

6775

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Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No. 2142	Office No. 86775
LOCALITY	
State	Maryland
General locality	Chesapeake Bay
Locality	Hooper Strait to Kedges Strait
194 2	
CHIEF OF PARTY	
L. E. Rittenburg	
LIBRARY & ARCHIVES	
DATE	

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.

Field No. 2142

REGISTER NO. 86775

State Maryland  
General locality Chesapeake Bay  
Locality Hooper Strait-Kedges StraitS  
Scale 1-20,000 Date of survey July-Nov., 1942  
Vessel M. V. COWIE  
Chief of Party L. E. Rittenberg  
Surveyed by Ships Officers  
Protracted by W. W. Feazel, M. A. Axelton  
Soundings penciled by W. W. Feazel, M. A. Axelton & L. J. Walter  
Soundings in ~~fathoms~~ feet  
Plane of reference M. L. W.  
Subdivision of wire dragged areas by  
Inked by Robert Galdin  
Verified by " "  
Instructions dated , 19  
Remarks: This sheet was processed at the Norfolk Processing  
Office.

REG. NO. 86775

DESCRIPTIVE REPORT (Based on Boat Sheet)

**H6775**

To Accompany Hydrographic Sheet Field No. 2142 - Project CS-287

INSTRUCTIONS

This survey was made in accordance with the Director's Supplemental Instructions dated July 14, 1942, for Project CS-287.

LIMITS

This survey embodies all of priority areas 1a, 1b, most of 1c, and a small part of priority area 2 as outlined on Chart 1224 furnished with the Instructions. The northern limit of this survey is the line from Hooper Island Light House to the bell buoy at Lat. 38 - 12.8, Long. 76 - 10.95; thence on a line toward Hooper Strait Light House as far as Long. 76 - 06.5. The western limit is as follows: from a point at Lat. 38 - 15.5, Long. 76 - 16.3; thence SE to Lat. 38 - 07.0, Long. 76 - 14.8; thence S by E to Lat. 38 - 07.0, Long. 76 - 13.0; thence SE by S to Lat. 38 - 02.0, Long. 76 - 11.8. The southern limit of this survey is Lat. 38 - 02.0. The eastern limit (also the western limit of Field Sheet Nos. <sup>H-6776</sup> 1142 and <sup>H-6779</sup> 1242 of this project) is from Lat. 38 - 13.5, Long. 76 - 06.5; thence S by W to Lat. 38 - 07.0, Long. 76 - 07.5; thence S to Lat. 38 - 04.0; thence E to Long. 76 - 05.7.

SURVEY METHODS

CONTROL for this survey consisted of recovered triangulation stations (no triangulation was accomplished on this project), topographic stations located by graphic control methods, and several hydrographic stations located by sextant cuts. Cuts to hydrographic stations were indexed in the front of the sounding volumes.

HYDROGRAPHY was accomplished by the usual sextant fix method and sounding lines were run by compass courses using the ship's standard compass. All work on this survey was done by the COWIE, running at full speed (approximately 10 knots) throughout.

All SOUNDING was done with the 808 Recorder (Recorders # 63 and 65) and the 'fish' was set at a 3 foot draft at all times. Bar checks were taken at least twice a day using a bar check consisting of a weighted 1" X 10" X 48" board to which two well-seasoned leadlines were fastened at each end by a small bridle. Daily bar checks were indexed in the front of the sounding volumes to facilitate the reductions later. Bar checks to 36 feet could be taken very readily, but beyond this depth, trouble was encountered due to the vessel drifting faster than the bar. Extra weights were attached to the board which helped some, but it took a fairly calm day with little current running to get comparisons on depths much deeper than 42 feet. In as much as approximately 95% of all sounding done on this survey was less than this depth, no other comparison methods than those used were deemed necessary due to the urgent nature of the work at the time. Very little trouble was encountered with the recorders other than a few minor mechanical difficulties which were easily handled by members of the party. The 'fish' was unshipped twice during the work and thoroughly cleaned to insure good operation.

