5228 5229
5230

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: Maryland

DESCRIPTIVE REPORT

Hydrographic } Sheet Nos. 1, 2(a & b), 3(a & b).

5228 5229 5230

LOCALITY

Wicomico River

Maryland

19 32

CHIEF OF PARTY

E. H. Bernstein

U. S. GOVERNMENT PRINTING OFFICE: 1931

5228 5230 5229

Form 537
11—5812

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. 1

REGISTER NO. 5228

State Maryland

General locality Wicomico River

Locality ~~Huntikoko~~ Long Point to Mount Vernon ~~Wharf~~.

Scale 1:10,000 Date of survey April 26, to June 3, 1932

Vessel Launch MIKAWE (Launch No. 65)

Chief of Party E.H. Bernstein

Surveyed by E.H. Bernstein

Protracted by A.C. Klahre, Jr.

Soundings penciled by R. Stephenson

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by John S. Ladd

Verified by John S. Ladd

Instructions dated August 17, 1931, 192

Remarks:

GPO

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5229

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"a" and 2"b"

REGISTER NO. 5229

State Maryland

General locality Wicomico River

Locality ~~Mount Vernon Wharf to Quantico Wharf~~ Central Portion

Scale 1:5,000 Date of survey July 22, to Aug. 16, 1932 July 28, to Aug. 16, 192 32

Vessel Launch MIKAWE (Launch No.65)

Chief of Party E.H. Bernstein

Surveyed by E.H. Bernstein

Protracted by W.B. Moore, Jr.

Soundings penciled by W.B. Moore, Jr.

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated August 17, 1931, 192

Remarks: Boat sheets to correspond are two separate sheets.

GPO

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5230

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. 3"a" and 3"b"

REGISTER NO. 5230

State Maryland

General locality Wicomico River

Locality ~~Quantico Wharf to~~ Salisbury and Approach

Scale 1:5,000 Date of survey Aug 1 to Aug. 16, 1932 Aug. 2 to Aug.9, 1932

Vessel Launch MIKAWE (Launch #65)

Chief of Party E.H. Bernstein

Surveyed by E.H. Bernstein

Protracted by A.C. Klahre, Jr.

Soundings penciled by J.G. Conrath

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by Warren H Bamford

Verified by W H B

Instructions dated August 17, 1931, 192

Remarks: Boat Sheets to correspond are two separate sheets.

GPO

DESCRIPTIVE REPORT

to accompany

SHEETS 1, 2 (a and b), 3 (a and b).

Wicomico Proj. 88.

DATE OF INSTRUCTIONS

August 17, 1931.

SURVEY METHODS

The standard prescribed methods of the Coast and Geodetic Survey for launch hand lead sounding were used. The launch used was Launch No. 65. All lines were run on natural ranges on points picked out by laying off sextant angles. Since the lines are very short and work is done on a large scale, special attention was given to details. The two sextant observers stood continually as close together as possible and angles were marked sharply and exactly. The leadsman was as close to the observers as possible. The launch was usually maneuvered into position heading on the selected range and given a chance to get started on sounding speed by going full speed ahead on the engine and immediately slowing down to regular sounding speed when that was obtained; besides that, positions were taken as soon as possible after the first one, the idea being to compensate for irregular speeds when starting lines. Positions were taken very frequently. At the end of lines positions were sharply marked on the last sounding on the line while the launch still was running at regular speed. A superfluity of signals was available; the strongest available fix was chosen wherever possible. Lines were run parallel to the channel in the various reaches of the river, and spaced not over 25 meters apart, with additional lines to develop the various curves of the river. This system gives check crossings on the turns where most needed. On sheet No. 1, the channel lines are 50 meters apart and sufficient cross lines were run to definitely determine all depth curves. In all cases the launch was run as slowly as necessary to obtain good soundings. Sounding was done by an experienced leadsman, a boatswain of the Survey. For his relief another man was especially trained. Currents were not excessive but at times of the stronger currents sounding was done closer to shore in shoaler water.

DISCREPANCIES

Satisfactory junction and overlap was made with sheet H-2614 at the mouth of the river.

There were no particular discrepancies and none remain unadjusted.

