

5531

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

State: Maryland

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 2 5531  
Hydrographic

LOCALITY

Chesapeake Bay Harbor

Baltimore Harbor

1934

CHIEF OF PARTY

John A. Bond

5531

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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REG. NO. 5531

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. 2

REGISTER NO. 5531

State Maryland

General locality Chesapeake Bay

Locality Baltimore Harbor

Scale 1:10,000 Date of survey June-July, 19 34

Vessel Launch MIKAWA

Chief of Party John A. Bond

Surveyed by D. E. Sturmer - T. A. Rydingsvard

Protracted by A. G. Turner

Soundings penciled by A. van Reuth

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by Mark S. Gurnee

Verified by Mark S. Gurnee

Instructions dated May 15, 19 34

Remarks: \_\_\_\_\_

## DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet No. 2

### BALTIMORE HARBOR

#### AUTHORITY

This work was executed in accordance with the Director's Instructions dated May 15, 1934 to the Commanding Officer, Launch MIKAWA, Project No. 183.

#### LIMITS

Sheet 2 joins sheet 1, which was executed this season, on the west, and extends to 39°-13.7' on the south.

Two surveying parties, each with its own boat sheet, worked simultaneously on the area covered by the smooth sheet. The inshore work including soundings along the docks, was done by T. A. Rydingsvard, Surveyor, and is recorded in volumes 1 to 4, using "blue" as the day letter color. The offshore areas and channel lines were surveyed by D. E. Sturmer, Deck Officer, the work being recorded in volumes 5 to 8, using "green" as the day letter color.

#### SURVEY METHODS

Standard Coast Survey methods of hand lead soundings and sextant fixes were generally used. In narrow creeks and along docks where sextant fixes were impracticable, the positions were carefully plotted on the boat sheet in relation to nearby topographic detail. The lead-line was No. 8 Samson mahogany tiller rope, graduated in fathoms and feet.

A thirty-five foot launch was used in surveying the channel and offshore areas. The inshore work was done from a 24 foot skiff with outboard motor.

#### DISCREPANCIES

No discrepancies are known to exist. Errors in the sounding records, principally in recording and reading of angles have been adjusted during the smooth plotting and noted in red in the sounding records.

#### DANGERS

Several wrecks which are visible above water were located on topographic Sheet B.

CHANNELS

Fort McHenry and Ferry Bar Channels, which are regularly surveyed by the U. S. Engineers, were not developed in detail. Numerous privately dredged channels of various depths were developed.

COMPARISON WITH OTHER SURVEYS

The depth curves, in general, check well with those shown on Chart 545 except in areas affected by recent harbor improvements.

Shoaler depths are found for a short distance off the bulkhead around the airport at the entrance to Colgate Creek. Northeast of Fishing Point gravel has been dredged from a considerable area and dumped northeast of Brooklyn.

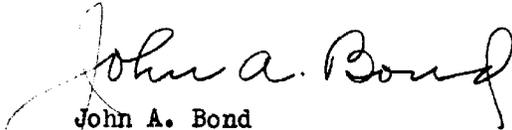
Soundings from the latest surveys of the U. S. Engineers were found to average about 2 feet shoaler than those of the present survey. No reason can be given for the variance, but it is reasonably consistent throughout.

Respectfully submitted,



D. E. Sturmer  
Deck Officer

Approved & Forwarded



John A. Bond  
H. & G. Engineer  
Chief of Party

STATISTICS FOR FIELD SHEET NO. 2

<u>Day Letter</u>	<u>Volume</u>	<u>Positions</u>	<u>Soundings</u>	<u>Statute Miles</u>
(Blue)				
a	1	33	124	02.8
b	1	110	429	11.2
c	1	106	401	10.4
d	1 & 2	62	238	05.4
e	2	110	448	11.6
f	2	141	576	13.8
g	2 & 3	112	524	11.6
h	3	141	738	14.3
j	3 & 4	132	593	13.5
k	4	71	301	06.9
l	4	30	113	02.5
m	4	49	142	02.9
(Green)				
a	5	44	93	01.2
b	5	80	427	11.7
c	5	122	699	21.5
d	5 & 6	58	315	07.0
e	6	125	713	16.7
f	6 & 7	149	802	22.3
g	7	137	786	20.6
h	7	132	709	19.7
j	8	39	167	04.1
k	8	92	397	09.5
l	8	52	212	04.6
m	8	03	03	Detached Pos.
Totals		<u>2130</u>	<u>9950</u>	<u>245.8</u>

To: Mr. Bacon  
From L. S. S.