SPEED CHECKS were made with the stop watch regularly during the day. Some difficulty was encountered with Recorder # 63 to determine when the middle reed was vibrating but a careful watch was kept on it and by taking numerous speed checks the operator could tell when the machine was at proper speed. At first, stop watch speed checks were not entered in the sounding volumes, but later when it became obvious that there might be some question raised in regards to speed, they were entered in the volumes when taken.

BOTTOM SAMPLES were obtained at each stop for bar checks and when the vessel was anchored on the working grounds.

The general SPACING OF LINES on this survey is 100 meters with closer spacing for splits and development. CROSS LINES were run at approximately 10% of the general system of lines and at an angle of over 45 degrees to them. Crossings were good

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as near as can be determined on the boat sheet, never differing by more than 2 feet. This difference will no doubt be eliminated when the smooth reductions are applied.

Depth Curves were penciled on the boat sheet from day to day, thus additional development was indicated as the field work progressed. These curves were later inked in appropriate colors.

FATHOGRAM ROLLS were scanned daily and the soundings were recorded in the standard sounding volumes at 15 second intervals between fixes. All fixes, except when marking on ranges, etc., were taken exactly on the fifteen second marks on the fathogram. Critical soundings such as peaks and deeps were recorded as part of a 15 second interval and indicated as such in the records. The time of all positions were recorded to the nearest second at the instant the fathometer operator pushed the fix button. This gave a quick check on the speed of the fathometer by noting the elapsed time between fixes.

FLOATING AIDS TO NAVIGATION within the limits of this survey have been located by 3 or more sextant cuts taken by a third angleman on strong fixes during the progress of the work. Several new aids have been located which were laid down for the benefit of the Navy during their gun firing. It is understood that several additional aids (spars) have been laid down subsequent to working in this area but in as much as they are only temporary markers and only for the specific use of the Navy, it was not deemed necessary to forfeit considerable time locating them as they are in the firing area and would have to be located at some time when firing was not contemplated. Paragraph 31 of the Instructions in regards to "Objects for Locating Aids to Navigation" will be complied with at a later date.

COMPARISON WITH PREVIOUS SURVEYS

Prior to the field work, all soundings on Chart 1224 in the area covered by this survey were transferred to the boat sheet and the various copies of previous surveys were scanned for additional shoals, critical depths, etc. Depth curves were also transferred to the boat sheet for direct comparison with the new work. Generally, the new work agrees very closely with the charted soundings and depth curves. The following instances are to be noted where discrepancies occur:

1. Lat. 38 - 11.20, Long. 76 - 13.46; a charted sounding of 71 feet. This *Recommend disregarding 71ft* sounding falls within an area around 55 feet and appears too deep. However, this sounding is near the steep slope and needs only to be out of position a small amount to appear to be in error.

2. Lat. 38 - 11.90, Long. 76 - 08.27; a charted sounding of 22 feet. This *Recommend Disregarding charted 22. See Review* sounding is in an area of 26 feet and appears to be too shoal in as much as the bottom is exceptionally flat here. Further development of this area was prevented by Navy gun firing in this locality. 83

3. Lat. 38 - 10.00, Long. 76 - 11.64; a charted sounding of 33 feet. This *33ft is actually 38ft in prior records* sounding falls in an area of 36 feet and appears too shoal. However, there is a sounding of 35 feet about 550 meters NNW of this spot which may reduce to less on application of the smooth tides and could easily be the same spot but out of position.

4. Lat. 38 - 09.37, Long. 76 - 12.08; a charted sounding of 51 feet. This sounding lies in an area of 46 feet of this survey and should be deleted.

5. Lat. 38 - 08.98, Long. 76 - 12.62; a charted sounding of 37 feet. No *37ft retained See Review* indication of this depth was obtained in this area. The present survey indicates a depth of about 47 feet here. However, this area was not developed due to an obstruction placed here by the Navy and further opportunity for development was not afforded due to their maneuvers. This obstruction was believed to

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be a wreck when sounding in this area and was purposely avoided. It has since been ~~learned~~<sup>understood</sup> that the Navy had planted an obstruction of some form here and the area has been buoyed accordingly.