DANGERS

Parallel lines were run spaced as closely as possible over the shoal immediately south of the line between buoys N. 2 and S. 4, south of Nantikoke Point. No indication was found of the wreck shown here on Chart No. 1224. Inquiry on shore and among oyster tongers working

on the shoal revealed that no traces of this wreck remain, it having sanded in completely. The least water found on this shoal is 6½ feet, the sounding previous to position No. 101 "r". This same depths prevails over an area covering two lines to the southward.

A least depth of 2 feet prevails about 300 meters west of buoy S "4".

A least depth of 7 feet is found on a shoal 740 meters northeast of buoy N"2".

A least depth of 5½ feet is found on the point of shoal 180 meters northwest of Great Shoals Day Beacon.

A least depth of 3 feet is found 620 meters south of the eastern end of Nantikoke Point, a narrow ridge with this depth of water extending that far off the point, with 2 feet 440 m. south of the point.

A least depth of 6 feet is found immediately adjacent to the main channel 160 meters northeast of Great Shoals Day Beacon.

A least depth of 6 feet is found on a shoal 440 meters north by east of Wingate Point Beacon.

A spoil bank 900 meters north northeast of station"Jones (1932)" bares at ½ tide.

CHANNELS

Sufficient lines parallel to the channels were run to definitely define their limits. The controlling depth in the channel as far as White Haven is 11½ feet. This depth is found in longitude 75° 49¼'. Above White Haven the limiting depth to Salisbury is 10½ feet. This limiting depths is found ¼ mile above the mouth of Wicomico Creek, (Sheet 2 "a"), and a depth of 12 feet is found 250 yards north of Fruitland Wharf (Sheet 3 "b"), and 12 feet, 1½ miles above Green Hill Church.

The entrance channel is well marked as far as Mount Vernon. In the vicinity of Great Shoals Lighthouse the channel is narrow and has very shoal sides. At certain stages of the tide there is much current in this vicinity.

The main channel of Wicomico River has been improved by dredging in the reach to the east and northward of Great Shoals Lighthouse to Wingate Point; the reach from the north shore opposite Mount Vernon to Mount Vernon Wharf; and in the upper reaches from Patricks Landing to Salisbury. At Salisbury a turning basin 155 feet wide and 650 feet long has been provided just below the fork in the river. Above this fork the two branches of the river have been dredged for a distance of about 4/10 mile with depths of about 9 feet available.

ANCHORAGES

Vessels anchor frequently in the deeper water 250 meters south of Great Shoals Lighthouse. If anchored over longer periods the

deeper water 350 meters to the south and southeast of Mount Vernon Flats (Red 1932) Beacon, is used. Smaller boats frequently anchor in Monie and Ellis Bays.

Dames Quarter Creek is extensively used for anchorages of fishing boats.

Smaller fishing boats abound in the cove 200 meters westward of triangulation station "Jones (1907)".

Wicomico Creek is used very infrequently and usually only to the cannery $\frac{3}{4}$ mile inside its entrance. Limiting depth at entrance 6 ft.

COMPARISON WITH PREVIOUS SURVEYS

The agreement with Sheet No. H-2614 at the mouth of the river is very satisfactory.

Results of the survey agree with charted part of Wicomico River except that greater detail is revealed.

It is very difficult to compare soundings shown on the two photostat sheets of the Corps of Engineers, U.S. Army showing condition after dredging November 27, 1922. Soundings given by the Army Engineers should be considered for charting purposes. (Copies of two photostats are transmitted with this report.) 3BP 25165-6-7 Feb. 18, 1932

GEOGRAPHIC NAMES

See Descriptive Reports for topographic Sheets A,B,C,D, and E.

STATISTICS

Sheet	Miles	Soundings	Positions
1	380.7	16,823	2,720
2 "a"	69.7	5,733	1,006
2 "b"	32.4	3,588	592
[illegible] "a"	36.4	3,846	615
[illegible] "b"	33.2	3,537	545

TIDAL DATA

The positions of the tide guages at Great Shoals Lighthouse, White Haven, Quantico Wharf and Salisbury are shown on the hydrographic Sheets.

