

7157

Diag'd. on Diag. Ch. No. 77-3

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
Field No. CO-1746 Office No. H - 7157

LOCALITY
State MARYLAND
General locality Chesapeake Bay
Locality Honga River

1946

CHIEF OF PARTY

Ronald R. Moore

LIBRARY & ARCHIVES

DATE

7157

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.

REG. NO.

H7157

REGISTER No. H-7157

Field No. CO-1746

State MARYLAND

General locality Chesapeake Bay

Locality Honga River

Scale 1:10,000 Date of survey August - October 1946

Instructions dated 11 August 1945

Vessel COWIE, LAUNCH 82, LAUNCH 100

Chief of party Ronald R. Moore

Surveyed by Ronald R. Moore, Roger C. Rowse

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

Protracted by D.E. Buok

Soundings penciled by A.G. Atwill

Soundings in fathoms feet at MLW MLLW

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

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET H - 7157

FIELD NUMBER CO-1746

USC&GS COWIE

SCALE 1:1000

Ronald R. Moore, Comdg.

SURVEY BY

Ronald R. Moore
Roger C. Rowse

A. This survey was done under instructions for Project CS-287 dated 11 August 1945.

B. This is an inshore survey in Honga River, an arm of Chesapeake Bay, from latitude $38^{\circ} 17' 9''$ N where it joins Survey H-7156 (1946) (Field No. CO-1646), to the head of navigation in all bays and inlets tributary to Honga River in the area covered. The extreme northern limit is in latitude $38^{\circ} 23' 8''$ N. Field work commenced on 9 August 1946 and was finished on 17 October 1946.

C. Various units of the party worked on this survey. Launch No. 82 was used in depths of 6 feet and over; Launch No. 100 was used in all depths; and the 25 foot skiff was used in the shoal areas, generally 6 feet or less. The two launches were equipped with portable recording 808 type fathometers. For work with the skiff a 16 foot sounding pole was used. On one day, 11 August, the skiff was also equipped with an 808 type fathometer.

D. The tide station used for the reduction of soundings was the standard automatic tide gage maintained by the Maryland Biological Laboratory at their dock at Solomons Island, Maryland. No time factor was introduced.

E. The smooth sheet was plotted at the Norfolk Processing Office.

F. Control is based on triangulation accomplished by various chiefs of party from 1910 to 1929.

Topographic stations are located on airphoto topographic sheets T-8109 SW, T-8118 SE, T-8118 NW, T-8118 SW and T-8118 NE. These are supplemented by hydrographic stations located by sextant fixes at the stations, with the exception of signals FLAT, SOL, ROOF, CAB, RUSH, and RET, which were located by sextant cuts from other stations. In this area there are numerous duck blinds offshore that were located for use as signals.

G. The shoreline is from the air photo topographic sheets listed in F above.

The low-water line could not be defined by the hydrographic party because of the gradual slope of the bottom, the large areas of flats, and trees and stumps in areas where erosion has taken place. Lines adjacent to the shoreline were run for most of the sheet. ✓

H. The soundings in depths of 6 feet and over were obtained with an 808 type recording fathometer. Bar checks were taken at the beginning and end of each day's work. The bar check lines were accurately worked standard leadline. Bar check curves for each day were plotted and a mean curve for that day used for the connection of soundings. ✓

on launch 82
Depths of 2 ft and deeper obtained on launch 100

In depths under 6 feet a sounding pole 16 feet long was used. This pole was also used to check the fathometer soundings at numerous times as shown in the records in depths at which soundings with the pole could be made. ✓

I. All positions for the location of the boat depend on three-point fixes taken on stations located as outlined in F above, except in Wallace Creek and part of Charles Creek, where positions were referred to easily identifiable points of land and other natural objects. ✓

J. The survey is complete and adequate to supersede prior surveys. No holidays or excessive differences exist. ✓

Sounding lines in depths of 6 feet or over are spaced somewhat less than 100 meters apart, with intermediate lines where necessary for development. On the flats in the northern part of the sheet and close inshore the spacing is somewhat less than 200 meters. In the channels at least two lines were run along the axis and adjacent to it. ✓