See F.E. 3  
of 1944

6. Lat. 38 - 08.58, Long. 76 - 13.13; a charted sounding of 42 feet.

This sounding falls in an area of 62 feet and appears to be in error. No indication of a shoal was noted in this area. As a matter of fact, this area is very regular and it is recommended that this sounding be deleted.

Recommend  
Disregarding  
42 ft.  
See Review

7. Lat. 38 - 08.87, Long. 76 - 11.44; a charted sounding of 24 feet. This sounding falls in an area of 35 feet on this survey and appears to be in error as no indication of it was found. It is recommended that this sounding be deleted.

Recommend  
Disregarding  
24 ft.  
See Review

8. Lat. 38 - 10.82, Long. 76 - 08.30; a charted sounding of 20 feet.

This sounding is in a relatively flat area of 26 feet and appears to be in error. Further development was prevented here due to gun firing.

20 ft  
Retained  
See Review

9. Lat. 38 - 02.23, Long. 76 - 11.13; a charted sounding of 24 feet.

This sounding is in a flat area of 28 feet and no indication of it was found. It is recommended that depth of the present survey be used.

Recommend  
Disregarding  
24 ft  
See Review

Several differences of 1 or 2 feet were noted in comparing charted soundings against the present survey but it is believed that these differences will adjust themselves when the smooth reductions are applied and also it is possible that their transferred position on the boat sheet may be in error somewhat due to enlarging the scale.

#### JUNCTIONS WITH OTHER SURVEYS

The eastern limits of this survey joins with the western limits of Field Sheet Nos. 1142 and 1242 of this project. A good junction has been made between these surveys. Differences of 1 and 2 feet between comparative soundings were noted on the boat sheet but these differences will no doubt be eliminated when the smooth reductions are applied.

H-6776

H-6775

ADDITIONAL WORK

No additional work is deemed necessary in the area covered by this survey other than the holiday occasioned by the obstruction at Lat. 38 - 09.0, Long. 76 - 12.5. Further work was prevented in this area due to Naval activities. Due to the pressing demand for the Priority 1 portion of the project, as much time could not be spent on more detailed development of certain spots as would have been liked. Navy gun firing in this area began as soon as approximately one half of the survey was completed and eventually got to the point where only the area south of Holland Island could be worked during the work week, consequently there are areas which were to have been developed when the main body of the survey was completed which later became impossible to work in. However, in as much as the line spacing was confined to 100 meters and what with the abundance of soundings obtained with the fathometer, it is believed that the survey is sufficiently complete for all practical purposes.

DANGERS AND SHOALS

There are no dangers in the area bounded by this survey other than the obstruction noted under COMPARISON WITH PREVIOUS SURVEYS, Item 5. This obstruction is marked by a lighted bell buoy and 4 nun buoys. There are no uncharted shoals in this area and the general outline of shoals and depth curves are in close agreement with those of Chart 1224.

GEOGRAPHIC NAMES

No attempt was made to check on the geographic names pertaining to this survey. This function is being taken care of by the War Mapping Party No. 1.

ANCHORAGES

There are no good, protected anchorages within the limits of this survey. However, anchorage of a temporary nature is afforded from the North and east.

CHANNELS

There are no channels within the bounds of this survey.



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COAST PILOT

Coast Pilot notes covering the area embodied by this survey are to be obtained and submitted by the War Mapping Party No. 1.

LANDMARKS FOR CHARTS

All Landmarks for Charts, other than the two Navy observation towers listed on Form 567 and submitted with this survey, are to be reported on by the War Mapping Party No. 1.

TIDES

Portable automatic tide gages were in operation at Barren Island and Holland Island Bar Lighthouse while engaged in sounding on this survey. (See tidal data sheet submitted with smooth sheet) All boat sheet soundings are based on predicted tides for Holland Island Bar Lighthouse.