Current stations are plotted on Sheets, 2"a" and 5"b". Observations were made by pole and also the Price current meter in accordance with standard prescribed methods of the Survey. Consistant results were obtained but currents are influenced consideralby by narrowness of channel making relatively large displacement of the ship when swinging. Revolutions of the current meter were counted by two persons for every reading. A tracing showing location of each station is fur-

nished herewith.

Reducers were obtained for Sheet No. 1 from readings at the Great Shoals Lighthouse guage. Zones of 1 mile length were laid off and reducers obtained for every zone making corrections to the time and height as computed by simultaneous observations between this guage and the one atWhite Haven.

For Sheet 2"a" the readings of the White Haven guage were used and advanced for height and time in $\frac{1}{2}$-mile zones in proportion to relations between this guage and the one at Quantico Wharf. Below White Haven tides were obtained for zones inversely as above.

Sheet 2"b" readings of the guage at Quantico Wharf were used and reducers computed for $\frac{1}{2}$-mile zones in proportion to the distance down the river to White Haven and corrected for time and height differences.

On Sheet 3"a" Quantico Tides were used and corrected for 1-mile zones in proportion to distance away from Quantico Wharf towards Salisbury and corrected for time and height differences prevailing.

On Sheet 3"b" Salisbury tides were used directly and corrected in 1-mile zones in proportion to distance away from Salisbury for height and time differences with Quantico Wharf.

Marigrams were scaled and tide readings tabulated for all of the White Haven observations. For the other stations only such parts as were needed for the sumultaneous comparisons or for tide reducers to soundings were scaled, and tabulated. (Page 117, Hydrographic Manual).

Guage	Height of M.L.W. on staff.
Great Shoals L.H.	2.5 feet.
White Haven	5.51 feet.
Quantico Wharf	4.00 feet.
Salisbury	0.30 feet.

All of the sheets were protracted and soundings plotted by inexperienced men. Special effort was made by the Chief of Party to supervise these operations and numerous positions were examined. Yet several places were foundto be erroneously plotted in spite of a record kept of those points that gave the draftsmen difficulty. Others may therefore be found when the sheets are reviewed in the office. It was impossible for the Chief of Party to review all sheets in detail in their entirety.

Respectfully submitted,

E.H.Bernstein

E.H.Bernstein
Lieutenant, U.S.C.& G. Survey
Chief of Party

POST-OFFICE ADDRESS: San Juan Magnetic Observatory, Box 3067 Santurce, Puerto Rico.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

80

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

November 8, 1933.

1933 NOV - 14 AM 9:38

To: The Director
U. S. Coast and Geodetic Survey
Washington, D.C.

From: E. H. Bernstein
Lieutenant, U. S. C. & G. Survey

Subject: Channel Markers, Wicomico River, Maryland.

Referring to your letter No. 80-DRM, dated November 1, 1933, all channel markers of permanent nature were plotted on the topographic and hydrographic sheets with proper symbols.

Only the entrance of the River is marked by permanent aids. These end with the red lighted beacon which is about three miles below White Haven.

Channel markers referred to in notes in the sounding records but not plotted on the field sheets are all very temporary marks most of which disappeared while the survey was in progress. They are bushes and flimsy stakes which were set by the dredges while working. References were made to such markers in the sounding records to aid in plotting only. I do not believe that any of these temporary marks should be plotted. If the bushes in the upper reaches of the River from Patricks Landing to Salisbury were to be regularly maintained, I would strongly suggest that the site of such bushes be outlined on the chart similarly as done on some of our Inside Route charts in the vicinity of Albemarle Sound where such bushes are maintained by the Lighthouse Service.

Please call on me again for further explanation of any questions which have not been made sufficiently plain in the notes or the various reports.

E. H. Bernstein

E. H. Bernstein
In charge San Juan Magnetic Observatory

80-DRM

November 1, 1933.

To: Lieut. E. H. Bernstein,
U. S. Coast and Geodetic Survey,
San Juan Magnetic Observatory,
P. O. Box 3067,
Santurce, Puerto Rico.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Channel markers, Wicomico River.

In the verification of the hydrographic survey of Wicomico River it is noted that the positions of numerous channel markers were recorded in the sounding records but not plotted on the field sheets. The nature and permanence of these markers was not stated.

