of relatively deep water was found close inshore to the SW of Long Point and extending for about ^{1 1/2} miles in length. A narrow channel with a controlling depth of 7 feet was found to have ^{almost} cut through the shoal area to the north of the mouth of Wetipquin Creek. This leaves a narrow ~~isolated~~ shoal extending ^{SW to} ~~NE of~~ Nanticoke River Upper Light. ~~for a distance of about 1/2 mile.~~

Review, par. 5

channel does not cut through shoal area

N. DANGERS AND SHOALS:

N. DANGERS AND SHOALS:

Except as noted above no new dangers or shoals were found in the area covered by this survey.

O. COAST PILOT NOTES:

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

P. AIDS TO NAVIGATION:

The following fixed aid to navigation in this area was relocated by hydrographic methods and has been reported on Form 567. Nanticoke River Upper Light - (Lat. $38^{\circ} - 20.33'$ - Long $75^{\circ} - 53.0^{02}'$) (Note: This light was located on Sheet ^{H-7884} CO-1650 and transferred to this sheet).

new location
approximately
15m. from
former position

No floating aids to navigation are in the area covered by this survey.

Q. LANDMARKS FOR CHARTS:

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

R. GEOGRAPHIC NAMES: *LSY*

Geographic names for this area ~~are~~ shown on Charts 1224, 77 and War Department Topographic Quadrangle; "Mardela Springs, Md." are adequate and no additional names are recommended.

U-Y. MISCELLANEOUS:

A duplicate was made of the boat sheet for this survey so that both sounding vessels could be in operation at the same time.

U-Y. MISCELLANEOUS: (CONT.)

The hydrography from the southern limits of the survey ~~is plotted~~ to approximate latitude $38^{\circ} - 22.5'$ is plotted on the duplicate ^{boat} sheet. The hydrography from the above latitude to the northern limits of the survey is plotted on the original boat sheet.

In the greater part of the area covered by this survey, the soundings are plotted every 30 seconds instead of every 15 seconds. This was done due to the relative lack of underwater features in the area and to save time. Intermediate soundings were plotted when needed to define underwater features. All intermediate soundings are recorded in the sounding volumes.

In featureless flat areas, spacing of sounding lines was increased to 180 meters. This was done in accordance with Paragraph 9 of the Instructions.

Z. TABULATION OF APPLICABLE DATA:

Coast Pilot Report - Forwarded To Washington Office 15 Nov. 1950

Form 567 ~~First~~ ^{Fixed} Aids to Navigation - Forwarded to Washington Office.

Harry D. Read, Jr.
Harry D. Read, Jr.,
Lieut., USC&GS.

*Approved and Forwarded
See Season's Report
John Bowie, Jr.
Comdr., USN
Comdg. Ship COWIE*

COPY

Department of Commerce
U.S. Coast and Geodetic Survey
Washington 25

Refer to No. 76-mkl

26 November 1951

To: Supervisor, Southeastern District
U. S. Coast and Geodetic Survey
Room 418, U. S. Post Office Bldg.
Norfolk 10, Virginia

Subject: Marked Topographic Stations, Air Photo Compilations -
T-8119, T-8120 and T-8121

New positions have been determined on two of the topographic stations in question, and verification of stations TRANS 1942, and GRAYS 1942 indicate slight chance of error in these positions.

In the case of FAN 1942, two sites were selected and the positions scaled for a possible solution to your problem. The definition of detail on the ratio prints used is extremely poor and the position should be used with caution.

A new position for marked station ADA, 1942 is submitted from and office selection since there is a definite chance for error in the field inspection of this point. A fork in the stream which falls approximately 100 meters East seems a likely selection but nevertheless should be used with caution even though the field photograph indicated a fork farther inland.