STATISTICS

The following are the statistics for this survey:

Statute miles sounding lines -----	<u>1,706.1</u>
Number of Soundings (recorded soundings only) -----	<u>33,470</u>
Number of Positions -----	<u>4,202</u>
Area, square statute miles -----	<u>97.2</u>

Submitted by,

*Roscoe A. Gilmore*

Roscoe A. Gilmore  
H. & G. Engr. C&GS

*Forwarded and*

Approved by,

*I. E. Rittenburg*

I. E. Rittenburg  
Chief of Party  
Commanding M. V. COWIE

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ADDENDUM

SHEET 2142 (Field) - PROJECT CS-287

TOPOGRAPHIC SIGNALS:

The processing of this sheet was accomplished while the field work was being done. Due to the fact that some of the signals which were originally located by sextant cuts were later determined by topography, a slight discrepancy was noted in some instances between the two methods of locating these signals. Where a discrepancy existed, the topographic location was used.

However, since this survey had priority and since no apparent appreciable displacement of the hydrography was found except as noted below, and because practically the entire sheet had been protracted before the receipt of the topographic locations, the positions as originally determined by sextant cuts were not changed.

Signal TREE:

The original location of this signal was obtained by sextant cuts, and all fixes involving this signal on "J" and "K" days and to and including 76 "L" day were plotted using this location. All fixes after 76 "L" used the topographic location, which was found to be 12 m northwest of the hydrographic location.

Signals LUMP and JAN:

Due to the fact that it would have been necessary to add a large dog-ear to plot these signals, these signals together with the hydrography was plotted on the western portion of this sheet and the hydrography was then transferred to its proper location. The original plotting is left on this sheet in order that the varifier may check these positions, if necessary.

FOUR NUN BUOYS: (See page 4, par. 5 of this report)

In conference with the lighthouse officials at Norfolk, it was determined that the four nun buoys to the eastward of Buoy 16 BB mark the location of an area where experimental work is being done by the U.S. Navy, and they should not be charted.

Respectfully submitted,

*Isadore M. Zeskind*  
Isadore M. Zeskind,  
Assoc. Cartographic Eng'r.

Norfolk, Va.  
November 25, 1942.

Approved and forwarded:

*Paul C. Whitney*  
Paul C. Whitney,  
Supervisor, S.E. District.

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TIDE DATA

In accordance with the Director's letter of Sept. 14, 1942, reference 36-McC, M.L.W. for use in the reduction of soundings of this sheet was determined from the automatic tide observations as corresponding to a reading of 2.0 ft. on the tide staff at Holland Bar Light House.

## Remarks

## Decisions

1		U.S.G.B.
2		382760 "
3		380760 "
4		382761 "
5		381760 "
6		
7		
8		
9		
10	Location of tide staff.	380760 U.S.G.B.
11		
12		
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14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

# GEOGRAPHIC NAMES

Survey No.

**H6775**

Name on Survey

	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	
A.	B.	C.	D.	E.	F.	G.	H.	K.	
<u>Chesapeake Bay</u>									1
<u>Hooper Strait</u>									2
<u>Kedges Straits</u>									3
<u>Hooper Islands</u>									4
<u>Bloodsworth Island</u>									5
									6
									7
									8
									9
<u>Holland Island Bar Lt.</u>									10
									11
									12
									13
									14
									15
									16
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									20
									21
									22
									23
									24
									25
									26
									27

L. Heck 3/15/43

TIDE NOTE FOR HYDROGRAPHIC SHEET

Dec. 7, 1942.

~~Division of Hydrography and Topography~~

Division of Charts: Attention: Mr. H. R. Edmonston.

Plane of reference approved in  
20 volumes of sounding records for

HYDROGRAPHIC SHEET 6775

Locality Hooper Strait to Kedges Strait, Chesapeake Bay, Md.

Chief of Party: I. E. Rittenburg in 1942

Plane of reference is mean low water reading

2.0 ft. on tide staff at Holland Island Bar Lighthouse

14.0 ft. below B. M. 3 (1942)

Height of mean high water above plane of reference is 1.4 ft.

Condition of records satisfactory except as noted below:

*E. K. Green*

Chief, Division of Tides and Currents.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6775**

Records accompanying survey:

Boat sheets ~~one~~; sounding vols. (20); wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls (20) *in envelopes*;  
 special reports, etc. ....  
 .....