It is requested that you furnish information on this point and advise if provision is made for continuing them in place. This information is desired for charting purposes.

(Signed) J. H. HAWLEY

Acting Director.

RAE

April 7, 1933

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 5228

Locality **Long Point to Mount Vernon, Wicomico River, Md.**

Chief of Party: **E. H. Bernstein in 1932**
Plane of reference is **mean low water, reading**
5.5 ft. on tide staff at **White Haven**
8.9 ft. below B. M. 1
2.5 **ft. on tide staff at Great Shoals Light**
4.8 **ft. below B.M. 2**
Height of mean high water above plane of reference is 2.3 feet at Great Shoal Lighthouse and 2.4 feet at White Haven.
Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul P. Whitney
Chief, Division of Tides and Currents.

RQC

April 3, 1933

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 5229

Locality **Wicomico River, Md. (Central Portion)**

Chief of Party: **E. H. Bernstein in 1932**
Plane of reference is mean low water, reading
5.5 ft. on tide staff at **White Haven**
8.9 ft. below B. M. **1**
4.0 ft. on tide staff at Quantico Wharf
5.9 ft. below B.M. 1
Height of mean high water above plane of reference is 2.4 feet at White Haven and 3.0 feet at Quantico Wharf.
Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul P. Whitney

Chief, Division of Tides and Currents.

RAC

April 5, 1933

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 5230

Locality **Salisbury and approach, Wicomico River, Md.**

Chief of Party: **E. H. Bernstein in 1932**
Plane of reference is mean low water, reading
4.0 ft. on tide staff at **Quantico Wharf**
5.9 ft. below B. M. **1**
0.3 ft. on tide staff at Salisbury
6.4 ft. below B. M. 1
Height of mean high water above plane of reference is 3.0 feet.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul C. Whitney

Chief, Division of Tides and Currents.

H. 5228

Chief of Party - E. H. Bernstein
Surveyed by - E. H. Bernstein
Protracted by - A. C. Klahre, Jr.
Soundings plotted by - R. Stephenson
Verified and inked by - John G . Ladd.

1. The records conform to the requirements of the general instructions.

2. The plan and character of development fulfills the requirement of the general instructions.

3. The sounding line crossings are adequate.

4. The usual depth curves could be drawn.

5. The field plotting was not carried out to the extent prescribed in the general instructions (protracting and penciling of the soundings).

The following variations were noted:

(a) Every recorded sounding that was reduced to the nearest ½ foot, was penciled on the sheet as such, without regard to its importance or location. (At least 50% of the 16,823 soundings involved were reduced to the nearest ½ foot.) The result was unnecessary congestion of the sounding along the channel and in many cases the obliteration of the position and position number.

(b) The prick holes representing the position were not always inked, making in numerous cases unnecessary protracting in order to locate the position. On many lines along the channel every position had to be protracted in order to follow it.

(c) All topographic names were omitted from the sheet by the field draftsman.

(d) Variable time intervals between positions (which usually resulted when crossing the channel) were in most cases ignored.

(e) The penciled soundings were not as legible as they easily could have been. (This applies to the position numbers also.)

(f) Bottom characteristics were left off the sheet entirely. (There are hundreds recorded in the sounding volumes.)

(g) △ Sta. Hall Pt. Beacon 1932 on the smooth sheet, was called "chop" on the boat sheet and in the records.

6. No part of the field drafting had to be done over by the office draftsman.

7. The junction with adjacent sheet to the east is satisfactory.

8. Along the northern edge of the channel between △ Red Beacon 1932 and the eastern limits of the sheet there is a sharp shoaling. ex. 2 ft.

sounding just adjacent, but inshoreward to 10 ft. sounding. etc. This is likely due to dredging of the channel in this area.

9. The 11½ foot sounding found at 75° 49½' in the channel is mentioned in the descriptive report as the controlling depth for this sheet. This should be changed as follows:

There is a controlling depth of 12 feet from the western limit of the sheet to △ "Red Beacon 1932" (the 12 ft. depth being chiefly confined to area in channel between Nanticoke and Wingate Points.) From △ Red Beacon 1932 to the 11½ ft. at 75°49½ there is a controlling depth of 11 feet found in the channel about 300 meters east of △ Red Beacon 1932.

