

7184

Diag'd. on diag. ch . No. 1221

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey ... HYDROGRAPHIC

Field No. CO-5447 Office No. H-7184

LOCALITY

State ... VIRGINIA

General locality ^{Little} Machipango Inlet

Locality ... Unshur Bay

1947

CHIEF OF PARTY

Ronald R. Moore

LIBRARY & ARCHIVES

DATE ... OCT 1 1947

B-1870 (1-47)

7184

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 27184

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-7184

Field No. CO-5447

State VIRGINIA

General locality LITTLE MACHIP/NGO INLET

Locality UPSHUR BAY

Scale 1:5000 Date of survey JULY 10, 24, 1947

Instructions dated 22 APRIL 1947

Vessel SHIP COWIE

Chief of party RONALD R. MOORE

Surveyed by R. C. ROWSE, C. A. SCHOENE

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

Protracted by W.W. Williamson

Soundings penciled by W.W. Williamson

Soundings in fathoms feet at MLW MLLW

REMARKS: This survey was processed in the Hydrographic Section of the S.F.

District at Norfolk, Va.

DESCRIPTIVE REPORT

to accompany

Hydrographic Sheet H-7184

Field No. CO-5447
Office No.

Scale 1:5000

Ship COWIE

Ronald R. Moore, Comdg.

- A. This survey was made under Supplemental Instructions for Project CS-330 (c) dated 22 April 1947 at the request of the U.S. Engineer Department, Norfolk Office. ✓
- B. This area surveyed is designated as Sandy Is. Channel, vicinity of Quinby, Little Machipongo Inlet between latitudes $37^{\circ}30.2'$ and $37^{\circ}33.2'$ and longitudes $75^{\circ}42'$ and $75^{\circ}43.75'$. It includes the deep slue jutting into Upshur Bay from Sandy Is. Channel, and the mud flats on either side. ✓
- C. This survey was made by the 25 foot skiff equipped with an 808 type recording Fathometer, supplemented with pole soundings at intervals. ✓
- D. A portable automatic tide gage was established at the southern end of Revel Creek and was in operation during the entire period of the survey. A value for the datum of mean low water was furnished by the Washington Office based on 15 days record. Mean low water on the staff was 1.4 ft. ✓
- A tide staff was established in Latitude $37^{\circ}32.05'$ Longitude on $75^{\circ}43.6'$ the western side of the slue in Upshurs Bay and the staff read during the period of sounding at half hour intervals. The value for the datum of mean low water as furnished by the Washington Office was 1.1 ft. ✓
- E. The smooth sheet was plotted by the Norfolk Processing Office. ✓
- F. The control for this sheet was based on triangulation stations AYER 3 and SAND. With these stations and Topographic Station MIT (1942) the signals used were located by graphic control, which was executed by Lieut. John Bull of the Ship BOWEN. ✓
- G. No topography was done except in the vicinity of the stations used in the graphic control. The shore line should be taken from the air photo topographic sheets. See review, par. 1. ✓
- H. Soundings were obtained with an 808 type recording fathometer supplemented by pole soundings as a check. Bar checks were taken in deep water, at least one each day, and curves drawn from which to obtain the fathometer corrections. Additional bar checks were omitted on account of the distance to be run to deep water. ✓

- I. The positions of soundings were controlled by three point fixes taken on the average at $1\frac{1}{2}$ minute intervals. The signals used were located as described in F. above. ✓
- J. This survey is complete and adequate to supersede^s all prior surveys in this area for charting. There are no holidays or excessive differences. In general the spacing of sounding lines is approximately 50 meters in areas over 6 feet deep, and approximately 100 meters in areas under 6 feet. ✓
- K. The percentage of crosslines is approximately 8%. Crossings are in good agreement in so far as predicted tides were used for the plotting of soundings. The agreement is better in the channels than on the flats which are studded with irregularities. Note: It is known that on two days the reducers used are in error by at least a foot. (a and b days) ~~(Correct reducers produced no discrepancies)~~
(Crossings adequate with correct reducers) ✓
- L. No previous surveys of this area were furnished this party. ✓
A comparison with Sheet No. 21, scale 1 inch - 400 ft., "Inland ^{Sp.} 31243 (1937) Waterway, Chesapeake Bay to Chincoteague Bay" made by U. S. Engineer Department in 1937 shows good agreement where the present survey joins the older one. However, only a small area is common. ✓
- M. A comparison with Chart No. 1221, print date August 24, 1946 shows good agreement. ✓
- N. No new dangers to navigation were found. ✓
- P. There are no aids to navigation on this sheet. ✓

Ronald R. Moore

H-7184 (1947)

LIST OF SIGNALS

Triangulation Stations.

