

4799

C. & G. SURVEY
L. M. P.
AUG 13 1928
Acc. No.

Diag. Cht. No. 1218-2

6627
4799

Form 504
 DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY

State: New Jersey - Delaware

11-5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. **4799**

LOCALITY:

Atlantic Coast.

Entrance to Delaware Bay

Vicinity of Cape May.

1927

191

CHIEF OF PARTY:

G. C. Mattison.

S-108 21V

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO.
4799

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. **4799**

State NEW JERSEY

General locality ~~ENTRANCE TO DELAWARE BAY~~ Cape May

Locality ~~CAPE MAY TO OVERFALLS SHOAL~~ Entrance to Delaware Bay

Scale 1:20,000 Date of survey Aug. - Oct., 1928

Vessel RANGER and MARINDIN

Chief of Party G.C. MATTISON

Surveyed by G.C.M. - R.F.A.S. - R.C.O.

Protracted by FIELD PARTY

Soundings penciled by FIELD PARTY

Soundings in ~~centims~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by NONE

Inked by J. T. Torrey

Verified by "

Instructions dated July 15th and Supp. Aug. 16th, 1927

Remarks: Soundings plotted after Chief of Party
relieved by R.L. Schoppe

.DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
E. LESTER JONES, DIRECTOR.

NEW JERSEY

A DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET # _____

1927

S.S. RANGER

G.C. MATTISON,
CHIEF OF PARTY,
R.F.A. STUDDS,
Temporary in charge.

DESCRIPTIVE-REPORT

to accompany

HYDROGRAPHIC SHEET # _____

In the absence of Lieut. G.C.Mattison, former Chief of Party and Lieut. (j.g) R.F.A. Studds, temporarily in charge of 1927 work, the writer has assembled as much information as possible regarding this sheet. The work on this sheet was done in accordance with instructions dated July 13th and August 16th.

The usual methods were employed in this survey. All signals were located by triangulation. There was no inshore work on this sheet requiring the location or use of intermediate signals as are usually located by the topographic party. All soundings were made with the hand lead, using the bronze center mahogany line. The launch MARINDIN worked on the northern half, which contained the shoalest areas. The vessel RANGER did all the other areas. All lines were spaced 100 meters and shoals East of Longitude 75° 00' received close development.

A large number of crossings failed to check. There are numerous places where the crossings failed to agree by from four to seven feet and in a few places the crossings differ as much as 10 and 11 feet. It is clearly shown that the bottom formation is very much broken by ridges which run in the same direction as the ebb and flow of the currents. The bottom is so broken that it appears impossible to obtain a satisfactory development unless

different methods are used. So many soundings have been made that they can not be plotted on a 1:20,000 scale and still there are areas that show uncertainty in the depth curves. The distance from signals makes it impossible to use a larger scale in this area.

The dangers on this sheet are clearly shown on chart 1219, and need not be enumerated here except to compare them with previous surveys. The same channels exist as shown on chart 1219. On account of the strong currents that sweep across these channels, it is not possible to utilize the channels to their full depths, even with local knowledge.

The best channel across Prissy Wicks Shoal is about 0.3 mile south of the cup¹ on Cape May Point and this locality was sounded by the Army Engineers. It is not on this sheet and directions for crossing can not be given here. Cape May Channel shows no change in depth. The channel north of buoys #1 and 3 marking South Shoal, is sometimes used by tugs and barges. The limiting depth of 20 feet falls west of the area covered by the 1927 work.

There are no anchorages on this sheet. Vessels run to Delaware Breakwater or to Cape May Harbor when in need of shelter.

Geographic names are the same as noted on existing charts.

In comparing this sheet with previous surveys, it appears that the general size and shape of the various shoals has not

materially changed. The same channels exist, as are shown on chart 1219. The shoal soundings on Prissy Wicks Shoal do not vary by more than one foot from those now shown. Practically the same is true of North Shoal. It is learned from conversation with officers and crew that were engaged on this survey, that the bottom appears to have spots of clay and sand mixture of almost the consistency of hard-pan. This would explain the abrupt changes in depth that occur so frequently on adjacent soundings on the same line and also in adjacent lines. This causes extreme confusion in drawing the depth curves and until the sheet is inked, it appears to be impossible to complete the drawing of these curves. Additional curves can be drawn by this party but if further work of this kind is done on this sheet, it is feared that the pencil soundings will be obliterated and that more harm than good will result. This condition is noted, in spite of the fact that only a 6H pencil has been used on the work.