Submitted - John G. Ladd. Oct. 30, 1933.

Section of Field Records
Report on Verification of H. 5229.
Surveyed in 1932.

Chief of Party - E. H. Bernstein.
Surveyed by - E. H. Bernstein.
Protracted by - W. B. Moore, Jr.
Soundings plotted by - W. B. M.
Verified and inked by - L. S. Straw.

1. The records conform to the requirements of the Hydrographic Manual.

2. The plan and character of development fulfill the requirements of the General Instructions.

3. The plan and extent of development satisfy the Specific Instructions except as noted in paragraph 4 of this report.

4. The sounding line crossings are <u>inadequate</u> for this survey. The system of overlapping channel lines afforded an adequate check on soundings and complete information for the delineation of depth curves at the bends in the river, but no cross lines were run in the sections of the river between bends which extend from $\frac{1}{4}$ to $\frac{1}{2}$ mile. (See Specific Instructions dated Aug. 17, 1931. Paragraph 14, MIKAWE.

5. The usual depth curves can be completely drawn with the exception of the 6 ft. curve $\frac{1}{4}$ mile up the river from White Haven. There is also an insufficient number of soundings $\frac{3}{4}$ mile up the river from White Haven to definitely delineate the 6 ft. curve. Cross lines in this vicinity would have been desirable. (See Paragraph 4 of this report. A lso Specific Instructions MIKAWE dated Aug. 17, 1931, par. 14).

6. The field plotting was completed to the extent prescribed in the Hydrographic Manual.

7. No part of the field drafting was done over in the office.

8. This sheet (H. 5229) joins H. 5228 and H. 5230. The junctions will be considered when those sheets are verified.

9. Further surveying is not required to fully develop important areas within the limits of this sheet.

Submitted by - Leo S. Straw. Aug. 31, 1933.

L. O. Colbert.
Chief, Field Records Section.

Examined and approved.

Chief, Division of Charts.

Chief, Field Work Section.

Chief, Division of H. & T.

SECTION OF FIELD RECORDS
Report on Hydrographic Sheet No. 5230.

Chief of Party - E. H. Bernstein.
Surveyed by - E. H. Bernstein.
Protracted by - A. C. Klahre, Jr.
Soundings Plotted by - J. G. Conrath.
Verified and inked by - W. H. Bamford.

1. The sounding records were found to be neat, legible and complete, and to conform to the requirements of the Hydrographic Manual except as noted in Par. 10, this report.

2. The protracting was found to be fairly well done. The position numbers were frequently found to be illegible or obscured by nearby soundings. Due to the pin prick locating the position - not having been colored with ink - a large amount of unnecessary protracting was required. (reference Hydro. Man. Par. 144.

3. The soundings were irregular in size and very poorly spaced. Approximately thirty per cent of the soundings necessitated replotting.

4. The sounding line crossings were found to be adequate on the whole although there were several instances where parallel sounding lines did not agree. These usually occurred very near the shore line.

5. The development of the channel was found to be sufficient.

6. It was possible to draw the usual depth curves.

7. The sheet was fairly clean and the work legible, except as noted in Par. 2.

8. The field plotting was completed to the extent prescribed in the hydrographic Manual.

9. The junction with the adjacent sheet, H. 5229, was found to be satisfactory.

10. It was noted that a red pencil was used to draw the twelve foot curve on the smooth sheet - this is undesirable as it is difficult to erase without erasing the soundings nearby.

A number of the bottom characteristics recorded in the sounding volumes were quite illegible and in other cases the abbreviations used on both the smooth sheet and in the sounding volumes were not according to those given on page 159, Hydrographic Manual.

In a number of cases, the ends of sounding lines, showing water at mean low water, plotted inshore from the low water line shown on the smooth sheet. These positions were always carefully checked and the low water line modified where necessary.

A large number of channel markers are referred to in the sounding volumes as the surveying party passes them. No symbol for these markers is shown on either the smooth sheet or the boat sheet, although they are

located by estimated distances from three point fix boat positions. There is no mention of these channel markers in the descriptive report, other than the statement that "the channel is well marked."