AYER 3 (1933,34,42)

SAND (1933,34,42)

Stations located by Graphic Control.

Bat	OAT
BOY	FIN
GAB	WAT
INK	ZED

Recoverable Topographic Station. - MIT 1942

Hydrographic signals (Sextant Fix)

DON, FIR, GAG (Tide Staff) Vol. 1

TIDAL NOTE

A portable automatic tide gage was installed in the southern end of Revel Creek by the party of the Ship STIRNI, which operated continuously from 10 July to 24 July. Mean low water corresponds with a height of *1.4 ft.* on the tide staff.

A tide staff was established in Lat $37^{\circ}32.05$ Long $75^{\circ}43.6$ in Upshur Bay. This was read by the ship's personnel during the hours that hydrography was being done. Mean low water corresponds with a height of *1.1 ft. on the tide staff.* Soundings in Sandy I. Channel south of Lat. $37^{\circ}30.5$ should be corrected from the Revel Creek gage, while the soundings in Upshur Bay north of the above latitude should use reducers from the Upshur Bay Tide Staff.

STATISTICS H-7184

DATE	DAY	VOL.	NO. POS.	VESSEL.	STAT. MILES	SOUNDINGS
1947						
7/10	a	1	26	Skiff	2.7	
7/16	b	1	82	Skiff	8.0	
7/17	c	1	170	Skiff	18.3	
7/22	d	1	55	Skiff	6.0	
7/22	d	2	79	Skiff	14.5	
7/23	e	2	186	Skiff	22.6	
7/24	f	2	64	Skiff	6.7	
7/24	f	3	136	Skiff	20.1	
Totals		3	798		98.9	

Total Area - 2.3 Sq. Stat. Miles

ADDENDUM

to accompany

HYDROGRAPHIC SURVEY H-7184 (Field No. CO - 5447)

Note: The corrections and additions shown in red on the preceding pages of this report were made at the Norfolk Processing Office.

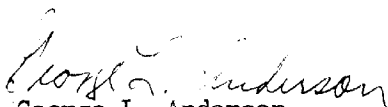
Shoreline: Latitude 37°30.75' and longitude 75°43.25'; latitude 37°30.10' and longitude 42.45'. Attention is directed to the "minus" soundings which plot on land. Attention is also directed to the Discrepancies apparent discrepancy between the graphic control delineation of adjusted during verification and review. shoreline and that obtained from an enlarged print of airphoto compilation T-8440.

Respectfully submitted,


Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
September 24, 1947

Approved and Forwarded


George L. Anderson
Supervisor S.E. District

GEOGRAPHIC NAMES

Survey No.

17184

Name on Survey

Name on Survey	Source										Number	
	A	B	C	D	E	F	G	H	K			
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List				
Virginia				(for title)						USGB	1	
Little Great Machipongo Inlet			"	"							2	
Upshur Bay										USGB	3	
Sandy Island Channel											4	
Quinby											5	
<u>Sloop Channel</u>											6	
											7	
				Names underlined in red are approved								8
				2/19/48								9
											10	
<u>Revel Creek</u>				(location of tide staff)							11	
											12	
											13	
											14	
											15	
											16	
											17	
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											27	

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7184

FIELD NO. CO-5447

Virginia, Little Machipongo Inlet, Upshur Bay
Surveyed in July 1947
Project No. CS-330
Scale 1:5,000

Soundings:

808 Fathometer
Pole

Control:

Sextant fixes on shore signals

Chief of Party - R. R. Moore
Surveyed by - R. C. Rowse, C. A. Schoene
Protracted by - W. W. Williamson
Soundings plotted by - W. W. Williamson
Verified and inked by - G. S. Hilliard
Reviewed by - T. A. Dinsmore, December 8, 1948
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with T-8440 (1942) except the sections appearing in broken red lines which are revisions from the present survey.

