

5374

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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. 4. 5374
Hydrographic }

LOCALITY

Chesapeake Bay

Herring Bay.

1933

CHIEF OF PARTY

John A. Bond

DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet No. 4.

CHESAPEAKE BAY

FRANKLIN POINT TO NORTH CHESAPEAKE BEACH

AUTHORITY

This work was executed in accordance with Director's Instructions dated May 10, 1933 to the Commanding Officer, Launch MIKAWA.

LIMITS

Sheet 4 joins sheet 3 on the north and sheet 2 on the east, both of which were executed this season.

SURVEY METHODS

Standard Coast Survey methods of hand lead soundings and sextant fixes were generally used. In narrow creeks and at the end of lines where sextant fixes were impracticable, the positions were 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. The boats used were a 32-ft. hydrographic launch and a 22-ft. skiff with outboard motor. Sheet No. 4 was surveyed in conjunction with sheet No. 3 to the north, sounding lines being continuous from one sheet to the other which accounts for the large intervals of time between successive positions at the end of lines on the northern edge of the sheet.

DISCREPANCIES

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

DANGERS

A wreck of an old schooner lies 100 meters north of signal "Blac", just north of the channel into Rockhole Creek. The wreck is covered by $\frac{1}{2}$ -ft. of water at low water. Positions 15m and 16m mark its location. Lat. 38-46.0, Long. 76-33.3.

wreck
awash
according
to records.

CHANNELS

Four feet can be carried into Rockhole Creek at Low Water through a well beaconed channel.

COMPARISON WITH PREVIOUS SURVEYS

The depth curves check well with previous surveys as taken from the chart.

MISCELLANEOUS

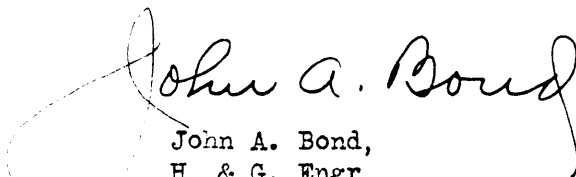
The dotted line extending intermittently along the western shore from Lat. 38-43.9 to Lat. 38-46.0 is the low-water line carefully sketched in at low water.

Respectfully submitted,



D.E. Sturmer,
Deck Officer,
Hydrographer.

Approved and forwarded,



John A. Bond,
H. & G. Engr.,
Chief of Party.

*Applied to new chart 550
Sept 24, 1934 HHC.*

STATISTICS FOR FIELD SHEET NO. 4

<u>Date</u>	<u>Day Letter</u>	<u>Volume</u>	<u>Positions</u>	<u>Soundings</u>	<u>Sta. Miles</u>
Oct. 6	a	I	44	237	7.8
Oct. 9	b	I	89	470	14.4
Oct. 11	c	I	79	456	14.3
Oct. 12	d	I	35	207	7.1
Oct. 16	e	I	47	272	8.6
Oct. 16	e	I II	60	307	9.5
Oct. 18	f	II	141	736	24.0
Oct. 19	g	II	131	561	15.0
Oct. 20	h	III	99	510	16.9
Oct. 30	j	III	153	635	11.9
Oct. 31	k	III & IV	183	833	13.6
Nov. 1	l	IV	127	547	10.5
Nov. 2	m	IV	16	53	1.0
Nov. 7	n	IV	98	555	18.9
Nov. 9	p	IV	9	51	1.0
Nov. 20	q	V	52	304	9.7
Nov. 21	r	V	63	344	10.3
Nov. 25	s	V	24	94	3.0
Nov. 28	s t	V	6	24	1.2
<u>Totals</u>			1385 1456	6830 7196	187.1 198.7

Rsk

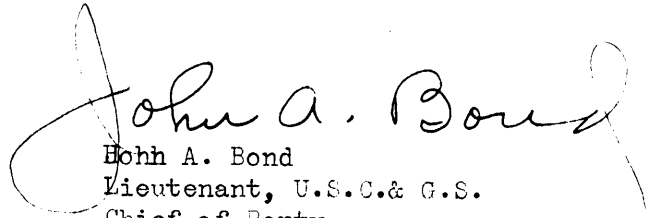
TIDAL DATA

The tide gage and staff used for reducing all soundings plotted on this sheet was located at Thomas Point Shoal Lighthouse, (Lat. 38-54, Long. 76-26). An Automatic portable tide tide gage was installed from Oct. 6 to Oct. 26, 1933 and the staff was read hourly during sounding periods from Oct. 26 to Nov. 28, 1933.

