

5764

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

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

State: LOUISIANA

DESCRIPTIVE REPORT

Topographic | Sheet No. 7
Hydrographic

LOCALITY

GULF OF MEXICO

LOUISIANA COAST

WEST OF TRINITY SHOAL

1934

CHIEF OF PARTY

W. E. Parker and R. P. Eyman

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. 7

REGISTER NO. 5764

State LOUISIANA

General locality GULF OF MEXICO

Locality WEST OF TRINITY SHOAL

Scale 1:40,000 Date of survey April 5, 1934 to Sept. 27, 1934

Vessel U.S.C. & G.S.S. "HYDROGRAPHER"

Chief of Party W. E. Parker and R. P. Eyma

Surveyed by A. P. Ratti, R. W. Woodworth, P. C. Doran, G. R. Shelton, O. B. Hartzog.

Protracted by E. D. Parmar

Soundings penciled by E. D. Parmar

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by -----

Inked by M. A. Hagel

Verified by S. M. Green Jr.

Instructions dated Dec. 17, 1932, Jan. 7, 1933, May 31, 1933

Remarks: -----

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET No. 7

GULF OF MEXICO

LOUISIANA COAST

DATE OF INSTRUCTIONS:

Instructions for this survey were dated December 17, 1932, and Supplemental Instructions January 7, 1933. Letter of May 31, 1933, authorized the plane of reference and location of tide gauge.

SURVEY METHODS:

All the positions on this sheet were located by means of visual fixes on topographic signals, buoys and water signals. Sextant fixes on shore signals were used to carry the hydrography to a maximum distance of eleven miles offshore, the Ship HYDROGRAPHER'S port launch working from the shore line to about 500 meters offshore, the Launch PRATT working from 500 meters offshore to a maximum distance of five miles offshore, and the Ship HYDROGRAPHER working from the limit of work done by the Launch PRATT to eleven miles offshore.

This work was controlled from triangulation executed by E. R. McCarthy in 1933.

Buoys and water signals were used for position finding beyond the limit of visibility of the shore signal towers. All of the hydrography in this area with the exception of the westward tip of Trinity Shoal was done from the Ship HYDROGRAPHER. The shoal tip was done from the launch FARIS. A system of triangulation using sextant angles, taut wire measurements, and azimuths was used for locating buoys and water signals for control in this area. These triangulated buoys and water signals were plotted on the aluminum sheet and transferred to the smooth sheets by geographical positions to eliminate distortion.

In cases where lines of hydrography were run parallel to a row of buoys and too close for sextant fixes, rangefinder distances or depression angle distances were taken and plotted on bearings. Bearings are indicated on the smooth sheet by means of yellow lines about two millimeters long.

Soundings were taken by means of lead lines which were verified or calibrated at the beginning and end of each working day.

Tidal reductions were made from data obtained from a recording tidal station located at Calcasieu Pass Lighthouse, Louisiana.

DISCREPANCIES:

With the exception of customary and occasional errors in observing or recording no difficulty was experienced in plotting. The errors in the record were cases where the angle, name of signal, or buoy actually recorded sounded very much like the correct angle, name of signal or buoy. There are a few jumps where fixes on shore signals or water signals and buoys are changed to fixes on buoys alone, however, these jumps are small and due to the buoys having scopes. In all cases, doubtful fixes were checked against the boat sheet, and all corrections, deviations and rejections were noted in the sounding records opposite the fixes in question.

Signal "Wale" was a whaleboat anchored on M day and used only on M day. Both the anchor position, (indicated by dot in center of two millimeter circle) and the whaleboat position were determined by sextant fixes on shore signals, giving a scope of 80 meters and 282° direction of current at the time the position was determined. Using the anchor position failed to give positions which checked for time and course, therefore, the whaleboat position was used for all positions

where "Wale" was used in a fix on M day. This whaleboat position, which gave good results as to time and course for the day is indicated on the smooth sheet by a blue dot bearing 282° a distance of 80 meters from the center of the two millimeter circle.

On Q day positions 10 to 23, the rangefinder distances failed to check with time and course on some positions where the positions were greater than 900 meters from the observed buoy. After plotting this line as a traverse using time and course between bearings it was noted that short observed distances checked within the scopes of the buoys but that the accuracy of the rangefinder decreased rapidly for distances greater than 900 meters and at these greater distances the rangefinder values were too large. See positions 18 and 19.

The fixes on B'day, positions 50 to 54 being weak were plotted on course and checked for time and log distances as noted in sounding volume.

Discrepancies of soundings at crossings for the sheet as a whole were very small, being only one to two feet with an occasional three foot discrepancy.

DANGERS:

All changes in depth are gradual and there are no rocks nor shoal shell reefs. The only prominent shoal found offshore was the westward tip of Trinity Shoal, on which the shoalest depth found was twelve feet at Latitude $29^{\circ} 11.7'$ and Longitude $92^{\circ} 16.4'$.^{*} The bottom at the shoal is hard and covered with fine gray sand. The bottom of the area surrounding the shoal is soft and sticky gray mud with an occasional patch of gray sand and broken oyster shell.

**Sheet shows 12 ft. depths on both sides of a true position; the most westerly spot being at Lat. $29^{\circ} 11.2'$, Long. $92^{\circ} 17.1'$.
J.W.M.*

COMPARISONS WITH PREVIOUS SURVEYS:

Upon comparing soundings on the western limit of sheet No. 7 with the eastern soundings of the adjoining sheet, Sheet No. 6, it was noted that the tie-in was very good and an excellent junction of depth curves was obtained.

