

ORIGINAL

5276

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Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: Mass.

DESCRIPTIVE REPORT

~~Topographic~~  
Hydrographic

Sheet No.

5276

7

LOCALITY

CAPE COD

19 33 7

CHIEF OF PARTY

*W. B. ...*  
H. A. Searn

5276

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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MAY 19 1933

REG. NO. 5276

HYDROGRAPHIC TITLE SHEET

Acc. No. \_\_\_\_\_

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. 7

REGISTER NO. 5276

State Massachusetts

General locality New England Coast

Locality Off Cape Cod

Scale 1/100,000 Date of survey Sept 26 to 30, 19 32

Vessels HYDROGRAPHER and OCEANOGRAPHER

Chief of Party W.E. Parker & L.O. Colbert

Surveyed by W.E. Parker & L.O. Colbert

Protracted by E.L. Jones

Soundings penciled by E.L. Jones

Soundings in fathoms ~~feet~~

Plane of reference <sup>M</sup>MLW

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by [Signature]

Verified by [Signature]

Instructions dated May 16, 1932

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT TO ACCOMPANY SHEET NO. 7

GEORGES BANK 1932

Combined work of Ships HYDROGRAPHER and OCEANOGRAPHER

DATE OF INSTRUCTIONS:

Instructions of May 16, 1932, Project H T 107.

SURVEY METHOD:

Work on this sheet was accomplished by standard RAR methods by the sounding ships HYDROGRAPHER and OCEANOGRAPHER with the station ships LYDONIA and GILBERT.

HYDROGRAPHER :

Soundings below 125 fms., approximately, were taken with fathometer using fast red light with striker. Soundings above 125 fathoms, approximately, were taken with fathometer using slow red light with striker.

OCEANOGRAPHER:

Soundings on this sheet were taken with oscillator and striker fathometers using fast red light.

REDUCTION OF SOUNDINGS:

HYDROGRAPHER:

No information concerning the reduction was given the plotter except that shown in the sounding records. Comparisons of vertical casts and fathometer readings were taken, in general, once a day.

OCEANOGRAPHER:

Tidal corrections to soundings were made from the predicted tides for Newport, R.I., using one-half the range and three hours and forty minutes later in time.

In applying the fathometer corrections, the index correction to the fathometers and temperature and salinity corrections were combined and entered as one unit. Index corrections were obtained by comparisons between vertical casts and fathometer soundings at beginning and end of each day. Temperature and salinity corrections were made from observations taken in the area covered by the sheet during the time of sounding.

DISCREPANCIES:

In plotting lines, bomb arcs were given more weight than courses, distances and bearings. In cases where the intersections were in error one or both of the bomb arcs were rejected and the line run by course and distance, correcting for current from previous intersections. In many cases at the turns it was necessary to back plot through two or three good intersections before closing a loop.

Positions were plotted carefully on tracing paper from the dead reckoning. This was adjusted graphically to the bomb arcs and transferred. Small changes of course were not shown on smooth sheet. Many of the bearings from both the OCEANOGRAPHER and HYDROGRAPHER were rejected.

It was found that bomb positions could not be made to check using the position of buoy WE<sub>2</sub> as furnished by the HYDROGRAPHER. On all bomb positions taken between this buoy and other buoys to the westward the bomb arcs failed to intersect by an amount too large to be accounted for by any variation in velocity. As the other buoys checked among themselves and were tied in to shore, it was assumed that buoy WE<sub>2</sub> was in error, having probably dragged about 1/4 mile from its original position. Buoy WE<sub>2</sub> was therefore moved 455 m., 314-1/2 degrees true from its position as obtained from plotting it graphically by the HYDROGRAPHER.

The fact that bomb positions checked so well on this sheet and that there was practically no jump in the log distance when crossing over the line between WE<sub>2</sub> and other buoys to the westward shows that the change of position was justified and that its new position is about correct. In fact it would have been almost impossible to plot this sheet using the former position of this buoy.