When the writer took over the work of the Steamer RANGER on April 16th, the office work on this sheet had progressed to a point where practically all of the soundings had been reduced and about 90% of the positions had been plotted. Until the close of the work in Miami, one officer was assigned to continuously work on this sheet. As a result, it was practically finished when it was brought to the office on May 21st.

Since then work on this sheet was suspended because of the urgent need for work on the preliminary computations for this season's work, and also in order that various officers who were to be detached, might do as much as possible on various parts of the Miami work, on which they had been engaged during the winter.

It is probable that valuable additions to this report can be made by Lieut. G.C. Mattison, if he can review the sheet after it is inked.

A table of statistics is attached.

Respectfully submitted

Ray L. Schoppe,
Chief of Party,
Str. RANGER.

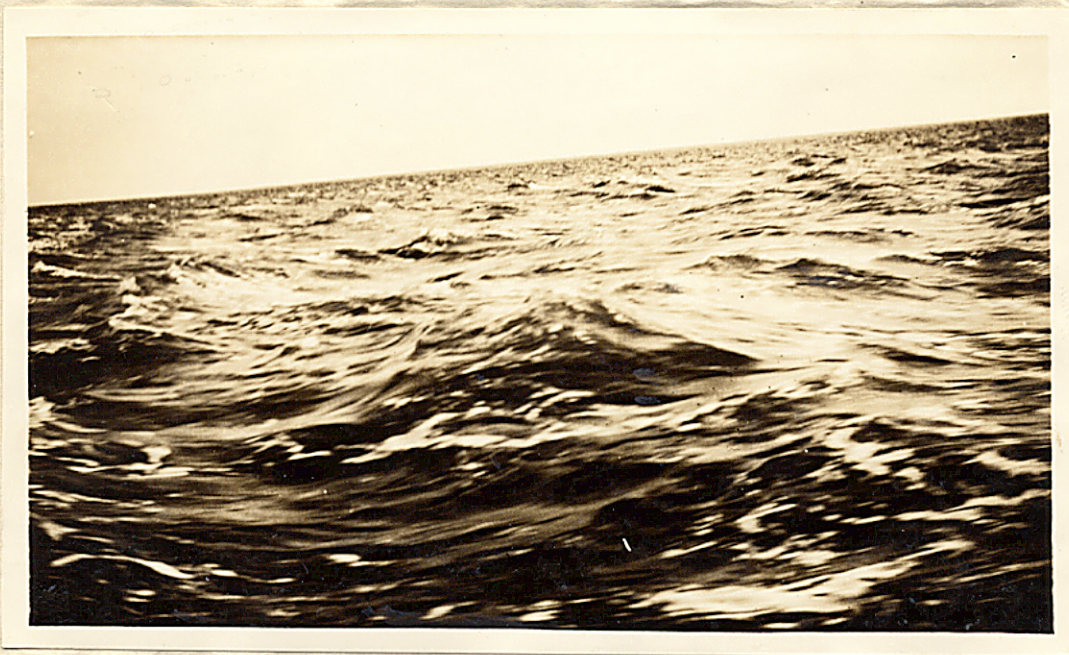
TIDE RIPS ON PRISSY WICKS SHOAL.

WEATHER, - CALM.

SEA, - SMOOTH IN SURROUNDING AREA.



Looking Northwest toward Cape May Point



Looking seaward.

STATISTICS
HYDROGRAPHIC SHEET #
ENTRANCE TO DELAWARE BAY

Date	Letter	Vol.	Pos.	Soundings	Miles	Vessel
Aug. 15-27	A	1	97	525	15.5	RANGER
16	B	1	113	652	16.1	"
23	C	1	37	207	5.7	"
25	D	1&2	97	533	14.6	"
30	E	2	43	217	6.2	"
Sept. 1	F	2	15	88	2.7	"
6	G	2	122	677	25.5	"
7	H	2&3	122	709	24.2	"
9	J	3	118	657	23.8	"
12	K	3	114	654	21.2	"
13	L	3	123	476	15.0	"
16	M	4	102	569	18.2	"
21	N	4	51	272	8.9	"
23	P	4	87	469	16.0	"
26	Q	4	132	538	15.9	"
27	R	5	149	745	24.7	"
28	S	5	80	395	12.3	"
30	T	5	68	313	13.8	"
Oct. 3	U	6	148	585	17.2	"
5	V	6	194	873	22.8	"
6	W	6&7	172	838	25.9	"
7	X	7	174	892	23.6	"
10	Y	7	176	874	25.0	"
11	Z	8	180	891	22.7	"
14	A*	8	171	827	23.6	"
17	B*	9	73	370	10.7	"