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

Number of positions on sheet	.4202.
Number of positions checked	.190..
Number of positions revised	...0.
Number of soundings recorded	33479.
Number of soundings revised (refers to depth only)	..60.
Number of soundings erroneously spaced	..15.
Number of signals erroneously plotted or transferred	...2.
Topographic details	Time .....
Junctions	Time ...8 hrs.
Verification of soundings from graphic record	Time .274 hrs.

Verification by *Robert Goldin*.....Total time .280 hrs. Date *2/1/43*...

Review by *G.F. Jordan*..... Time .45. Date *3/15/43*..

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOGRAPH~~

No. H **H6775**  
~~No. H~~

received **Nov. 30, 1942**  
registered **Dec. 4, 1942**  
verified  
reviewed  
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
✓ 83	Pg 485	HEP	M. Engelbrecht. note this report for future corrections. nothing critical for land construction. #27
88			
90			

RETURN TO

82	<b>R.W.Knox</b>
----	-----------------



DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6775

Field No. 2142

Chesapeake Bay, Hooper Strait to Kedges Straits  
Surveyed July - November 1942; Scale 1:20,000  
Instructions dated July 14, 1942

Soundings:  
808 Fathometer

Control: Three-point Fix on  
Shore Signals

Chief of Party - I. E. Rittenberg  
Surveyed by - Ship's Officers  
Protracted by - W. W. Feazel; M. A. Axelton  
Soundings plotted by - W. W. F.; M. A. A.; L. J. Walter  
Verified and inked by - R. Goldin  
Reviewed by - G. F. Jordan  
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The control is from previously established triangulation stations and from T-8135, T-8136, T-8149, T-6905a&b, and hydrographic signals of the present surveys.

The shoreline is from the above planimetric drawings T-8135, T-8136 and T-8149.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

A satisfactory junction is made with H-6776 (1942) on the southeast. H-6779 (1942) on the east has not been verified and will be considered in the review of that survey.

5. Comparison with Prior Surveys

Nine prior surveys in the periods 1848 to 1849 and 1900 to 1912 overlap the area of the present survey and are in general agreement. Two soundings have been carried forward.

H-209 (1848) 1:20,000

This is an original survey covering the northern part of the present survey.

H-211 (1849) 1:20,000

This is an original survey covering the southern part of the present survey.

- a. A 37-ft. prior sounding charted on 1224 at Lat.  $38^{\circ}09.0'$ ; Long.  $76^{\circ}12.6'$  has been carried forward on the present survey. This sounding falls near lighted bell buoy No. 16BB in 50 feet at the edge of a small area which is undeveloped on the present survey. This area is also discussed in Par. (10). 37 disproved on H-7094 (1945-46)
- b. A 42-ft. prior sounding charted on 1224 at Lat.  $38^{\circ}08.6'$ ; Long.  $76^{\circ}13.1'$  should be disregarded. This sounding which falls on a slope in 63 feet on the present survey was on line between a "miss" sounding and 71 feet on the prior smooth sheet. The sounding was not verified in the records as the sounding volumes are incomplete for this prior survey. It is believed that the sounding could have been 66 feet, the 11fm. being recorded as 7fm. The present survey is adequate.
- c. The 24-ft. prior sounding charted on 1224 at Lat.  $38^{\circ}08.9'$ ; Long.  $76^{\circ}11.5'$  is considered to be erroneous and should be disregarded. This was the first sounding at the beginning of a line adjacent to 36-ft. depths and falling in 36-ft. depths on the present survey. It is believed that the headline was misread 2 fathoms. The sounding records are incomplete for that day's work and the 24-ft. sounding was not verified.
- d. It is recommended that the 24-ft. prior sounding charted on 1224 at Lat.  $38^{\circ}02.2'$ ; Long.  $76^{\circ}11.2'$  be disregarded. This sounding on a line of 27 foot soundings falls in 28-ft. depths on the present survey. This sounding was not verified in the records, as the sounding volumes are incomplete. It falls between the edge of deep water navigation and 18-ft. shoals. The present survey is considered adequate.