The basic control is from T-8440 (1942). Eight topographic signals are from a graphic control sheet which has been subsequently destroyed. As no descriptions were furnished for signals OAT and MAT, it is presumed they are temporary. 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 except in lat. 37° 31.60', long. 75° 43.50', and lat. 37° 31.83', long. 75° 43.30', where small sloughs branching off the main channel are undeveloped.

The bottom is generally smooth in the area of the mud flats. In the natural channel extending southward through the mud flats there are several deeps of 20 to 42 feet.

4. Adjoining Surveys

No contemporary surveys by this Bureau adjoin the present survey. Charted information on the south from Corps of Engineers Bp. 31243 (1937) is in harmony with depths on the present survey.

5. Comparison with Prior Surveys

H-1104 (1871) 1:20,000

This prior survey covers the area of the present survey except for the flats which border the channel through Upshur Bay. A comparison with the prior soundings indicates that no important changes in bottom have occurred. The deeps revealed on the present survey by the 21-ft. depths in lat. $37^{\circ} 30.75'$, long. $75^{\circ} 43.09'$, the 27-ft. depth in lat. $37^{\circ} 31.48'$, long. $75^{\circ} 43.35'$, and the 35-ft. depth in lat. $37^{\circ} 31.85'$, long. $75^{\circ} 43.37'$, do not appear on the prior survey probably because of the sparse development. Minor shoaling has occurred in the southern part of the surveyed area, where portions of the low-water line in lat. $37^{\circ} 30.23'$, long. $75^{\circ} 42.35'$ and lat. $37^{\circ} 30.37'$, long. $75^{\circ} 42.07'$, show an accretion of about 100 meters.

Except for a few bottom characteristics which have been retained, the present survey is adequate to supersede the prior survey within the common area.

6. Comparison with Chart 1221 (Latest print date 6/23/47)

a. Hydrography

Charted hydrography originates with the prior survey which needs no further consideration.

The present survey, prior to verification and review, has been applied to a new drawing of Chart 1221. No comparison has been made between the present survey and the new drawing. It is pertinent to note that the delineation of the low-water line in the flats of Upshur Bay has been altered slightly by the revision of several smooth sheet soundings during verification.

b. Aids to Navigation

No aids to navigation are charted in this area. No dangers to navigation are revealed by the present survey.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete.
- b. The smooth plotting was carefully done.
- c. Two small sloughs in lat. $37^{\circ} 31.60'$, long. $75^{\circ} 43.50'$, and lat. $37^{\circ} 31.83'$, long. $75^{\circ} 43.30'$, respectively, were not developed.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions except as noted under par. 7c above.

9. Additional Field Work

The survey is considered basic except for the incomplete delineation of the small sloughs mentioned in par. 7c above. However, the sloughs are not considered sufficiently important to warrant additional work.

Examined and approved:



H. R. Edmonston
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

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7184**

Records accompanying survey:

Boat sheets .1...; sounding vols. .3...; wire drag vols. 0....;
 bomb vols. 0....; graphic recorder rolls 5....;
 special reports, etc. 1 Graphic Control Sheet A & B 1 sheet bar checks
 2 BP No. 31243 1 Triangulation diagram 1221 1 Topo. map T-8440

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

Number of positions on sheet		798..
Number of positions checked		59..
Number of positions revised		1..
Number of soundings revised (refers to depth only)		14..
Number of soundings erroneously spaced		10..
Number of signals erroneously plotted or transferred		0..
Topographic details	Time	2..
Junctions	Time	0..
Verification of soundings from graphic record	Time	5 hrs.
Verification by <i>H. L. Williard</i>	Total time	91 hrs. Date Oct. 13, 1948
Reviewed by <i>J. A. Simons</i>	Time	16 hrs. Date Dec. 8, 1948

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

15 October 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET

7184

Locality - Upshur Bay, Revel Creek, Virginia

Chief of Party: R. R. Moore in 1947

Plane of reference is mean low water, reading

1.4 ft. on tide staff at Revel Creek

6.8 ft. below B. M. 1 (1947) at Revel Creek

Height of mean high water above plane of reference is 4.0 feet

Condition of records satisfactory except as noted below:

E. C. McKay

Section
Chief, Division of Tides and Currents

NAUTICAL CHARTS BRANCH

SURVEY NO. H7184

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/20/48	1221	John M. McAlinden	Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			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.