(1946)
using The junction with Sheet H-7156 (CO-1646) is satisfactory, ~~in so far as predicted tides were used~~ for the reduction of soundings plotted on the boat sheet. ✓

K. The percentage of crosslines is 6.8%. The crossings are in good agreement considering the use of predicted tides for the plotting of soundings. ✓

L. Comparison with Survey H-209, scale 1:20000, surveyed in 1848. ✓

In the shoal areas the present survey is in good agreement with the old survey. However, in the channel there is evidence of considerable shoaling, especially south of the southwest point of Wrotten Island. The old survey shows depths of 27 feet in the middle. ✓

of the channel, while in the present survey the channel is blocked by depths of 13 and 14 feet at this point.

Comparison with Survey H-4919, scale 1:10000, surveyed in 1929. In the area covered by this survey, the present survey indicates shoaling of from 1 to 3 feet.

M. Comparison with Chart 1224, print date 6-23-45.

The present survey is in close agreement in the flat areas. Considerable shoaling is indicated in the main channel, which is now blocked by 9 to 11 feet in the vicinity of Long Point Bar Buoy No. 7, west of Wroten Island. The dredged channel, running east and southwest from Fishing Creek Bridge, has filled up, the spoil bank apparently having washed back into the channel. Shoaling of 1 to 2 feet is also indicated to the north and northeast of this channel.

N. No new dangers to navigation were found. The shoaling of the channels mentioned in M is not considered a menace to navigation, since the boats which use it are of shallow draft. These boats also use the Barren Island Gaps Channel, which at present has a limiting depth of 4 feet.

O. This area is used locally by fishermen in boats of suitable draft, basing at Hoopersville, Fishing Creek, and other places in the Honga River area. In going to and from the Honga River many of these fishermen pass through the ^(Hooper Island) Narrows Ferry drawbridge (name from Atlantic Coast Pilot, Section C, page 279), where the limiting depth is 3 feet. The fixed aids to navigation marking this channel are Middle Island Bridge Lights 1 and 3.

P. The fixed aids to navigation in the area covered by this sheet are:

MIDDLE ISLAND BRIDGE LIGHT NO. 1
MIDDLE ISLAND BRIDGE LIGHT NO. 3 (38°-18.01' 76°-12.08'
(August 14, 1946 4.6 ft.
WROTEN ISLAND LIGHT
HUNTING RIDGE POINT LIGHT
HONGA RIVER UPPER LIGHT

Q. The floating aids to navigation are:

WROTEN ISLAND BAR BUOY 4 38°-18.40' 76°-11.80'
(RS 4) Aug. 14, 1946 13.6 ft. 189-c Lch.100
LONG POINT BAR BUOY 7 38°-10.35' 76°-12.40'
(BS 7) Sept. 24, 1946 13.5 ft. 1-d Skiff

1935

Russell R. Turner

A D D E N D U M

to accompany

HYDROGRAPHIC SURVEY H -7157 (Field No. Co. 1746)

Addition to Par. "P": The channel from Fishing Creek Bridge to Hunting Ridge Point Beacon was surveyed in September 1946 by a party from the Baltimore Office of the U.S. Engineers Dept. with a view to dredging this channel to its former depth. At the same time a survey was made for a 7 foot channel and turning basin into Back Creek.

Sp 42114-15



Ronald R. Moore
Lieut. Comdr., U.S.C.&G.S.
Chief of Party

TIDAL NOTE

The standard automatic tide gage maintained by the Maryland Biological Laboratory on their dock at Solomons Island, Maryland, was used for the reduction of soundings without any time correction. ✓

Mean low-water corresponds to a reading of 3.0 feet on the tide staff. ✓

STATISTICS FOR SHEET H.-715(CO-1746)

