

5638

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Rev. Dec. 1933  
DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

*Topographic* } Sheet No. 6 5638  
*Hydrographic* }

State New Jersey

LOCALITY

New Jersey Coast

Monmouth Beach To Sea Girt

1934

CHIEF OF PARTY

E. R. McCarthy

5638

N 1/2 of lot 285 -  
to S 1/2 of 1932 Survey Co H on  
in sheet 32349

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES

FEB 1 1935

REG. NO.

Acc. No.

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. 6

REGISTER NO. 5638

State New Jersey

General locality New Jersey Coast  
~~Open Coast~~

Locality Monmouth Beach to ~~Seagirt~~ Sea Girt  
~~Seabright to Seagirt (includes Shark River Inlet)~~

Scale 1:10000 Date of survey Oct. 1 to Nov. 2, 19 34

Vessel Field Party No. 14

Chief of Party E. R. McCarthy

Surveyed by E. R. McCarthy, R. A. Philleo

Protracted by E. L. Patterson

Soundings penciled by E. L. Patterson

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by W. J. Brown

Verified by

Instructions dated May 10 and August 8, 19 34

Remarks:

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET NO. 6

SEABRIGHT to SEAGIRT  
NEW JERSEY

Party No. 14

E. R. McCarthy,  
Lieutenant (j.g.) C. & G. S.  
Chief of Party.

DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET NO. 6

AUTHORITY:

Instructions from Director dated May 10, 1934 and supplemental instructions dated August 8, 1934.

LIMITS:

Latitude 40 21 southward to Latitude 40 08 and from shore to approximate six fathom curve. Includes development of Shark River Inlet and Shrewsbury Rocks.

Sheet joins Sheet No. 1 to southward and Sheet No. 2 to northward.

METHODS:

Soundings were taken with a bronze centered lead line graduated in fathoms and feet in depths over ten feet and with a sounding pole graduated to feet and half feet under this depth.

Positions were obtained by sextant angles on three known points. *Shore Signals.*

EQUIPMENT:

For work along the coast the launch "NANUK", a 50 foot Chesapeake Bay fishing boat was used.

DISCREPANCIES:

The soundings cross quite well.

The junctions with Sheet No. 1 and No. 2 were satisfactory.

COMPARISON WITH PREVIOUS SURVEYS:

The sheet was compared with chart No. 1215 and except for the Shrewsbury Rocks does not appear to check closely as several smaller shoals were discovered.

COMPARISON WITH PREVIOUS SURVEYS: (continued)

The sheet was compared with Sheet No. 5300 (P. C. Doran 1933) and the following changes noted:

The soundings check quite well except at the entrance to Shark River Inlet inside of the 18 foot curve. Considerable shoaling has occurred since 1933 across the whole of the entrance but principally to the east and south. Local fishermen say that the bar changes somewhat after each storm. ✓

SHOALS AND DANGERS:Shrewsbury Rocks

These rocks extend about 1.2 miles from shore. The charts shows 14 feet but 16 1/2 feet was the least depth found in the survey after a thorough search. The four (4) following shoals are the shallowest spots of the rocks. ✓

14 feet carried  
forward from  
H-1278 (1875)

Latitude 40 20.8 Longitude 73 57.2

A shoal with a least depth of 17 1/2 feet (61-2 f) was found. It is small and isolated and in general depths of over 20 feet. It was investigated on "g" day and nothing less obtained. Bottom is rocky. ✓

Latitude 40 20.7 Longitude 73 57.7

A shoal with a least depth of 16 1/2 feet (33-4 f) was found. It is about 0.1 mile in extent, is isolated and in general depths of 19-20 feet. It was investigated on "g" day and nothing less obtained. ✓

Latitude 40 20.5 Longitude 73 57.8

A shoal with a least depth of 17 1/2 feet (35 f) was found. It is about 0.1 mile in extent, and in general depths of 19-21 feet. It was investigated on "g" day and nothing less obtained. ✓

Latitude 40 20.1 Longitude 73 57.8

A shoal with a least depth of 24 feet (80-1 f) was found. It is very small and in general depths of 27-29 feet. It was investigated on "g" day and nothing less obtained. ✓

Latitude 40 15.0 Longitude 73 59.3

Breakers were noted in this area on "c" day and a fix obtained at the northern limits of them and the southern limits ✓

SHOALS AND DANGERS: (continued)

sketched. As they were breaking quite heavily they were not investigated at the time and no opportunity was afforded to visit them later.