Mean Low Water---2.35 on the staff. The soundings were reduced from the 2.4-ft. plane.

STATEMENT OF CHIEF OF PARTY

The accompanying hydrographic sheet has been inspected by
the undersigned, and is approved.


John A. Bond
Lieutenant, U.S.C. & G.S.
Chief of Party

LUC

February 20, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5374

Locality Franklin Point to North Chesapeake Beach, Chesapeake Bay, Md

Chief of Party: John A. Bond in 1933
Plane of reference is mean low water reading
2.2 ft. on tide staff at Thomas Point Light
4.1 ft. below B. M. 1

Height of mean high water above plane of reference is 0.9 feet

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents

VERIFICATION REPORT H-5374

Records:

The sounding records are very neat and legible. They conform to the general requirements except for the following:

1. The bottom characteristic is not usually entered at the top of each page.
2. In general there are no explanations given for rejections or changes in the records except for such casual mention under "Discrepancies" in the Descriptive Report.
3. The signals Owl and Bec are beacons; ~~although not shown on the contemporary topographic sheet (T-6036) of this area. No mention of these signals as being beacons is made in the records.~~ they are shown on the contemporary topographic sheet (T-6036) of this area. No mention of these signals as being beacons is made in the records.
4. "Vert" and "Cup" were used interchangeably in the records for the same station - namely- Calvert Hotel Cupola.
5. Change in time interval was not always noted with a distinctive mark. This involved perusal of the time recordings by the verifier.
6. An "old wreck" at pos. 107g is not recorded in the index of that volume.
7. The record does not give sufficient information with regard to "pipe and concrete pier" at pos. 102f to determine the size and character of this structure. The verifier assumed this to be a mooring for small craft.
8. There is some contradiction between the records and the Descriptive Report regarding a wreck at positions 15 and 16m. The Descriptive Report refers to one wreck covered $\frac{1}{2}$ ' at low water, while the sounding records refer to an "old wreck" at pos. 15m and a "big wreck" at pos. 16m. It is evident that the tide reducer had not been applied to the $\frac{1}{2}$ ' sounding. The verifier at the direction of Mr. A. L. Shalowitz treated the danger as one wreck with the two positions marking its extremities and placing a note "awash at M. L. W." beside it.

Field Protracting:

The protracting was carefully done within the limits of accuracy of the field protractor, but many uniform errors in positions along the eastern limits of the sheet from lat. 38°42' to 38°45' indicated an inward bow in the right arm of the field protractor. This bow, when magnified by the use of the right arm extension on stations Hop and New, caused errors in positions (26-30r, 45-48r, and 27q) as high as 25 m. (10,000 scale). Since such errors caused so negligible a change in the depth curves the verifier was given permission by Mr. A. L. Shalowitz to ink this area,

subject to a possible correction when the adjoining sheet, (field #2) is verified, ^{and} the overlap made. A detailed memorandum of these protracting errors has been prepared to send to the chief of party. This memorandum is attached herewith.