SPECIAL ADJUSTMENT:

HYDROGRAPHER:

- (36 - 40) A. Held to course through 36 and 37 A to 38 A. These arcs are between Buoy 4 and WE<sub>2</sub> and are one of the few that fail to intersect even after adjusting WE<sub>2</sub>. Plotted positions between arcs. Back plotted from 40 A.
- (12 - 18) B. Back plotted from 18 through 12 B to 11. Position 16 is another set of arcs that failed to intersect. Placed position 16 between the two arcs.

In general very few special adjustments were necessary in the HYDROGRAPHER's work on this sheet.

OCEANOGRAPHER:

- 28 A. Log reading is in error approximately one mile.
- (44 - 58) A. Weak intersections and single arcs on northern part of line
- (64 - 70) A. Plotted through 64 - 65A and extended course by dead reckoning to end of line. Last four bombs were singles.
- (53 - 89) B. Poor control with part of line between station ships. Held to bombs even in close vicinity of Chatham Buoy to prevent line having large jump when changing from arcs to bearings. Position 80 and 84 are recorded as on range between the standpipe and Chatham Buoy. The bomb positions are approximately .3 mile to northward.
- (90 - 103)B. Held to bearings and single arcs on remainder of line. Slight jump in changing from weak double arcs to single arcs and bearings occurred between 89 and 95B. This jump was taken up at the turn.
- (50 - 52)B. Due to poor control this section of line was plotted so that its soundings would agree with the cross lines (6 - 7)B, (22 - 23)B and (17-18)B.
- (114-120)B. Back plotted from 123B through 120 to 119 B. Made slight change of course (119-120)B to hold to bomb arcs 117. Placed small jump in log between (114-115)B.
- C Day. A and B days were plotted from the adjusted positions of WE<sub>2</sub>. On C day WE<sub>2</sub> was not used, hence the plotted position on the smooth sheet at the junction with A & B days is not in agreement with the boat sheet.

CROSSINGS:

HYDROGRAPHER:

The crossings of the HYDROGRAPHER on its own work were, in general, good. The following are the larger discrepancies:

*soundings from 49 to 50 D Not plotted*

- (a) 28 fms (49-50)D on 25 fms (34-35)D ✓
- (b) 28 fms (49-50)D on 25 fms (33-34)D ✓
- (c) 28 fms (63-64)D on 33 fms (10-11)C ✓

*soundings from 63-64 D not plotted*

OCEANOGRAPHER:

Crossings on own work:

- Soundings omitted from 1 to 5 C* (d) 32 fms (2-3)C on 29 fms (3-4)A ✓
- (e) 33 fms (71-72)C on 35 fms (35-36)A ✓
- (f) 33 fms (72-73)C on 35 fms (56-57)A ✓
- (g) 34 fms (73-74)C on 38 fms (40-41)B ✓

JUNCTION OF HYDROGRAPHER AND OCEANOGRAPHER WORK:

- (h) 51 fms (7-8)A OCEANO on 47 fms (56-57)D HYDRO ✓
- Soundings on crossing 10-13 A not plotted* (i) 98 fms (11-12)A " on 93 fms (28-29)C " ✓
- (j) 44 fms 35A " on 41 fms (1-2)A " ✓ *Shoal sounding plotted*
- (k) 20 fms (37-38)A " on 17 fms (44-45)C " ✓
- (l) 35 fms (40-41)B " on 32 fms (50-51)D " ✓

*50 Hand 48 for sdgs not plotted at crossing*

*line 39 to 42 B omitted*

RECOMMENDATIONS:

*Retained*

The 10-fathom sounding plotted between (57-58)B OCEANO is questioned in the record. It is recommended that this question be removed as a 12 and 13-fathom soundings were recorded shortly after on this same line.

*9000' 15 fm depth*

Respectfully submitted:

Edmund L. Jones  
Edmund L. Jones, Aid, C&GS.,  
Ship OCEANOGRAPHER.

Approved and forwarded:

*H. A. Seran*  
H. A. Seran, Comdr., C&GS.,  
Commanding Ship OCEANOGRAPHER.