- e. A 39-ft. prior sounding charted on 557 at Lat.  $38^{\circ}04'$ ; Long.  $76^{\circ}12'$  is considered erroneous and should be disregarded. This sounding falls on a steep slope in 50 feet on the present survey and is in disagreement with adjacent soundings on the prior survey. It is believed disagreements on this slope are due to both errors in reading the leadline and faulty control on the prior survey. The 36-ft. prior sounding 600 meters south, charted on 557, should also be disregarded for the same reason.
- f. The 54-ft. prior sounding charted on 557 at Lat.  $38^{\circ}05.1'$ ; Long.  $76^{\circ}12.5'$  falling in 65 feet on the present survey should be disregarded for the same reason given in the above paragraph.

H-1441b (1879) 1:40,000; H-2429 (1899) 1:40,000;

H-2500 (1900) 1:60,000

Satisfactory agreement is made with these reconnaissance surveys.

H-2614 (1901-02) 1:20,000; H-2616 (1901-02) 1:20,000;

H-3361 (1911) 1:40,000

Agreement is satisfactory with these surveys in their overlap on the northeast and southeast corners of the present survey.

H-3379 (1912) 1:40,000

This closely developed prior survey covers a large part of the present survey and is in satisfactory agreement.

- a. A 20-ft. prior sounding charted on 1224 at Lat.  $38^{\circ}10.8'$ ; Long.  $76^{\circ}08.3'$  has been carried forward. This sounding, falling in 26-ft. depths on the present survey, was not substantiated by adjacent depths on the prior survey. However, the next sounding was marked "O.K." in the records. The sounding was not investigated on the present survey.
- b. A 22-ft. prior sounding charted on 1224 at Lat.  $38^{\circ}11.9'$ ; Long.  $76^{\circ}08.3'$  is considered erroneous and should be disregarded. The records indicate that the recorder was confused on correct time

and was in haste to turn to the next page. It is considered the unreduced 4-0 sounding should have been 4-4 (26 feet reduced), which agrees with adjacent and crossline depths on the prior survey and with present depths.

6. Comparison with Chart 557 (latest print date 5-9-42)  
1224 ( " " " 10-21-42)

New chart 3330, dated November 30, 1942, has not been considered in this review except as noted in Par. (10). This chart was compiled from bromides of the boat sheets of the present survey.

Chart 557

The 85-ft. sounding charted at Lat.  $38^{\circ}02.3'$ ; Long.  $76^{\circ}11.5'$  is actually 35 feet on H-211 (1849).

Chart 1224

The 33-ft. sounding charted at Lat.  $38^{\circ}10.0'$ ; Long.  $76^{\circ}11.6'$  is actually 38 feet in the records of H-209 (1848). The sounding is not clear on the smooth sheet.

Aids to Navigation

- a. Red spar buoy No. 16AA is charted at Lat.  $38^{\circ}06.1'$ ; Long.  $76^{\circ}12.6'$ , 700 meters north of its position on the present survey. Either position is satisfactory to mark the 30-ft. depth curve.
- b. Red nun buoy No. 16 is charted on 557 at Lat.  $38^{\circ}04.6'$ ; Long.  $76^{\circ}12.1'$ , 350 meters WNW of its position on the present survey. Either position is satisfactory to mark the 30-ft. depth curve.
- c. Red spar buoy No. 4B charted at Lat.  $38^{\circ}10.4'$ ; Long.  $76^{\circ}10.2'$  has apparently replaced the temporary spar buoys X and Y, probably placed during naval maneuvers and located on the present survey.
- d. Several other spar buoys have been charted from H. O. Notice to Mariners No. 37-1942, subsequent to this survey.

- e. The four nun buoys located on the present survey at Lat.  $38^{\circ}09'$ ; Long.  $76^{\circ}12.4'$  should not be charted according to the addendum to the D.R.