VCL. NO.	DATE	NO.POS.	STATUTE MILES	BAR CHECKS	H.L. or POLE SDGS.	DAY LETTER	BOAT
1	8-9-46	122	19.4	2	33	a	Lch. 100
1	8-13-46	173	31.2	2	505	b	Lch. 100
2	8-14-46	189	27.6	2	32	c	Lch. 100
2	8-16-46	139	20.9	2	25	d	Lch. 100
3	8-23-46	123	19.4	2	27	e	Lch. 100
3	8-29-46	89	13.3	—	399	f	Lch. 100
4	9-5-46	88	14.7	—	516	a	Skiff
4	9-11-46	104	13.8	1	39	b	Skiff
4 & 5	9-19-46	159	22.3	—	730	c	Skiff
5	9-24-46	149	20.4	—	816	d	Skiff
5	9-27-46	80	8.8	—	431	e	Skiff
6	10-3-46	70	12.8	—	7	a	Lch. 82
7	10-16-46	63	9.2	—	332	f	Skiff
7	10-17-46	67	9.0	—	350	g	Skiff
Totals		1615	242.8	11	4232		
Area		14 sq. stat. miles					

H-7157 (1946)

LIST OF SIGNALS

TRIANGULATION

Keenes, 1910
Kerwin, 1910
Mt. Zion M.E. Ch. Spire,
1910

TOPOGRAPHIC

East Gable 1942
Gar (Hunting Ridge Point
Lt.)
Mar
* Middle Island Bridge
Light #1
Wroten Island Lt.
* Spicer Silo 1942
Stack (Chimney 1924)
Tenders Cabin 1942
Tom 1942
Top 1942
Honga River Upper Lt.

*Dir. Letter
5/24/46*

AIR PHOTO (Green)

Chim
Flu
Los
Sam
Vac
* Wye

LEGEND

* From T 8109
From T 8118

HYDROGRAPHIC

Abe Sag
Ant Shack
Blu Sol
Cab Tan
Can Tap
Del Tar
Dot Tug
Duk Wash
Flat Wop
Gal Yel
Gun *Chim*
Hat
Lag
Lat
Lin
Long
Low
Nap
Nel
Nick
Nil
Nod
Owl
Pam
Pan
Pipe
Pole
Raw
Rek
Ret
Roof
Rush

A D D E N D U M

to accompany

HYDROGRAPHIC SURVEY H-7157 (Field No. Co-1746)

Control

Attention is directed to the fact that this survey contains a great many hydrographic signals whose locations were determined from a relatively few triangulation and topographic stations and, a great many previously located hydrographic stations.

$\phi -38^{\circ}-17.77' \lambda 76^{\circ}-11.73'$
CHIM (green): The location of this signal does not coincide on boat sheet H-7155, H-7154 and H-7157. Its location as shown on boat sheet H-7155 was determined by sextant cuts which, according to information obtained from the officer-in-charge of this survey, were not recorded by the field party, whereas its locations on boat sheets H-7154 and H-7157, which are in agreement, were taken from topographic sheet T-8118. The location of this signal on the above-mentioned smooth sheets was taken from boat sheet H-7155, as this location when used to determine the location of other signals appeared to give the best results. *Hydro. position accepted*