New positions:

ADA, 1942	38° 22'	735 meters	| sextant location used, see Vol. # 1, page 3
	75° 52'	405 meters	
FAN, 1942			| not applicable to this survey
site "A"	38° 20'	337 meters	
	76° 00'	1447 meters	
site "B"	38° 20'	347 meters	
	76° 00'	1394 meters	

/S/ Robert W. Knox

Acting Director

STATISTICS

FOR HYDROGRAPHIC SURVEY H-7885 FIELD NO. CO-1750

SHIP COWIE - PROJECT CS-287

DATE 1950	DAY	VOL. No.	STAT. MI. HYDRO	POS.	HL&P.	BAR CK.
Launch #102						
9/22	a	I	15.3	83	-	1
9/25	b	I	19.0	98	-	1
9/26	c	I-II	36.8	202	-	1
10/10	d	II	25.9	132	-	1
10/11	e	II-III	23.8	135	-	1
10/17	f	III	4.8	28	-	1
			TOTALS:	125.6	678	6

Skiff #737						
9/25	a	IV	13.0	88	567	-
9/26	b	IV	18.2	142	744	-
9/27	c	IV-V	11.4	92	467	-
10/12	d	V	10.7	75	456	-
10/25	e	V	7.1	54	319	-
			TOTALS:	60.4	451	2553
GRAND TOTALS :			186.0	1129	2553	-

Area - 6.2 Sq. Stat. Mi.

TIDE NOTE

HYDROGRAPHIC SURVEY H -7885 FIELD NO. CO-1750

Portable automatic tide gages in the Nantlooke River at Roaring Point (Lat. $38^{\circ} - 15.72'$ Long. $75^{\circ} - 55.2$ ^{16'}) and Vienna (Lat. $38^{\circ} - 28.9$ ^{88'}, Long. $75^{\circ} - 49.5$ ^{48'}) were used for obtaining tide reducers for this survey.

Height of MLW at the Roaring Point gage was 0.9 feet above zero on the tide staff and at the Vienna gage MLW was 2.8 feet above zero on the tide staff.

Tide reducers were obtained from the Roaring Point gage from the start of this survey on 22 Sep't. 1950 through 27 Sep't. when hydrography had been extended from the southern limits of the survey to the vicinity of Penknife Point (Approx. Long $75^{\circ} - 50.5$ ¹). This gage was then dismantled due to the base of operations being moved from Crisfield, Md. to Cambridge, Md. For the remainder of the survey reducers were obtained from the gage at Vienna, Md.

Hourly heights were scaled from the marigrams by personnel of the Ship COWIE. No time or height corrections were applied to the observed tides when obtaining reducers for this survey.

FATHOMETER CORRECTIONS

Hydrographic Survey H-7885 Field No.1750
Project CS-287

A-day (Fathometer No.63, Mod.808)

Depths 7.0 ft. and over add 0.2 ft. corrections.

B-day ----- no corrections

C-day (Fathometer No.____ Mod.808)

Depths	Corrections
0.0- 7.0	0.4
7.1-25.0	0.0
25.1-30.0	-0.2
30.1-over	-0.4

D-day (Fathometer No.____ Mod.808)

Depths	Corrections
0.0- 7.0	0.4
7.1-22.9	0.0
23.0-28.0	-0.2
28.1-over	-0.4

E-day (Fathometer No.____ Mod.808)

Depths	Corrections
0.0-5.0	0.6
5.1-7.0	0.4
7.1-9.0	0.2
9.1-over	0.0

F-day (Fathometer No.____ Mod. 808)

Depths	Corrections
0.0-7.0	
Time	
0919-1334	0.0
1335-end	0.2
7.1-15.0	0.0
15.1-over	
Time	
0919-1334	0.2
1335-end	0.0

LIST OF SIGNALS
To Accompany

HYDROGRAPHIC SURVEY H-7885 (Field No. Co-1750)