Field Plotting:

The field plotter of the smooth sheet should be commended for the excellency of his sounding figures, although they were somewhat large. The day letters and position numbers were very well done. The field plotting conformed to the general requirements with the following exceptions:

1. In general, changes in time interval were disregarded between positions. The verifier replotted all such cases.
2. The lines of k day (which cross the channel line 10-14m) in Rockhole Creek were evidently plotted prior to the channel line, with the result that 3 feet appeared to be the controlling depth. Upon careful scrutiny and inking of the channel line before inking the cross lines it is now evident that 4 feet can be carried into Rockhole Creek. This corroborates the Descriptive Report.
3. The wreck noted in the record between 107-108g was not plotted by the field plotter,
4. Can Buoy #25 (pos. 27-28r) was not plotted by the field plotter.
5. The field plotter placed Spar Buoy #1 in pencil at pos. lh. The verifier upon the suggestion of Mr. A.L. Shalowitz moved this buoy to a mean position between lh and lt.
6. Many geographic names were not penciled in by the field plotter.
7. There was no triangulation datum given on the smooth sheet. Also the geographic position of the reference station (Baker) had been copied incorrectly from the list of Geographic Positions, and was changed by the verifier.
8. The depth curves were well drawn by the field plotter, except that instead of including the significant depth they passed through its center.
9. The transfer of topography from the topographic sheets was carelessly done, especially with regard to docks.

Office Protracting:

Due to the errors here-to-fore mentioned, considerable time was spent in checking the field protracting. The verifier protracted an average of 18% of the positions besides making careful comparison with the boat sheet. This protracting was held to a minimum of 5% in areas which checked well.

Verifiers' notes upon comparison with other data:

1. The boat sheet checked well with the smooth sheet.
2. Upon comparison with the contemporary topographic surveys T-6035 and T-6036 several changes and additions were made

on the hydrographic sheet, namely:

- (a) Small docks were placed on the hydrographic sheet at 100, 101, 114, 115 and 116g.
- (b) A wreck appearing on the topographic sheet was transferred to the hydrographic sheet at pos. 114g. This wreck did not appear on the hydrographic sheet nor did mention of it appear in the records.
- (c) A dock at 88g on the hydrographic sheet does not appear on the topographic sheet.
- ~~(d) A dock just north of signal Cur was removed from the hydrographic sheet by suggestion of Mr. A.I. Shalewits because it does not appear on the topographic sheet.~~
- (e) Docks, Jetties, tiny islands, and structures - too numerous to mention - were adjusted or added to the hydrographic sheet, in conformity with the topographic sheet.
- (f) The low water line carefully sketched in on the hydrographic sheet was accepted and inked in preference to the line shown on the topographic sheet.

shown in pencil on the Topo sheet replaced on hydro sheet
Ryl

Crossings:

The crossings, practically all of which are in the entrances to creeks, are in agreement.

Curves:

The usual depth curves could be drawn.

Junctions:

Since the contemporary adjoining hydrographic sheets have not yet been received in this office no junctions can be made. When these junctions are made careful attention should be given to the agreement between 38°-42' and 38°-45' mentioned here-to-fore under field protracting.

Omissions:

Very few soundings were omitted and then only when their omission increased legibility without detracting from the completeness of the development in that area. Seven soundings prior to 47b were omitted because of no control.

Verifier's notes:

The verifier assumed the privilege of correcting the "Statistics" in the Descriptive Report.

It was noticed that chart 1225 gives the name Rockhole Creek to that creek which chart 77 calls Herring Creek. The name Rockhole

(4)

Creek was inked on this sheet after consulting Mr. Bacon,

There is a possibility of a shoal existing in the vicinity of 15-16d and 22-23d where the $7\frac{1}{2}$ ' soundings appear.

The entrance to Broadwater Creek appears to be cut off by a controlling depth of $1\frac{1}{2}$ feet whereas the arms of the creek contain many three and even four foot soundings.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'R. B. Krum', with a long horizontal flourish extending to the right.

R. B. Krum

MEMORANDUM:

For Field Sheet # 4 H-5374

Franklin Point to North Chesapeake Bay, Chesapeake Bay, HERPING BAY
Maryland

Chief of Party: John A. Bond

During the office verification many small errors were found in the field protracting on this sheet. Their magnitude increased until at positions 27q, 28-30r and 45-48r the errors in field protracting became as great as 15 to 25 meters (10,000 scale) . The office protracting was done with three different protractors, all of which were found to be in proper adjustment.