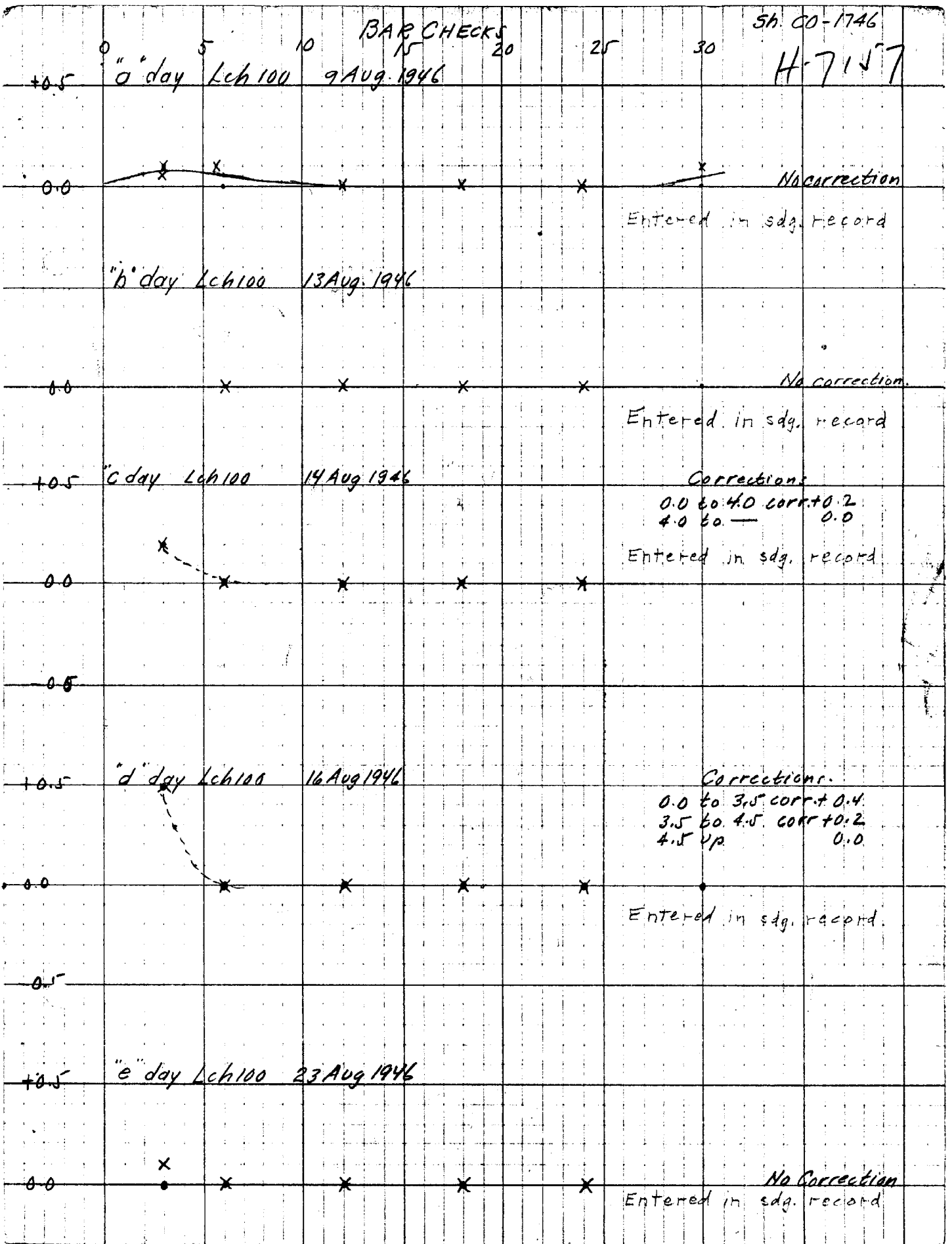
$\phi 38^{\circ}-17.7' \lambda 76^{\circ}-12.79'$
MID (Topo) T-8118: The location of this signal on smooth sheets Nos. H-7154, H-7155 and H-7157 does not agree with that shown on topographic sheet No. T-8118. The position as shown on the smooth sheet was plotted from the geographic position contained in the Director's letter dated 24 May 1946, reference 70-lmh. *(Planetable position more recent than T-8118)*