There is no indication of a danger here as 10-12 feet was obtained inside but the breaker appeared to be over a number of large rocks between the fix at "26 c" and a jetty to the southward.

Latitude 40 16.9 Longitude 73 58.7

A shoal with a least depth of 23 1/2 feet (19-20 b) was found but was not investigated. General depths are 27-28 feet.

Latitude 40 16.8 Longitude 73 58.5

A shoal with three high spots was found here. The northerly has 28 1/2 feet (105-6 e) and is very small, easterly has 29 1/2 feet (107-8 e, 113-4 e, 5 g) and is small, the westerly has 27 feet (2 g) and is also small. All three spots were investigated on "g" day and no less depths obtained.

Latitude 40 16.2 Longitude 73 58.7

A shoal with a least depth of 29 feet (27-8 a) was found. It was investigated on "e" day and nothing less obtained.

WRECKS:

The wreck of the "MORRO CASTLE" lies on the beach at Asbury Park. The beach has built out to the ship and but 6 feet of water is outside of it. The ship is slightly listed to the starboard and from a distance does not seem aground. It is reported that it is to be removed.

Since  
Removed

SHARK RIVER INLET:

The inlet was examined and the depths found to be 2 to 3 feet less than in 1933. The inlet is narrow and a strong current sets through it on both flood and ebb tide. The distance between the jetties is not wide and the entrance difficult in moderate weather as breakers extend completely across the entrance although they are not as heavy to the northeast.

Seven (7) feet may be carried through to the highway bridge by the following directions:

Enter with the entrance beacon bearing 225° T and when on range with the north jetty turn in and favor the north jetty.

SHARK RIVER INLET: (continued)

On the south the water is shoaler and but a six (6) foot draft may be carried into the river by the following directions:

Remain in depths of twelve (12) feet until in range with the south jetty, turn and steer mid channel course favoring the north jetty.

A stranger drawing four (4) feet and over should not attempt the entrance in even a small swell or with a flood tide but should employ a local pilot.

The inlet is used extensively by small fishing boats (largely pleasure) during the summer.

ANCHORAGES:

There are no anchorages within the limits of this sheet. ✓

WIRE DRAG:

In view of the number of small rocky shoals found it is recommended that - should opportunity arise, - ~~that~~ the area be dragged. ✓

MISCELLANEOUS:

On "g" day considerable difficulty was experienced with one of the sextants and corrections were made to the angles as explained in the record for that day. ✓

Fish stakes show a private red light from the outer end.

Statistics, tidal notes, and computations are attached.

Respectfully submitted,

*E. R. McCarthy*

E. R. McCarthy, Lieutenant (j.g.)  
U.S. Coast and Geodetic Survey,  
Chief of Party.

STATISTICS

PROJECT 174 NEW JERSEY

SHEET #6

DAY	DATE	BOAT	MILES STATUTE	SOUNDINGS	POSITIONS	DAYS RUN
a	10-1-34	Nanuk	18.4	404	93	40.4
b	10-2-34	Nanuk	30.3	827	182	45.6
c	10-3-34	Nanuk	38.1	910	207	40.4
d	10-8-34	Nanuk	14.2	496	101	37.5
e	10-9-34	Nanuk	23.3	589	168	45.9
f	10-10-34	Nanuk	8.4	317	101	37.9
g	11-2-34	Nanuk	<u>1.0</u>	<u>42</u>	<u>29</u>	<u>41.3</u>
		Totals	133.7	3585	881	289.0

MEMORANDUM BY CHIEF OF PARTY:

Records and boat sheet were inspected daily.

The smooth plotting was inspected frequently. The draftsman, Mr. E. L. Patterson, had little experience before plotting this sheet.

*E R McCarthy*

E. R. McCarthy, Lieutenant (j.g.)  
U.S. Coast and Geodetic Survey,  
Chief of Party.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. .5638

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

Number of positions on sheet	.....881
Number of positions checked	.....92
Number of positions revised	.....2
Number of soundings recorded	.....3585
Number of soundings revised	.....24
Number of signals erroneously plotted or transferred	.....0

Date: April 9, 1935

Verification by W. I. Brown

Review by *Harry J. Kelly*

Time:

26

Time:

~~27~~ hrs.