These errors were not confined to any particular day but seemed to be grouped in outlying areas of the sheet where such fixes were used as to place the right signal near the end of (or on the extension of) the right arm of the protractor. Further investigation showed that an average decrease in the right angle of 10' was necessary to bring the office plotting in agreement with the field plotting in cases where the signal fell within 2 inches of the end of the right arm. When the signal fell on the extension of the right arm this angle increased to an average of 15'

MEMO for Field Sheet #4

Since the office protracting checked the field protracting very well in cases where the signal did not fall beyond the center of the right arm the conclusions are that the field protractor had an inward bow in the right arm , near its end.

It would be well to mention here that the verifier could not sufficiently determine the character of the obstruction at Pos. 102f. Its only notation is in the sounding record, quote " Pipe and concrete pier 20 meters stbd." This structure is neither plotted on the smooth sheet nor the boat sheet nor the recent topographic sheet of this area. There are no aerial photographs of this section. Perhaps this structure is a small pipe set in a concrete footing for purposes of mooring small boats.

Respectfully submitted,



Verifier.

SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5374
Herring Bay, Chesapeake Bay, Maryland.
Surveyed Oct.-Nov. 1933.
Instructions dated May 10, 1933 (MIKAWE)

Chief of Party - J. A. Bond.
Surveyed by - D. E. Sturmer.
Protracted and soundings plotted by - A. G. Turner.
Verified and inked by - R. B. Krum.

1. Records in general conform to the requirements of the Hydrographic Manual though the notes are inadequate in some instances. At pos. 102f a note states "Pipe and concrete pier 20m. Stbd.;" as neither boatsheet or topographic sheet shows a wharf or dock in this locality it is assumed to be a permanent mooring for small craft. Several variations from prescribed practice are noted in the verifier's report.
2. The plan and extent of development conform to the regulations and satisfy the specific instructions, except that the sounding lines were run at an angle to the general coast line instead of parallel to it, and there are no cross lines.
3. Soundings are consistent and depths at crossings at entrance to creeks and in channels are in good agreement.
4. Depth curves can be drawn satisfactorily.
5. Junctions. Contemporary survey sheets adjoining this sheet have not yet been verified. Attention is directed to a small displacement of soundings at the southern edge of this sheet apparently due to a faulty protractor used by the field party, see verifier's report.
6. Comparison with H. 2629 (1903) shows good general agreement in depths. There has been some change close inshore especially at the entrance to Parkers Creek and to Rockhole Creek though the effective depth in the channels remain about the same.
7. Field plotting was excellent, except that soundings were not spaced according to elapsed time where the interval was changed between positions. A wreck and a buoy mentioned in the sounding records were omitted by the field draftsman. The transfer of shoreline, docks, islands, was not made carefully and the values of the reference station (Baker) was not in agreement with the list of Geographic Positions.
8. Recommendation. This sheet (H. 5374) should supersede all previous surveys for charting the area represented by it.

No further surveys are deemed necessary at this time. A copy of the verifier's memorandum relative to the use of a faulty protractor should be forwarded to the field party. *furnish field Party April 30-34*
CKG

9. Reviewed by - R. J. Christman, April 28, 1934.

K.T. Adams
K. T. Adams,
Chief, Section of Field Records.

H. P. Gordon
Chief, Section of Field Work.

Examined and approved: *L. O. Lobbut*
Chief, Division of Charts.

G. V. Rude
Chief, Division of H. & T.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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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. 4.

REGISTER NO. 5374

State Maryland

General locality Chesapeake Bay

Locality Herring Bay

Scale 1:10,000 Date of survey Oct. 6-Nov. 28, 1933

Vessel Launch MIKAWA

Chief of Party John A. Bond

Surveyed by D.E. Sturmer

Protracted by A.G. Turner

Soundings penciled by A.G.T.

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by -----

Inked by R. B. Krum

Verified by R. B. Krum

Instructions dated May 10, 1933

Remarks: _____