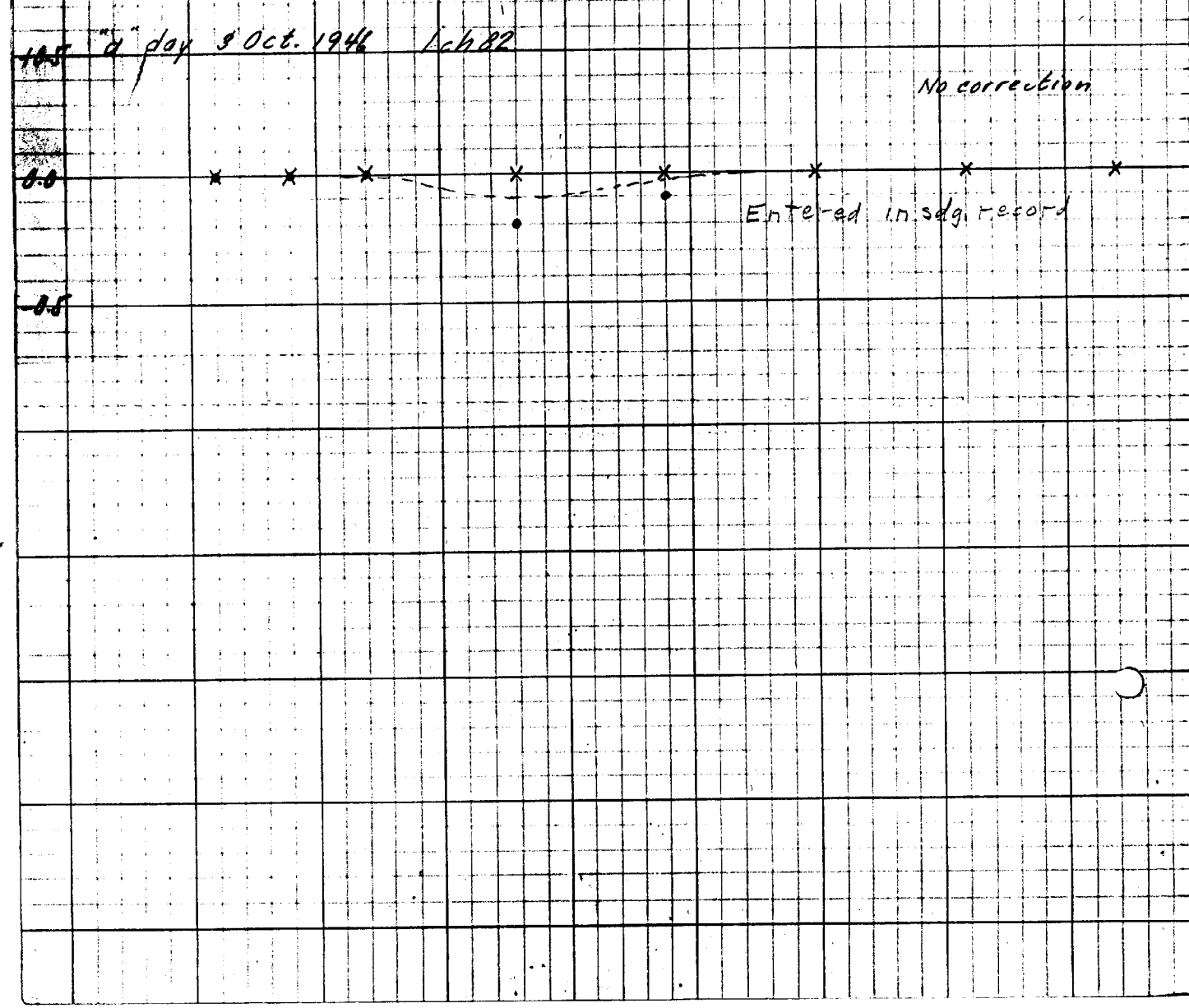
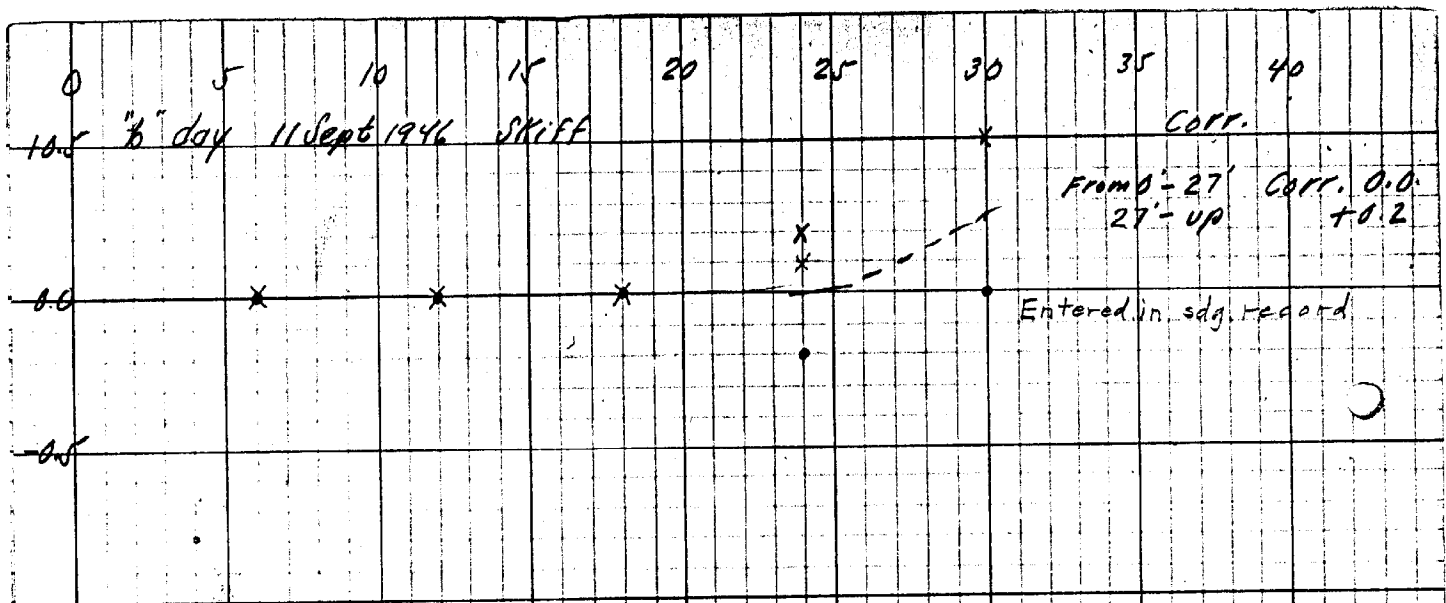
The location of this signal as shown on the smooth sheets gives the best positions for hydrographic signals FISH (H-7155) and HAT which are dependent on MID for their locations.