STATISTICS (cont)
 HYDROGRAPHIC SHEET # _____
 ENTRANCE TO DELAWARE BAY

Date	Letter	Vol.	Pos.	Soundings	miles	vessel
Aug. 15	A	10	169	650	25.5	MARINDIN
16	B	10	156	640	26.5	"
17	C	10	118	496	19.5	"
20	D	11	19	85	5.5	"
22	E	11	104	452	15.2	"
23	F	11	75	510	10.1	"
24	G	11	173	709	35.5	"
29	H	11&12	44	159	5.6	"
30	J	12	168	742	21.0	"
31	K	12	165	673	21.5	"
Sept. 1	L	12	44	182	7.9	"
2	M	13	156	567	15.7	"
6	N	13	153	618	16.7	"
7	P	13&14	159	660	21.0	"
8	Q	14	29	117	5.5	"
9	R	14	154	538	15.0	"
12	S	14	106	464	14.0	"
13	T	14	178	720	24.0	"
16	U	15	184	752	24.0	"
21	V	15	89	344	12.7	"
23	W	16	158	540	17.2	"
26	X	16	167	650	21.9	"
27	Y	16&17	196	777	25.9	"
28	Z	16&17	146	585	18.5	"
29	A'	17	178	706	22.8	"
30	B'	17	154	627	21.0	"

(Sheet #3)

STATISTICS
HYDROGRAPHIC SHEET #
ENTRANCE TO DELAWARE BAY

Date	Letter	Vol.	Pos.	Soundings	Miles	Vessel
Oct. 3	C ^o	17&18	147	876	17.2	MARINDIN
5	D ^o	18	186	m1115	21.8	"
6	E ^o	18&19	181	1105	20.7	"
7	F ^o	19	160	950	19.6	"
10	G ^o	19&20	154	850	18.5	"
11	H ^o	20	206	1219	24.7	"
14	J ^o	20&21	179	992	27.4	"
17	K ^o	21	75	436	9.1	"
Total for RANGER		2958	14848	451.8		
Total for MARINDIN		4670	21244	623.1		
Total for the sheet		7628	36092	1074.9		

(11)

ECM

Copy for Section of Field Records files

August 3, 1928.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
21 volumes of sounding records for

HYDROGRAPHIC SHEET 4799

Locality: **CAPE MAY, N. J.**

Chief of Party: **G. C. Mattison; R. F. A. Studds**

Plane of reference is **M L W**

0.5 ft. on tide staff at **Municipal Pier**

3.4 ft. ~~do~~ **Bay Shore Channel**

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 each 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.

Studds

Chief, Division of Tides and Currents.

Section of Field Records,
Report on Hydrographic Sheet No. 4799
Entrance to Delaware Bay in vicinity
of Cape May, New Jersey.

Instructions dated July 13 and August
16, 1927 (Ranger).

Chief of Party G. C. Mattison.

Surveyed by G. C. Mattison and
R. F. A. Studds.

Projected and soundings plotted by
the field party.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate; soundings at crossings vary considerably.
5. The information is sufficient to draw the depth curves.
6. The usual field plotting was done by the field party and when possible to identify found quite accurate but owing to the close development of the

numerous shoal areas and the soiled and rubbed condition of the sheet it was not possible to identify positions and follow lines except by numerous checking of positions.

7. The junction with sheet H-4816 to the East appears satisfactory. Sheet H-4815 not completed.
8. The area covered on this sheet is well covered and all soundings closely developed there are, however, numerous independent shoal spots appearing which are not supported by the soundings on adjacent line but owing to the broken character of the bottom these shoal spots may and probably do exist.
9. The character and scope of the surveying is excellent. No further surveying appear necessary unless some of the independent shoal spots require further development.
10. Reviewed by J. D. Torrey.
Sheet Inspected by A. T. Shalau

Applied to Chart 411, 2/3/53 JVE
" " " 826-SC 6-3-63 Frajier