TRIANGULATION STATIONS

EARLE	EARLE, 1907-42
GOVER	GOVER, 1907-42

MARKED TOPOGRAPHIC STATIONS

BARN	SHORE GABLE YELLOW BARN, 1942	T-8106
SILO	TOP BRICK SILO, 1942	T-8106
IDA	IDA, 1942	T-8106
JOE	JOE, 1942	T-8106

HYDROGRAPHIC STATIONS

Abe	Vol. 1, pg. 3 - Vol. 5, pg. 41
Ada	" " " " (Sextant location of Marked Topo. Sta. ADA, 1942)
Long	" " " "
Mit	" " " "
Mug	H-7884
Up	H-7884
New	H-7884
Old	Vol. 2, pg. 20 (Sextant location of N.W. corner Old Sandy Hill Wharf)
Oyster	H-7884
Peg	H-7884
Pen	Vol. 1, Pg. 3
Rim	" " " "
Wet	H-7884

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-7885 (Field No. Co-1750)

SOUNDINGS

The agreement between pole and fathometer soundings is noticeably better on this survey than was found on others in this area. This agreement is generally good and the maximum apparent discrepancy at junctions is one foot.

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer.

Norfolk, Va.
15 January 1952

Approved & Forwarded:

Earl O. Heaton
Earl O. Heaton
Supervisor, SE Dist.

GEOGRAPHIC NAMES

Survey No. H-7885

Name on Survey	Source of Name									
	A	B	C	D	E	F	G	H	K	
<u>Maryland</u>									B.G.N.	1
<u>Nanticoke River</u>										2
<u>Wetipquin Creek</u>									B.G.N.	3
<u>Dorman Ditch</u>										4
<u>Chapter Point</u>									B.G.N.	5
<u>Quantico Creek</u>										6
<u>Rewastico Creek</u>										7
<u>Bridge Therefore</u>										8
<u>Pole Point</u>										9
<u>The Inlet</u>										10
<u>Rags Therefore</u>										11
<u>Marshall Point</u>										12
<u>Peachorchard Creek</u> (it flows into north end of Wapremender Cr.)									B.G.N.	13
<u>Wapremender Creek</u>									B.G.N.	14
<u>Penknife Point</u>										15
<u>Long Point</u>										16
<u>Jacks Creek</u>										17
<u>Upper Greens Cove</u>										18
										19
										20
										21
										22
										23
<u>Roaring Point</u> (location of tide gage)										24
										25
										26
										27

Names underlined in red are approved.
1-28-52
L. Heck

ENC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

29 January 1952

Division of Charts: R. H. Carstens

Plane of reference approved in 5
volumes of sounding records for

HYDROGRAPHIC SHEET 7885

Locality Nanticoke River, Chesapeake Bay, Maryland

Chief of Party: J. Bowie, Jr. in 1950
Plane of reference is mean low water, reading
0.9 ft. on tide staff at Roaring Point
5.1 ft. below B. M. 1 (1950)

2.8 ft. on tide staff at Vienna
7.1 ft. below B. M. 1 (1950)

Height of mean high water above plane of reference is 2.3 feet.

Condition of records satisfactory except as noted below:

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

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7885....

Records accompanying survey:

Boat sheets 1(2 parts); sounding vols. .5....; wire drag vols.;
bomb vols.; graphic recorder rolls .3 Env.;
special reports, etc. 1 Descriptive Report; 1 Smooth Sheet;
.....

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

Number of positions on sheet	.....	1129
Number of positions checked	.....	50
Number of positions revised	.....	2
Number of soundings revised (refers to depth only)	.....	6
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	2
Topographic details	Time	2 hr
Junctions	Time	2 hr
Verification of soundings from graphic record	Time	5 hr

Verification by J. T. Gillahan Total time 145 hr Date May 29-52

Reviewed by A. J. Hoffman Time 23 hrs Date 8/22/52

Stini 6 hrs

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

REGISTRY NO. H-7885

FIELD NO. CO-1750

Maryland, Nanticoke River, Watipquin Creek to Marshall Pt.

