

2594

Diag. Ch't. No. 1208-Z

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey *Hydrographic*  
Field No. .... Office No. *2594*

LOCALITY

State *Massachusetts*  
General locality *Speed trial*  
Locality *Course of Wood  
and Cape Cod*  
1902

CHIEF OF PARTY

*H. L. Marindin*

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DATE .....

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Hyd Sheet # 2594

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Class



2594

Treasury Department,  
U. S. COAST AND GEODETIC SURVEY.

J. H. Littmann

Superintendent.

State: Mass

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 2594

LOCALITY:

Spind Trail Course  
off Wood and  
Cape Cod

1902

CHIEF OF PARTY:

H. H. Morrison

2594  
out.

Hyd<sup>c</sup> Sheet 2594.

Title:

Treasury Department

U.S. Coast and Geodetic Survey

O. H. Pittman

Supdt.

Speed Trial Course off

Wood End

Cape Cod

Mass.

Surveyed in July, 1902

by Party of H. L. Maindin Asst.

Scale  $\frac{1}{10,000}$

Observer: H. L. Maindin Asst.

" Recorder, Gershom Bradford 2<sup>d</sup>

2<sup>d</sup> Deck Officer

Tide Observer: George Sellers

Leadman: G. S. Peterson, In Mstr 3<sup>d</sup> cl.

Notes:

The soundings are expressed in feet and refer to plane of Mean Low Water.

The tides were observed on Staff established on Matheson's Wharf at Provincetown Mass.

The stations for observations of currents are shown thus:

Mean Low Water on Staff =  $\underline{3.57}$  feet

For height of Bench marks see Tide Book.

The work shown on the sheet # 2594 is the result of a request by the Board of Inspection and Survey of the Navy Department that the Coast Survey be requested to verify the location of the Speed Trial Course off Cape Cod Mass. which had been established by the Fore River Ship and Engine Co. of Quincy, Mass. for the trial of speed of the two Torpedo Boat Destroyers "Lawrence" and "McDonough" which they had built. The course as laid out by the Civil Engineer of the Fore River Ship Co. was not wholly satisfactory to the Navy Department and the question was whether an improvement could be made in the location and distance.

between some of the range marks.

The sheet shows the triangulation necessary to determine the position of the range marks also the location of the stations for the observation of currents and finally the soundings take both on and off the course.

The course as laid out by the Ship Co. ran in the deeper water nearer shore but too near to the point of the shoal at head End. (325 feet off 18 ft. curve) this was objectionable and the course was removed about 300 meters farther out in water not less than 21 fathoms of depth or M. L. Water. The maximum of current found was 1.25 knots and the direction of the course was as favorable as could be laid out for direction of Ebb or Flood current.

The recommendations for the improvement of the course were as follows, and were all accepted by the Ship Co.

- 1<sup>st</sup> The removal of the course farther out as explained above.
- 2<sup>d</sup> The extension of the course by establishing a Range line with Long Pt Lt Ho as rear mark. to take the place of the East Range line

which is not sufficiently sensitive.

3<sup>d</sup> The location of a third mark on the West Range Line, as far inland as the nature of the ground would permit. The Hill Range mark was thus placed on the hills back of Provincetown.

The results of the triangulation were combined with the measurements of a check Base line which was measured between Third Sta Center & and Mark Sig. & W. this gives the following measure for the perpendicular distance between the range lines

From Range Line West to Range Line Center

$$1853.52 \text{ meters} = 6081.09 \text{ feet} = 1.00013 \text{ Naut. Miles}$$

From Range Line Center to Range Line East.

$$1852.80 \text{ meters} = 6078.73 \text{ feet} = 0.99975 \text{ Naut. Miles}$$

From Range Line East to Long Pt Range

$$570.41 \text{ meters} = 1871.42 \text{ feet} = 0.30780 \text{ Naut. M.}$$

The entire course gives.

$$4276.73 \text{ meters} = 14031.24 \text{ feet} = 2.30768 \text{ Naut Miles}$$

The angles for placing the running Buoy are as follows

Buoy A. on West Range Line

Wood End Lt Ho. ~~Q<sub>1</sub>~~ West Range Marks ~~000~~ 72° 31'

Buoy B. on Center Range Line

Wood End Lt Ho. ~~Q~~ Center Range Marks ~~000~~ 56° 58'

Buoy C. on East Range Line

East Range Marks ~~000~~ ~~Q~~ Centenary Ch. Spire 27° 43'

Buoy D. on Long Pt Range Line

Long Pt Range Line ~~000~~ and Wood End Lt Ho. 30° 34'

Long Pt Range Line ~~000~~ and Race Pt Lt Ho. 74° 53'

No improvement could be suggested for the  
positions of the marks on East Range as the  
topographical features would not permit.

Respectfully submitted  
Henry L. Maraudin  
Assistant.

(2594)  
REPORT  
on  
HYDROGRAPHIC SHEET NO. 2594,

Cape Cod  
Speed Trial Course  
off Wood End,  
Mass.  
Assistant Marindin,  
1902.

Owing to the soundings being taken individually (not in a continuous series of lines), the usual check obtained by comparison of crossings cannot be applied. A comparison of adjacent soundings shows very few differences in depths greater than would naturally be expected.

When the new work is compared with the old, however, very great differences throughout almost the entire area covered by the new work are apparent. Old soundings 162 south of position A and 132 north of position C agree very closely with the new work. With the exception of these two all the new soundings show greater depths than the old ones do. The greatest differences seem to be close to the line AD, the old soundings along this line coming from sheet #516 and sounding 33 from sheet #1952 which lies between new soundings 93 and 139 (off Wood End Bar).

An inspection of sheet #1952 shows that the depths increase very rapidly outside of the 18 ft. curve. Therefore, the sudden increase in depth outside of this curve which the new hydrography shows as compared with that of #1952 does not necessarily indicate bad work on the part of the surveyor.

All of the old work that falls within the limits of the new hydrography has been given in red.

Edmund P. Ellis. (Signed).