Discrepancies

Crossing discrepancies occurring in the narrow channels were discussed with the Chief of Party, Lt. Comdr. R. R. Moore, who stated these discrepancies were due to the narrowness of the channels and the inexpertness of the person handling the sounding pole.

The sounding lines run by the skiff (green days) at times showed irregularity in speed and course, which were attributed by the





GEOGRAPHIC NAMES
Survey No. **H7157**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Maryland</u>											USGB	1
<u>Chesapeake Bay</u>											"	2
<u>Honga River</u>											"	3
<u>Fishing Creek</u>												4
<u>Keenes Point</u>											USGB	5
<u>Cedar Point</u>												6
<u>Wroten Island</u>												7
<u>Charles Creek</u>												8
<u>Hooper Islands</u>											USGB	9
<u>Long Cove</u>											USGB	10
<u>Long Point</u>												11
<u>Back Creek</u>												12
<u>Wallace Creek</u>												13
<u>Great Marsh Creek</u>												14
												15
												16
												17
												18
												19
												20
<u>Solomons Island</u>											USGB	21
												22
												23
												24
												25
												26
												27

Names listed in red approved
by L. Heck on 9/5/47

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7157**

Records accompanying survey:

Boat sheets **.1**...; sounding vols. **8**...; wire drag vols.;
 bomb vols.; graphic recorder rolls **.7**...;
 special reports, etc. **1 Sheet of Bar Checks**.....

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

Number of positions on sheet	1615..
Number of positions checked	...30..
Number of positions revised1
Number of soundings revised (refers to depth only)	...0..
Number of soundings erroneously spaced	...10..
Number of signals erroneously plotted or transferred0
Topographic details	Time ...5.. hrs.
Junctions	Time ...9.. hrs.
Verification of soundings from graphic record	Time ...3.. hrs.