Survey No. H 5531

GEOGRAPHIC NAMES

Chart No. 77 & 545

Date. Oct. 30, 1934

~~Georgia~~  
Maryland

Diagram No. 77-2

*Names underlined in red approved Nov. 1, 1934*

*H. Bacon*

\* Approved by the Division of Geographic Names, Department of Interior.

*Additional Names in  
second column approved  
Dec 13, 1934 H.B.*

⊕ Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

*all names well established.*

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>Patapsco River</u>	Same			
	<u>Colgate Creek</u>	"			
	<u>Fishing Point</u>	"			
		B			
		<u>BALTIMORE</u>			
		<u>FORT McHENRY</u>			
		<u>BROOKLYN</u>			
		<u>FAIRFIELD</u>			
		<u>CURTIS BAY</u>			
		<u>AIRPORT</u>			
		<u>NORTHWEST HARBOR</u>			
		<u>LAZARETTO POINT</u>			

LAC

November 21, 1934.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
8 volumes of sounding records for

HYDROGRAPHIC SHEET 5531

Locality Baltimore Harbor, Maryland

Chief of Party: John A. Bond in 1934  
Plane of reference is mean low water reading  
3.5 ft. on tide staff at Fort McHenry  
6.5 ft. below B.M. 25

Height of mean high water above plane of reference is 1.1 feet.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. .5531

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

Number of positions on sheet	.2139..
Number of positions checked	.238.
Number of positions revised	....5.
Number of soundings recorded	.2950..
Number of soundings revised	...20.
Number of signals erroneously plotted or transferred	.....

Date:..... *December 13, 1934* .....

Cartographer:..... *Mark S. Gurnee* .....

Verification of protracting  
Verification & inking of rocks and shoals)

by

M.S. GURNEE

Time: 8 1/2 Hours

Verification of inking by

Time:

Review by *R.J. Christman*

Time: 3 1/2 hrs

REPORT OF VERIFICATION - H5531

I - Conformity to Hydrographic Manual

The records are neat and legible and conform to the requirements of the Hydrographic Manual. ✓

Neither the Special Chart for the U. S. Lighthouse Service, nor Form 524 - Recoverable Stations - has been submitted.

II - Depth Curves

The zero, six, twelve, eighteen, and thirty foot depth curves appear complete on this sheet except along docks and bulkheads where it is impracticable to draw any curves between the soundings and the docks. ✓

III - Field and Office Plotting

The smooth sheet was checked with Boat Sheets, and occasional positions checked by reprotracting. Inasmuch as the work appeared to be very accurately and carefully executed, only important fixes and fixes which gave the appearance of being faulty were checked. Only five positions were revised, and four of these were locations abreast of signals, where odd times of passing the signals were overlooked by the field plotters. ✓

The field preparation of the sheet, as a whole, was considered by the verifier to have been unusually well done as far as hydrography is concerned. The topographic transfer of details such as pilings and wrecks required numerous office corrections and additions. ✓

IV - Junctions

H-5469 (1934) is the only adjoining sheet. The junction with this sheet was made on H-5469 by the verifier, as that sheet was on the larger scale. The agreement is good. ✓

V - Remarks

1. Buoy S-2 (Lat. 39°15'.3; Long. 76°33'.3) has been inked as located by the Topography and checked by sounding line 82-83f (blue). This buoy was apparently also located by position 28a (green; Vol. 5 page 7), but this fix fails to check the position of the buoy as above, falling 110 meters to the North Northwest. Only one Buoy is shown on the Topographic Sheet - T6060 - and on the chart (545). *error of 10° in recording the*  
~~The latter position has been left in pencil on the smooth sheet.~~

2. Black Spar Buoy #3 (Lat. 39°15'.3; Long. 76°33'.6) has been inked as plotted by position #521 (green) Vol 8 page 45). The check angle fails to check this position, as does also a rejected fix - 29 a day (green; Vol. 5 page 7). *Not shown on Topo Sheet.* ✓