Report on Sheet 5638'6<sup>3</sup> Surveyed in 1934  
State of New Jersey Surveyed by  
New Jersey Coast E. R. McCarthy,  
Monmouth Beach to R. A. Philleo,  
Sea Girt Soundings plotted by  
E. L. Patterson  
Protracted by E. L. Patterson  
Verified and inked by W. Brown

the records conform to the requirements of the General Instructions.

the one fathom curve can be partially drawn, the two fathom curve is complete with the exception of a few stretches along the westerly half of the sheet. ✓  
the three and five fathom curves are completely drawn.

this sheet is joined on the north by Sheet H-5616 (1934) and on the south by Sheet H-5615 (1934). These two adjacent sheets have not been inked at this time. The junction with Sheet H-5300 (1933) is satisfactory

2 of 3

The shore line in the vicinity of the mouth of Shark River was transferred from sheet T-4747 (1933). At the present time no aerial photo compilation is available for the shore line on this sheet.

The "Shark" was not under-scored on the  $\Delta$  Sta. Shark River. The position of  $\Delta$  Sta Shark River on this sheet differs from  $\Delta$  Sta Shark River (1933) on sheet H-5300. There are 2 stations. See boat sheet.

Sheet H-5300 is on \*NA Datum <sup>H.I.K.</sup> while this sheet is on NA 1927 Datum. This difference of approximately 17 meters in latitude and 5 meters in longitude was taken into consideration in transferring soundings.  $\Delta$  Sta Plant is spelled Plan in the sounding records.

\* N.A. 1927

3 of 3  
The inshore end of fishing stakes in the vicinity of latitude  $40^{\circ} 19.5'$  was incorrectly plotted. It was corrected to agree with the boat sheet and sounding record.

The rest of the fishing stakes were inked in to agree with the boat sheet. Position 106C <sup>corrected to use</sup> to locate the off shore end of one stake was rejected.

The bulk of the Morris Castle located on this sheet has since been removed.

200

March 11, 1935

*F.E.*

Division of Hydrography and Topography:

✓ Division of Charts: Attention E. P. Ellis

*Barthman*

Tide Reducers are approved in  
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5638

Locality Monmouth Beach to Sea Girt, N. J.

Chief of Party: E. E. McCarthy in 1934  
Plane of reference is mean low water, reading  
1.8 ft. on tide staff at Shark River  
16.8 ft. below B.M. 1

1.8 ft. on tide staff at Sandy Hook with correction to tide at place of sounding  
9.4 ft. below B.M. 2

Height of mean high water above plane of reference is 3.7 feet at  
Shark River; 4.7 feet at Sandy Hook.

Condition of records satisfactory except as noted below:

*H. S. Tanner*  
Chief, Division of Tides and Currents.



Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5638 (1934) - FIELD NO. 6.

Monmouth Beach to Sea Girt

New Jersey Coast

Surveyed in Oct.-Nov. 1934

Instructions dated May 10, 1934-August 8, 1934 (E. R. McCarthy)

Hand lead soundings - 3 point fixes on shore signals

Chief of Party - E. R. McCarthy.

Surveyed by - E. R. McCarthy and R. A. Philleo.

Protracted and Soundings plotted by - E. L. Patterson.

Verified and Inked by - W. I. Brown.

1. Condition of Records.

The records are neat, clear, and conform to the requirements of the Hydrographic Manual, with the following exceptions:

- a. No copy of Landmarks for Charts on form 567 accompanied this particular sheet. Landmarks for area submitted.
- b. No dates were shown on the names of triangulation stations. These have been added in the office.
- c. The descriptive report is clear and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

The plan, development, and extent of the survey satisfy the requirements of the instructions for the project. However, an additional line should have been run along several stretches of the coast to better define the 12 foot curve.

3. Sounding Line Crossings.

Cross lines are in excellent agreement.

4. Depth Curves.

All the usual depth curves may be drawn in detail down to the two fathom curve, (except for a few minor breaks), and a few portions of the one fathom curve, which in view of the open nature of the coast is all that can be expected.