7. Condition of Survey

The condition of the sounding records, including all pertinent data, is very good. The descriptive report is comprehensive and covers all matters of importance. The field plotting is satisfactory.

8. Compliance with Instructions for the Project

This survey complies with the instructions with the exception of Par. 9 and 28, which refer to obtaining least depths on shoals and investigation of charted shoals. This development was prevented by naval activities and gunfire. All but two charted shoal soundings have been disposed of in this review. The numerous shoals on the present survey are only a few feet shoaler than adjacent depths and are considered relatively unimportant to the usual navigation in this area. Examples are the 31-ft. shoal at Lat.  $38^{\circ}07.95'$ ; Long.  $76^{\circ}11.8'$ ; the 34-ft. shoal at Lat.  $38^{\circ}11'$ ; Long.  $76^{\circ}10.6'$  and the 23-ft. shoal at Lat.  $38^{\circ}12.9'$ ; Long.  $76^{\circ}07.0'$ .

9. Additional Work

- a. Determination of the nature and position of the obstruction and development of the charted 37-ft. sounding at Lat.  $38^{\circ}09'$ ; Long.  $76^{\circ}12.5'$  is desirable. Obstruction removed. See F.E. 3 (1944) Development on H-7094 (1945-46) Don/168B.
- b. The 20-ft. charted sounding at Lat.  $38^{\circ}10.65'$ ; Long.  $76^{\circ}08.2'$  should be investigated. *20'sd q. disproved. (See Item 3, FE No 4, 1951)*

10. Obstruction

The lighted bell buoy No. 16BB at Lat.  $38^{\circ}09.0'$ ; Long.  $76^{\circ}12.6'$  was placed in "54 feet" on January 21, 1941, according to C. G. Notice to Mariners No. 5-1941. No mention was made of an obstruction in this notice. The 37-ft. sounding is from H-211 (1849). The new <sup>37</sup> <sup>disproved</sup> chart 3330 was compiled from bromides of the boat H-7094 (1945-46) sheets of the present surveys and shows a wreck symbol based on a note on the boat sheet that wreckage showed 8 feet above the water. That note was amended, subsequent to making the bromides, and now states that an obstruction was placed and buoyed by the Navy. This is discussed in the descriptive report. Activity by the Navy prevented development of this area. It is recommended that chart 3330 be corrected to agree with charts 557 and 1224 which show "Obstr." See F.E. 3 (1944).

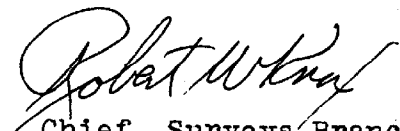
11. 808 Fathometer


Discrepancies of 6 feet in depths of 30 feet on a sounding line 3 miles long, positions 67P to 83P, have been disposed of by correcting clock time rather than accepting the discrepancy between clock time and fathogram speed as being due to fast speed of the fathogram. The bar check five minutes after position 83P, the end of the day's work, agreed with previous bar checks indicating proper operation of the fathometer. It is considered feasible that the recorders' clock was running down, as the time difference increased unevenly from 5% at position 67P to 18% at position 83P. This is noted, as discrepancies are usually attributed to the fathometer speed.

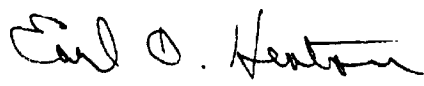
12. Superseded Surveys

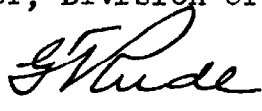
H- 309 (1848) in part	H-2500 (1900-01) in part
H- 211 (1849) " "	H-2614 (1901-02) " "
H-1441b (1879) " "	H-2616 (1901-02) " "
H- 2429 (1899) " "	H-3361 (1911) " "
	H-3379 (1912) " "

Examined and approved

  
Chief, Surveys Branch

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of  
Coastal Surveys

Applied to chart	557	Feb. 26, 1943	F.M.A.
"	"	" 1224	6/9/43 G.H.E.
"	"	" 3330	2-21-45 X.P.R.
"	"	" 555	11/21/52 Jam
"	"	" 554	6/29/54 J.W.C.