*All notes in red approved by L. O. Colbert*

STATISTICS

HYDROGRAPHER:

Day	Date	No. Positions	No. Sdgs.	Statute Miles
A	9-26-32	71	787	159
B	9-28-32	39	442	78
C	9-29-32	60	613	115.3
D	9-30-32	64	565	87.5
		<hr/>	<hr/>	<hr/>
		234	2407	440.0

OCEANOGRAPHER:

A	9-28-32	70	591	113.7
B	9-29-32	131	750	125.4
C	9-30-32	78	494	82.8
		<hr/>	<hr/>	<hr/>
		279	1835	321.9
			2407	440
			<hr/>	<hr/>
			4242	761

2ae

- 6 -

August 22, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5276

Locality off Cape Cod (Georges Bank, Coast of Massachusetts)

Chief of Party: W. E. Parker and L. O. Colbert in 1932

Plane of reference is mean low water, reading

\*3.3 ft. on tide staff at Commonwealth Pier No. 5, Boston, Mass.

18.2 ft. below B. M. 7

\*South of  $41^{\circ} 55'$  used 0.6 of range at Boston

North of  $41^{\circ} 55'$  used 0.8 of range at Boston

Height of mean high water above plane of reference south of  $41^{\circ} 55'$  is 5.6 ft;  
north of  $41^{\circ} 55'$  it is 7.5 feet.

Condition of records satisfactory except as noted below: Tide reducers were not satisfactory and new reducers were entered and reductions verified in Division of Tides and Currents. The reducers used by "Hydrographer" were not stated in sounding volumes nor in Descriptive Report, while those used by "Oceanographer", based on predicted tides for Newport, R. I., using on-half the range and three hours and forty minutes later in time, were not considered as satisfactory as Boston observations with allowance for difference in range. No time allowance from Boston was considered to be necessary.

*W. E. Parker*  
Chief, Division of Tides and Currents



Section of Field Work  
Surveyed in 1932.

Report on #5276.

Chief of Party W. E. Parker and L. O. Colbert.  
Surveyed by W. E. Parker and L. O. Colbert.  
Projected by E. L. Jones.

Soundings plotted by E. L. Jones.

Verified and Inked by Leo S. Straw

1. The records conform to the requirements of the General Instructions except as noted on page 6 of the Descriptive Report (#5276) (Aids Reducers)

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

3. The plan and extent of development satisfy the Specific Instructions

4. The usual depth curves can be completely drawn within the limits of this survey.

5. The sounding line crossings are adequate and agree fairly well. A few soundings which affected bad crossings were not plotted. Soundings on line 39 to 42 B (red) were not plotted because of their disagreement with adjacent parallel and cross lines.

See page 4 of Descriptive Report #5276

#5276

6. The field plotting was completed to the extent prescribed in the Hydrographic Manual and is considered very good. No part of the drafting done by the Field was done over in the office.

7. This sheet, #5276, makes a satisfactory junction with #5275 on the east.

There is a junction of this sheet, #5276, on the south-west for about five miles with #5249 (Great Round Shoal Channel). This junction is not complete because of one gap on the east and one on the north. There are no other contemporary surveys joining this sheet (#5276).

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

Respectfully Submitted

W. H. Straw

Sept. 15, 1933.

SECTION OF FIELD RECORDS  
Report on Hydrographic Survey No. 5276.  
Off Cape Cod, Mass.  
Surveyed in 1932.  
Instructions dated May 16, 1932.

Chief of Party - W. E. Parker & L. O. Colbert.  
Surveyed by - W. E. P. and L. O. C.  
Protracted and soundings plotted by - E. L. Jones.  
Verified and inked by - L. S. Straw.

1. General.

The verification of this sheet was accomplished under the close supervision of the Chief, Section of Field Records, who approved all the rejections and omissions of soundings made by the verifier. For details regarding the verification, see notes in red on page 4 of the Descriptive Report as well as the verifier's report.

Since no critical depths are involved on the main body of this sheet, and since no points are raised that have not already been considered in the reviews of other sheets of this project, the customary detailed review will be dispensed with.