It is stated in the descriptive report that above the fork in the river at Salisbury - "about nine feet of water is available". In the northerly fork, a sounding of 8½ feet (pos. 94d (red)) was obtained at the north side of the drawbridge. In the southerly fork a sounding of 8 feet was obtained at the 1st drawbridge on the northeasterly side of the river (pos. 53d (red)) and a sounding of nine feet on the southwesterly side of the river (pos. 40e red). At the second drawbridge the river is entirely blocked off by 8 ft. soundings therefore a change should be made in this statement quoted above.

The geographic names on this sheet were inked in by the field party and are not in accordance with the Hydrographic Manual as they are standard and not vertical.

No cross lines were run except at the bends of the river. This is contrary to instructions to the MIKAWE- Aug. 17, 1931.

Submitted by - Warren H. Bamford.

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5228.
Long Point to Mount Vernon, Wicomico River, Maryland.
Surveyed April-June 1932.
Instructions dated Aug. 17, 1931 (Mikawe Proj. 88)

Chief of Party - E. H. Bernstein.
Surveyed by - E. H. Bernstein.
Protracted by - A. C. Klahre, Jr.
Soundings plotted by - R. Stephenson.
Verified and inked by - John G. Ladd.

1. The records conform to the requirements of the Hydrographic Manual except that no list of signals was included and the abbreviations for bottom characteristics are not the standard abbreviations used on the charts. The work was done under the direct supervision of the Chief of Party but no separate approval statements were entered in the records and the Descriptive Report.

2. The plan and extent of development conform to the regulations and satisfy the specific instructions.

3. Soundings are in good agreement at crossing of lines and are generally consistent. No clearance is given for the bridge at the head of soundings in Monie Creek. This survey was made before the circular relative to furnishing a list of objects on Form 567 for the use of the Lighthouse Service was issued.

4. Depth curves can be drawn satisfactorily.

5. Junction with H. 5229 is satisfactory.

The overlap with H. 2614 (survey of 1901-2) is adequate.

6. Comparison with H. 2614 shows good general agreement in depth. H. 707 (1858-59) shows slightly less water in Monie Bay than is shown by H. 5228; also some of the irregular depressions on the shoal areas in other parts of the chart seem to have been filled in.

U. S. Engineer BP25167 shows several short sections of the river channel that have been dredged. The depth shown on this survey is about one foot less.

Chart 1224 is the largest scale of this area published at this time. Nothing of special importance was noted or omitted.

7. Field drafting was done by inexperienced men. The work of verification and inking the sheet in the office was made difficult because instructions in the Manual had not been followed viz., using an excessive number of fractions with the penciled depth, not inking the position prick mark, ignoring elapsed time in plotting soundings, and impaired legibility in congested areas. No bottom characteristics were penciled on the smooth sheet. Geographic names were added in the office.

8. Recommendation. This survey (H. 5228) should supersede previous surveys of this area for charting purposes. Blueprint 25167 shows improved sections of the river channel as of August 21, 1931 (12 feet controlling depth). The Descriptive Report gives the controlling depth as 11½ feet in longitude 75°49'.5. The sheet however shows 11 feet just beyond the dredged channel eastward of lighted beacon No. 2. The U. S. Engineer report (July 1933) gives 12 feet as the controlling depth in the Wicomico River and this depth probably can be carried through the above places by careful navigation. as asserted in aug. 1931 BJC

No further surveys are deemed necessary at this time.

9. Reviewed by R. J. Christman, Nov. 4, 1933.

Examined and approved:

L. O. Colbert
Chief, Field Records Section.

Chief, Division of Charts.

James S. Borden
Chief, Field Work Section.

Chief, Division of H. & T.

SECTION OF FIELD RECORDS
Review of Hydrographic Sheets Nos. 5229 and 5230.
Wicomico River and Salisbury and Approach, Maryland
Surveyed July-August, 1932.
Instructions dated August 17, 1931 (Mikawe).