3. The check angles of position 511 (green; Vol. 8 page 45) fail to check the position of Red Spar Buoy #4 (Lat.  $39^{\circ}15.3$ ; Long.  $76^{\circ}33.8$ ) <sup>5000</sup> not shown on Topographic Sheet. ✓

Respectfully submitted,

*Mark S. Gurnee*

Mark S. Gurnee,  
Verifier

Dec. 13, 1934.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5531 (1934)

Baltimore Harbor, Chesapeake Bay, Maryland  
Instructions dated May 15, 1934 (Mikawe)  
Surveyed in 1934

Hand Lead Soundings

Three Point Fixes on Shore Objects

Chief of Party - John A. Bond.  
Surveyed by - D. E. Sturmer, T. A. Rydingsvard.  
Protracted by - A. G. Turner.  
Soundings Pencilled by - A van Routh.  
Verified and Inked by - M. S. Gurnee.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual.

2. Compliance with Instructions for the Project.

The plan and extent of development are in accordance with the instructions for the project.

3. Sounding Line Crossings.

The agreement in depth of soundings on crosslines is satisfactory.

4. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn.

5. Junction with Adjacent Surveys.

- a. The junction with H-5469 (1934) to the west is satisfactory.
- b. Junctions with "Chart 545 at the entrance to Northwest Harbor" (required by par. 2 b of Instructions, and with "H-4371 (1924), approximately on the line between Fishing Point and Sollers Point," are satisfactory.

6. Comparison with Prior Surveys.

- a. H-165 (1845), H-1449b (1876), H-1450a (1876), H-1451 (1880), H-2344 (1898), H-2357 (1898), and H-2400 (1899).

Details along shore, as well as most of the water areas, have been greatly changed by dredging and general harbor improvements since these surveys were made. No detailed comparison is therefore necessary.

- b. H-4371 (1924).

This survey is in very good agreement with the 1934 survey,

except in the following areas.

- (1) The maintained channels have dredged deeper in a number of places.
- (2) The airport area has been filled in since the 1924 survey, and a strip approximately 300 meters wide outside the filled in area shows considerable change in details. (See BP 23606 and chart letter 400/1933).
- (3) The area southeast of Lazaretto Pt. (Lat.  $39^{\circ}15.5'$ , Long.  $76^{\circ}34'$ ) has changed considerably due probably to harbor improvements. The charted 16, 17 and 18 foot shoals in this area are apparently no longer in existence, according to the 1934 survey.
- (4) The area northeast of Brooklyn (Lat.  $39^{\circ}15'$ , Long.  $76^{\circ}35.5'$ ) is being used as a dumping place for dredged material. Dredging at the time of the survey was being done eastward of Fishing Point.
- (5) The area in the vicinity of the charted 17, 18 and 18 foot shoals (Lat.  $39^{\circ}15.1'$ , Long.  $76^{\circ}34.3'$ ) has deepened and none of these soundings have been carried forward to the present survey.
- (6) The charted 18 foot sounding in Lat.  $39^{\circ}14.4'$ , Long.  $76^{\circ}33.5'$  has not been carried forward. Its original position is close to the channel which has been dredged since the 1924 survey.
- (7) In the more stable areas the following soundings charted from the 1924 survey were disposed of as follows:
  - (a) A 6 in Lat.  $39^{\circ}14.5'$  Long.  $76^{\circ}31.6'$  although close to the changed area as noted under par. 6-b2, has been retained. It is small in area, was closely examined during the 1924 survey, and the adjacent soundings are in close agreement with the 1934 survey.
  - (b) The 6 foot sounding charted as a detached shoal about 300 meters southeast of the above, has been retained as the 1934 survey does not sufficiently disprove its continued existence.
  - (c) An 18 in Lat.  $39^{\circ}13.9'$ , Long.  $76^{\circ}31.9'$  has not been retained. It falls between lines of the 1934 survey with general depths of 22 feet, but the bottom is soft mud and probably has changed.