2. Comparisons with Chart 1107.

a. The charted 75 fathom bank (about 15 miles long) in lat. 42°08'.5 long. 69°40' originates with four soundings on one line in 1856 (by Lieut. Commander Stillwagen) shown on H. 1305. As no bottom characteristics are recorded it is possible that bottom was not obtained. These soundings fall in depths over 100 fathoms on the present survey. As the depths are not critical and since there is no reason to doubt the accuracy of the several lines on the present survey that cut across the bank, it is recommended that the new survey supersede the present charting.

b. The charted 10 fathom shoal in lat. 41°38' long. 69°45' originates with Chart Letters 376 of 1914 and 371 of 1915, (copies attached) being the least depth (actual 65 feet) of water obtained after the wreck of the schooner George P. Hudson was removed. The shoal falls just inside the 20 fathom curve on the present survey but between two lines spaced 2 miles apart. An undeveloped 10 fathom spot was found on the present survey about 2½ miles south by west of the charted 10. Inasmuch as no examination was made in the vicinity of the charted 10 fathoms, it should be carried on the charts until such time as it is proved to be out of position or non-existent. ~~It has been plotted on H. 5276 in red.~~ *Disregard*  
REF: LHNM 30/14 (1116) 7/23/1914; and AWOIS Item 3988. RWD 7/21/92

3. Junctions with Contemporary Surveys.

The junction with H. 5275 on the east is satisfactory.

The junction with H. 5249 (survey of Great Round Shoal Channel, but not a part of the Georges Bank project) is inadequate. There is a gap of about four miles between the two surveys, which ~~would have been very desirable to have filled in.~~ <sup>should</sup> \*

There are no other contemporary surveys in this area.

\* The survey of Great Round Shoal was made after the Georges Bank Project had been completed and was a separate project made at the close of the season. To fill in the gap would have required the use of two station ships for control. LOC.

H. 5276 - 2.

4. Additional Work.

When work is extended inshore in this vicinity, the 10 fathom shoal mentioned in par. 2, b of this review should be examined, the gap in the work north of lat. 41°30' long. 69°45' should be filled in and a junction effected with H. 5249. It is recommended that split lines be run at the northern end of the work over the previously charted 75 fathom bank to further disprove its existence.

5. Note to Compiler.

Apart from the 10 fathom shoal mentioned in par. 2, b, above, the present survey should supersede all previous chartings within its limits.

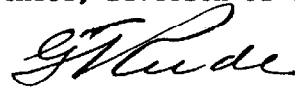
6. Reviewed by A. L. Shalowitz, Oct. 1933.

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

  
K. B. Borden  
Chief, Field Work Section.

Examined and approved:

  
L. O. Colbert,  
Chief, Division of Charts.

  
G. H. de  
Chief, Division of H. & T.

(Copy)

H-5276

CHART LETTER NO. 376.

September 15, 1914.

Superintendent,

U. S. Coast and Geodetic Survey,

Washington, D. C.

Sir:

I have to advise you that the commanding officer of the ACUSHNET reports under date of September 8, 1914, that on the 6th instant, he removed the obstruction to navigation caused by the wreck of the schooner GEORGE P. HUDSON about 6 miles  $76\frac{1}{2}$  from Pollock Rip Slue lightship, in latitude  $41^{\circ}38'$  North, longitude  $69^{\circ}45' 05''$  West. He reports that after the completion of his work an examination of the locality showed a least depth of four fathoms on the beginning of the westerly tide, the shoalest spot being over the stump of the spanker mast.

Respectfully,

(Signed) E. P. Bertholf.

Captain Commandant.

(COPY)

H-5276

CHART LETTER NO. 371

August 3, 1915

Superintendent,  
Coast and Geodetic Survey,  
Washington, D. C.

Referring to your letter of July 23, 1915, relative to depth of water over wrecks of the GEORGE P. HUDSON and the BOMBAY.

The following extract, from a letter dated July 30th received from the Lighthouse Inspector, Boston, Mass., is quoted for your information:-

"The U. S. Engineer Officer reports that after the removal of the wreck of the GEORGE P. HUDSON the least depth of water obtainable was 65 feet, and after the removal of the wreck of the BOMBAY the least depth of water obtainable was from 34 to 42 feet."

(Signed) G. R. Putnam

Commissioner.

Chart 270 Add a few edges in merchant part of chart Oct. 1958