5. Junctions with Contemporary Surveys.

The junction with H-5616 (1934) on the north and H-5615 (1934) on the south will be considered in the reviews of these sheets. The junction with H-5300 (1933) is satisfactory on the outer limits of

that sheet. The present survey, however, shows a general shoaling of two feet in the immediate vicinity of Shark River, out as far as the three fathom curve, with a shoal making out from the jetty south of the river. Because of these changes the soundings from H-5300 (1933) should not be used for charting within the area covered by the present survey.

6. Comparison with Prior Surveys.

a.	H-54 (1840)	Scale 1:20,000
	H-102 (1840)	Scale 1:20,000
	H-103 (1840-1875)	Scale 1:20,000
	H-104 (1840)	Scale 1:20,000
	H-106 (1840)	Scale 1:40,000

These surveys, with several lines duplicated on the various sheets, cover the present work with rather sparse development, in shore as far as the 5 to 6 fathom curves.

The present survey shows a general deepening of 4 to 6 feet and a recession of the shoreline to a maximum of 150 meters, at the north end of the work.

Included on H-103 (1840-1875) is a development of Shrewsbury Rocks in 1875, giving a least depth of  $14 \frac{3}{4}$  feet.

b. H-1278 (1875).

This survey, on a 1:10,000 scale covers, with a fair development, Shrewsbury Rocks; and gives a least depth of  $14 \frac{1}{2}$  feet at lat.  $40^{\circ}20.65'$ , long.  $73^{\circ}57.65'$ .

c. H-1538 (1882) and H-1578b (1883).

These surveys cover the northern part of the present survey. There has been a recession of the shoreline and the present depths in the areas of sand bottom are generally 3 to 5 feet deeper than the old ones. H-1538 (1882) shows a development over Shrewsbury Rocks. The least depth shown is 14 feet in approximately the same position as the  $14 \frac{1}{2}$  on H-1278 (1875) lat.  $40^{\circ}20.68'$ , long.  $73^{\circ}57.56'$ . Because the sounding records for H-1538 (1882) could not be located, the least depth of 14 feet is carried forward in the location given on H-1278 (1875).

d. H-3773 (1915).

This off-shore survey, on a 1:50,000 scale overlaps the present survey near the south end of the sheet.

With the exception of a few soundings in lat.  $40^{\circ}12'$ , long.  $74^{\circ}00'$  (see, 1a-2a) which appear about 10 feet too deep, there is a general agreement with the present survey.

7. Comparison with Chart No. 1215.

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

b. Aids to Navigation.

The lighted bell buoy off Shark River, lat.  $40^{\circ}10.95'$ , long.  $73^{\circ}59.9'$ , located by hydrography on present survey appears approximately 250 meters due south of its charted position.

Can buoy, 15 R, off Shrewsbury Rocks, lat.  $40^{\circ}20.4'$ , long.  $73^{\circ}56.95'$ , also located by hydrography on present survey appears approximately 250 meters west of its charted position.

In both cases the present locations adequately mark the feature intended.

8. Field Plotting.

The field protracting and plotting is satisfactory and conforms to the requirements of the Hydrographic Manual, with the following exception.

Several signals were spelled differently from the names appearing on the boat sheet and in records.

9. Additional Field Work Recommended.

No additional work is required at this time. Attention is called to the fact that 16 feet was the least depth found by the present survey on Shrewsbury Rocks, and that two well authenticated 14 foot depths are retained from previous surveys. If at any future date drag work is carried on in this vicinity, the effective depth of the project should consider the verification of depths less than 16 feet on Shrewsbury Rocks.

10. Superseding Old Surveys.

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

H-5638-4

H-54 (1840) - in part  
H-102 (1840)- " "  
H-103 (1840-75)" "  
H-104 (1840) - " "  
H-106 (1840) - " "  
H-1278 (1875)- " "  
H-1538 (1882)- " "  
H-1578b(1883)- " "  
H-3773 (1915)- " "

11. Reviewed by H. T. Kelsh and R. L. Johnston, April 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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

*Frank S. Boden*  
Chief, Section of Field Work.

*L. O. Pollock*  
Chief, Division of Charts.

*G. H. Hude*  
Chief, Division of H. & T.

Applied to Chart 1215	Feb 19, 1936	R.M.Z.
" " " 1216	Apr. 1936	<del>R.M.Z.</del>
" " " 795	Oct. 1936	F.M.A.