- ✓ (d) The 18 in Lat.  $39^{\circ}14.1'$ , Long.  $76^{\circ}32.05'$  has not been retained because the 1934 survey shows 22 feet in practically the same location.
- ✓ (e) The 18 in Lat.  $40^{\circ}13.75'$ , Long.  $76^{\circ}33'$  has not been retained because a deepening of 1 to 2 feet is indicated here.
- ✓ (f) The 6 in Lat.  $39^{\circ}15.4'$ , Long.  $76^{\circ}32.85'$  has been carried forward as the 1934 survey does not cover the exact locality and adjacent soundings on both surveys are in sufficiently close agreement to warrant its retention.
- ✓ (g) The 14 in Lat.  $39^{\circ}15.35'$ , Long.  $76^{\circ}33.15'$  has not been carried forward because it was questioned in the original record as a probable 20 foot depth, and the present survey gives no indication of shoaling in the vicinity. ✓ The 17 about 200 meters southeast of the 14 is not carried forward. The 1934 survey covers the immediate vicinity without any indication of shoaling. Both of these were single soundings in an otherwise regular bottom.
- ✓ (h) In Lat.  $39^{\circ}14.5'$ , Long.  $76^{\circ}31.3'$  a number of piles are shown on the chart from the 1924 survey. In view of the many changes along the waterfront in recent years, and the apparent attention to details during the 1934 survey, the latter should supersede all information of this nature now shown on the chart.

7. Comparison with Chart No. 545.

Within the area of the present survey the chart is based on surveys discussed in the preceding paragraphs, with the exception of the following:

- a. Limits of the maintained channels and controlling depths are charted from U. S. Engineers blueprints and reports. The chart also shows soundings from these blueprints in the areas adjacent to the channels. The Descriptive Report notes that depths on the 1934 survey are consistently 2 feet greater than on the latest blueprints (July, 1933, B. P. 27101-2-3) but the reason for the difference was not determined. It is recommended that where actual soundings are shown on the chart, the preference be given to H-5531 (1934).
- b. The detached 18 in Lat.  $39^{\circ}15.5'$ , Long.  $76^{\circ}34.2'$  comes from B. P. 27103. This is in a changing area. The dredging along the wharf to the eastward probably has affected this entire area and the 18 should no longer be charted.

c. A considerable amount of private dredging of channels appears to have been done, much of which is not shown on the present edition of Chart 545. One instance is the channel leading to the wharf westward of Fort McHenry. Chart letter 400 (1933) from Bureau of Harbors, Baltimore, and B. P. 23606 are authority for the airport and several projects under construction.

d. Charted positions of buoys are in general in fair agreement with the locations given by the 1934 survey. The differences noted do not affect their value as aids to navigation, except in the case of N "14M" (Lat. 39°15', Long. 76°33.7') which is located 160 meters southeast of the charted position and does not properly mark the entrance to the dredged channel leading to the wharves. Dredging has been done in the vicinity of the wharves and all 3 buoys marking the approach to the wharves have been shifted to show the new conditions. Some differences in location of buoys are as follows:

- (1) S5 (Lat. 39°16', Long. 76°34.7') is located about 100 meters south of the charted position.
- (2) WSC (Lat. 39°15', Long. 76°33.3') was not located by the 1934 survey.
- (3) WSA (Lat. 39°14.4', Long. 76°32.7') is located about 70 meters south of the charted position. These buoys mark the limits of the dredged anchorage.
- (4) The lighted buoys "9M" and "10M" of the Fort McHenry Channel are about 80 meters and 40 meters, respectively, southeast of their charted positions.
- (5) Other buoys along this channel are located close to their charted positions.

#### 8. Field Plotting.

Protracting and penciling of soundings were excellent. Transfer of topographic details was not complete and a number of additions and corrections were made in this office by the verifier.

#### 9. Additional Field Work Recommended.

The survey is satisfactory. The area has been uniformly and well covered, and no additional work is required.

#### 10. Superseding Old Surveys.

Within the area covered, the present survey with indicated additions from prior surveys, supersedes the following surveys for charting purposes.

H- 165	(1845)	In Part
H-1449b	(1876)	" "
H-1450a	(1876)	" "
H-1451	(1880)	" "
H-2344	(1898)	" "
H-2357	(1898)	" "
H-2400	(1899)	Entirely
H-4371	(1924)	In part

11. Reviewed by - R. J. Christman, Dec., 1934, and Jan., 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green,   
Chief, Section of Field Records.

  
Chief, Section of Field Work

  
Chief, Division of Charts.

  
Chief, Division of H. & T.

Smooth sheet No 2 and records have  
been examined and are approved.

John A. Bond  
Chief of Party.