Chief of Party - E. H. Bernstein.
Surveyed by E. H. Bernstein.
Protracted and Soundings plotted - 5229 by W. B. Moore, Jr.
5230 by A. C. Klahre, Jr. and
J. G. Conrath.
Verified and inked by L. S. Straw - W. H. Bamford.

1. The records conform to the requirements of the Hydrographic Manual. No bottom characteristics were recorded on "a" day blue July 22.

2. The plan and extent of development conform to the general regulations and satisfy the specific instructions except in respect to cross lines. The overlapping of channel lines at the bends of the river is not considered as full compliance with par. 14 of the instructions.

3. Soundings are generally consistent and in good agreement where the channel lines cross each other. An exception is the 17 foot depth in lat. 38° 15'20" long. 75°48'06" which appears to be too shoal. The record does not disclose any evidence to warrant the rejection of the sounding and as the controlling depth for navigation of the river is only 12½ feet, it has been retained on the sheet.

4. Depth curves can be drawn satisfactorily.

5. Junction between H. 5229 and H. 5230 is satisfactory. Sheet H. 5228 is being verified.

6. Comparison. This is the basic survey of the Wicomico River. Sections of the river have been improved by dredging. The latest U. S. Eng. blueprints (B. P. 25165-6-7) are dated Feb. 18, 1932. They show the result of improvement dredging during 1931. The agreement along the center line of channel is good but there are no cross lines on H. 5230 to check width of channel and stability of sides.

Chart 1224 does not show the upper part of the Wicomico River on the current edition.

7. Field drafting. The protracting was good. The lettering of names on H. 5230 did not follow Coast and Geodetic Survey standards and was done over in the office. (See Inspection Note).

8. Recommendation. These sheets (H. 5229 and H. 5230) are believed adequate for charting purposes. The limits of the improved channel should be taken from B. P. 25165 and 6. T. 4708 shows a U. S. Eng. mark (G. I. pipe 1") at Sharps Point and at the Marine railway of the Salisbury Ship Building Company. B. P. 24427 shows results of dredging in Salisbury during 1930 season.

No further surveys are deemed necessary.

H. 5229 and 5230.

9. Reviewed by R. J. Christman, Sept. 30, 1933.

Inspection Note for H. 5229 and H . 5230.

On H. 5230, four defects in the field plotting resulted in a considerable amount of additional time being spent on the office verification. There were as follows:

1. Position numbers occassionally illegible or obscured by nearby soundings.

2. A failure to color the prick point locating the boats position.

3. Soundings poorly spaced. Approximately 30 percent of the soundings had to be replotted.

4. The 12 foot curve was drawn with a red crayon on both H. 5229 and H. 5230.

A closer supervision of the work of temporary employees engaged in the plotting of hydrographic sheets would have doubtless eliminated these shortcomings.

Information should be requested from the Chief of Party regarding the nature and permanence of the numerous channel markers noted in the sounding records but not shown on the sheets. (Furnished by Let Ltr. 8/1934 attached p 5)

Note to Compiler.

The topographic and hydrographic signals on these sheets outside the high water line (except as indicated) are flags or banners erected for survey purposes and have no cartographic significance.

Sheets Inspected by - A. L. Shalowitz.

Examined and approved:

L. O. Colbert,
Chief, Field Records Section.

Chief, Division of Charts.

Chief, Field Work Section.

Chief, Division of H. & T.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5228

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

Number of positions on sheet	2720
Number of positions checked	about 20%
Number of positions revised	25
Number of soundings recorded	16823
Number of soundings revised	about 75
Number of signals erroneously plotted or transferred	none

Date: Oct. 25, 1933

Cartographer: John S. Ladd

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. H. 5229

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

Number of positions on sheet	1,598
Number of positions checked	316
Number of positions revised	34
Number of soundings recorded	8,321
Number of soundings revised	131
Number of signals erroneously plotted or transferred	0

Date: Aug. 31-1933

Cartographer: [signature]

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5230

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

Number of positions on sheet	1160
Number of positions checked	237
Number of positions revised	13
Number of soundings recorded	7383
Number of soundings revised	APPROX 30%
Number of signals erroneously plotted or transferred	NONE

Date: September 1 - 1933

Cartographer: Warren H Bamford