Project No. CS-287

Surveyed in September - October 1950

Scale 1:10,000

Soundings:

808 Fathometer
Handlead
Sounding Pole

Control:

Sextant fixes on shore signals
Estimated distances from shore

Chief of Party - J. Bowie, Jr.
Surveyed by - J. Bowie, Jr. and H. D. Reed
Protracted by - A. G. Atwill
Soundings plotted by - A. G. Atwill
Verified and inked by - J. T. Gallahan
Reviewed by - A. J. Hoffman, 3 September 1952
Inspected by - R. H. Carstens

1. Shoreline and Signals

Air-photographic surveys T-8106, T-8120 and T-8121 of 1942 cover the area of the present survey. Minor shoreline revisions were noted during the present survey and are shown on the smooth sheet. The present survey delineation should supersede the topographic delineation of these features.

The source of the signals is given in the Descriptive Report. A redetermination of several topographic stations by the field party was necessary in order to provide adequate control for the survey.

2. Sounding Line Crossings

Depths at crossings are in good agreement. In a few instances, handlead and pole soundings were 1 ft. deeper than fathometer soundings because of sounding in soft mud.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. Only small portions of the low-water line were determined by the regular sounding lines, which were run as close inshore as the range of tide and the draft of the boat permitted. The 3, 24 and 36-ft. curves have been added to emphasize bottom relief.

The bottom over most of the area is smooth except for several channel deeps.

A natural channel traverses the area and ranges in depth from 11 to 56 ft.

4. Junctions with Contemporary Surveys

The present survey junctions adequately with H-7884 (1950) on the south and with H-7886 (1950) on the north.

5. Comparison with Prior Surveys

H-673 (1858) 1:20,000

A comparison between the prior and the present survey reveals that changes have occurred in the river bottom. A shift in the position of the channel deep has occurred in lat. $38^{\circ} 23.14'$, long. $75^{\circ} 50.40'$ where prior depths of 46-ft. (charted) fall in present depths of 15-ft. Comparable present depths fall 150 meters to the northwest. Shoaling has occurred in lat. $38^{\circ} 22.90'$, long. $75^{\circ} 50.53'$ where prior depths of 4-ft. (charted) fall in present depths of 1-2 ft., and in lat. $38^{\circ} 20.15'$, long. $75^{\circ} 53.93'$ where prior depths of 11-ft. (charted) fall in present depths of 4-5 ft. Scouring of the bottom north of Hatcrown Point has caused the shoal to recede about 200 meters southeastward, and as a result in lat. $38^{\circ} 20.40'$, long. $75^{\circ} 53.02'$ present depths of 7-ft. now fall in prior depths of 4 ft.

The present survey is adequate to supersede the prior survey in the common area.

6. Comparison with Chart 77 (Print date 11/26/51)
Chart 1224 (Print date 8/4/52)

a. Hydrography

Charted hydrography originates entirely with the previously discussed survey which needs no further consideration.

The present survey supersedes the charted information.

b. Aids to Navigation

There are no floating aids to navigation in the area. No new features dangerous to navigation were revealed by the survey.

c. Dredged Channel

The charted controlling depth of 5 ft. in the dredged channel extending southwestward from lat. $38^{\circ} 20.5'$ is from advance information of the present survey contained in Chart Letter 71, 1951. This depth is superseded by 11 ft. shown on the smooth sheet.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was very well done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

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

Examined and approved:



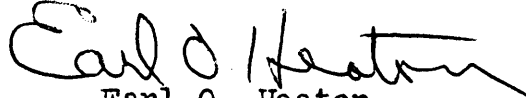
H. R. Edmonston
Chief, Nautical Chart Branch



H. Arnold Karo
Chief, Division of Charts



L. S. Hubbard
Chief, Section of Hydrography



Earl O. Heaton
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7885

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3/26/53	1224 Reconst.	<i>JJE</i>	Before After Verification and Review
1/10/55	H.L. 554	John M. McAlinden	Before After Verification and Review
10-27-55	77	<i>JFWalsh</i>	Before After Verification and Review <i>Examined - not applied</i>
2/27/64	77	O. Svendsen	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.