Verification by *Stephen Rose* Total time **.263** hrs. Date **Aug. 28, 1947**

Reviewed by *R.H. Carstens* Time **.294** Date **Sept. 4, 1947**

Turn

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

30 April 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 7157

Locality - Honga River, Chesapeake Bay, Maryland

Chief of Party: R. R. Moore in 1946
Plane of reference is mean low water, reading
3.0 ft. on tide staff at Solomons Island
10.8 ft. below B. M. 4

Height of mean high water above plane of reference is 1.2 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-7157

FIELD NO. CO-1746

Maryland, Chesapeake Bay, Hoga River
Surveyed in August - October 1946 Scale 1:10,000
Project No. CS-287

Soundings:

Sounding Pole
Handlead
808 Fathometer

Control:

Sextant fixes on shore signals
Estimated distances from shore

Chief of Party - R. R. Moore
Surveyed by - R. R. Moore, R. C. Rowse, and O. C. Swindell
Protracted by - D. E. Buck
Soundings plotted by - A. G. Atwill
Verified and inked by - S. Rose
Reviewed by - R. H. Carstens, September 3, 1947
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline and signals originate with air photographic surveys T-8109 (1942) and T-8118 (1942). Supplementary hydrographic signals, located by sextant cuts and fixes, are recorded in the sounding volumes. Signals inked in green are supplementary signals spotted directly from the air photographs.

2. Sounding Line Crossings

Depths at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated. The 3-ft. curve has been added to emphasize bottom relief.

The bottom over most of the area is smooth. There is a natural channel south of Lat. 38°-20.6', with depths as great as 28 ft. in places.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-7156(1946) on the south and H-7155(1946) on the southwest.

The junction with H-7154(1945) on the west in Lat. 38°-21' will be considered in the review of that survey.

5. Comparison with Prior Surveys

A. H-209 (1848) 1:20,000

This survey covers the entire area of the present survey.

Prior depths are generally within 1 to 2 ft. of present depths except in the natural channel which has decreased in depth as much as 10 ft. in many places.

The present survey contains all the essential hydrographic information necessary to supersede this prior survey within the common area.

B. H-4919 (1929) 1:10,000

This prior survey covers an area about 900 meters wide between Fishing Creek and Wroten I.

Prior depths are generally 1 to 2 ft. deeper than present depths.

The sunken wreck (charted) in Lat. 38°-20.12', Long. 76°-11.92' is described in the Descriptive Report of H-4919 as "part of an old hull". This wreck was not specifically investigated on the present survey and can not be considered disproved. The sunken wreck symbol, therefore, has been carried forward to the present survey.

With this addition, the present survey is adequate to supersede this prior survey within the common area.

6. Comparison with Chart 1224 (Latest print date February 17, 1947)

A. Hydrography

The charted hydrography originates chiefly with the previously discussed surveys which need no further consideration.

B. Aids to Navigation

The present survey positions of aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended except that the present survey position of Middle Island Bridge Light No. 3 is about 80 meters west of the charted position in Lat. 38°-18', Long. 76°-12'. The present survey position is the position of the new light built in 1946 (H. O. Notice to Mariners 31, 1946) and supersedes the charted position.

C. Controlling Depths

The present survey value of the controlling depth in the charted dredged channel from Fishing Creek to the natural channel in Honga River is 1 ft. less than the charted "5 ft. in June 1946". The present survey depth is in close agreement with the $4\frac{1}{2}$ ft. determined subsequently in September 1946 by the U. S. Engineers, Bps. 42114 and 42115.

7. Condition of Survey

The field plotting was accurate.

The sounding records and Descriptive Report are complete and comprehensive.

It is noted that many of the hydrographic signals were located by sextant fixes on other hydrographic stations. The Hydrographic Manual states that, "In general, hydrographic stations shall not be used as control from which to determine the positions of other hydrographic stations".

8. Compliance with the Project Instructions

The present survey adequately complies with the Project Instructions except as indicated in paragraph 9.

9. Additional Field Work Recommended

This is an excellent basic survey.

At a convenient time an investigation should be made of the wreck (charted) in Lat. 38°-20.12', Long. 76°-11.92', discussed in paragraph 5 B, which is not considered disproved.

Examined and approved:



I. E. Rittenburg
Chief, Nautical Chart Branch



C. M. Durgin
Chief, Division of Charts



E. G. Grosby
Chief, Section of Hydrography



C. K. Green
Chief, Division of Coastal Surveys