A number of comparisons were made between soundings on this sheet and soundings on Charts No. 1277 and No. 1278 covering the same area, and in no case was found a discrepancy greater than three feet. On the portion of Trinity Shoal covered by this sheet the shoalest depth found was twelve feet at Latitude $29^{\circ} 11.7'$ and Longitude $92^{\circ} 16.4'$. On the Chart the shoalest depth shown in this area is ten feet located at Latitude $29^{\circ} 11.4'$ and Longitude $92^{\circ} 16.8'$. The chart shows the twelve foot spot in approximately the same location as the survey on Sheet No. 7 but no ten foot depths were found in this area by this survey party. The same bottom characteristics as noted on the Chart were found during this survey; i.e., mostly soft and sticky gray mud with an occasional patch of broken shell and fine gray sand.

Respectfully submitted,

E. D. Parmer

E. D. Parmer, Surveyor,
U. S. Coast & Geodetic Survey.

Examined and Approved:

R. F. Luce

R. F. Luce, Commander,
U. S. Coast & Geodetic Survey,
Chief of Party.

STATISTICS FOR SHEET NO. 7

Total number of positions	4,401
Total number of soundings	22,544
Total number of statute miles,	1,887

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5764

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

Number of positions on sheet	4401
Number of positions checked	111
Number of positions revised	5
Number of soundings recorded	22,544
Number of soundings revised	50 ⁺
Number of signals erroneously plotted or transferred	none

Date: 6/12/35
Inked by M.A. Hagel
Verification by S.M. Green Jr.
Review by *[Signature]*

Time: 73 hr.
Time: 101 hr.
174
Time: 122 hr.
7/31/35

HYDROGRAPHIC SURVEY NO. 5764

Smooth Sheet 1

Boat Sheet 3

Sounding Records 13 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Filed in Vol. 1

Landmarks for Charts (Form 567) No Available objects

Statistics Filed in D.R.

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None Rec'd

Special Chart for Lighthouse Service (Circular Nov. 30, 1933) *None Rec'd

Remarks * The only floating aid to navigation
on the sheet is beyond visual range of shore objects

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 23, 1935

Division of Hydrography and Topography:

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in
13 volumes of sounding records for

HYDROGRAPHIC SHEET 5764

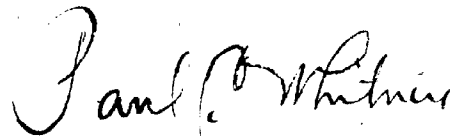
Locality West of Trinity Shoal, Gulf of Mexico, Louisiana Coast

Chief of Party: W. E. Parker and R. P. Eymann in 1934
Plane of reference is mean low water reading
3.5 ft. on tide staff at Calcasieu Lighthouse (Staff #1)
5.9 ft. below B.M. 1

4.1 ft. on tide staff at Calcasieu Lighthouse (Staff #2)
5.9 ft. below B. M. 1

Height of mean high water above plane of reference is 1.5 feet
at Calcasieu Lighthouse.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

H-5764

7/20/35

The soundings are sufficient to draw all curves completely. The curves were not drawn properly by the field platter.

The work checks very well on cross lines and with adjoining sheets. There are a few doubtful sdgs. at 29-21.5; 92-24.0 there is a 34' ^{REJECTED} sdg. between two 29' sdgs. This is apparently an error. ^{Probably a datum error.} Also at 29-33.6; 92-31.7 there are two 14' ^{REJECTED} sdgs. between a 7 and a 9' sdg. These are questioned in the sounding record, and probably had been recorded in error.

Upon checking the S.S. with the B.S. it was noticed that the positions of the signal buoys are not the same on both sheets. This is explained in the descriptive report.

The sheet has been compared with the topo. sheets and the shoreline verified.

S. M. Green Jr.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5764 (1934) FIELD NO. 7

West of Trinity Shoal, Gulf of Mexico, Louisiana
Surveyed in 1934

Instructions dated December 17, 1932 & January 7, 1933 (HYDROGRAPHER)

Hand Lead Soundings.

3 Point fixes on shore signals,
water signals, and buoy signals.

Chief of Party - W. E. Parker; R. P. Eymann.

Surveyed by - A. P. Ratti, R. W. Woodworth, P. C. Doran, G. R. Shelton.

Protracted by - E. D. Parmer.

Soundings penciled by - E. D. Parmer.

Verified by - S. M. Green, Jr.

Inked by - M. A. Hagel.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual, except that the use of yellow color for day letter and position numbers is contrary to the Hydrographic Manual (par. 62).

The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

2. Compliance with Instructions for the Project.

This is a well executed survey and complies with the instructions for the project.

3. Sounding Line Crossings.

Sounding line crossings are considered very satisfactory. Cross lines were run on an average of two miles apart throughout the limits of the sheet. Generally differences in depth at crossings are not more than one foot.

4. Depth Curves.

The usual depth curves can be satisfactorily drawn.

5. Junctions with Contemporary Surveys.

The junctions with H-5410 (1933) and H-5411 (1933) on the west and southwest are adequate and satisfactory.

The junctions with H-5767 (1934) on the south and H-5765 (1934-35) on the east are satisfactory.

6. Comparison with Prior Surveys.

a. H-1776 (1887-88).

A comparison between this survey and the present survey discloses differences in depths of 1 to 2 feet over large flat areas. In the inshore areas the 6, 12 and 18 foot curves are from 1/4 to 1/2 mile farther from shore on the present survey. The shoalest depth on the western tip of Trinity Shoal is 12 feet on the present survey whereas the old survey shows 10 feet.

The 25 foot sounding on chart No. 1277, latitude 29° 20.9', longitude 92° 25.3' is incorrectly charted. It is shown as in 4-3/4 fathoms on H-1776 (1887-8) and is actually 29-1/2 feet in the old records, (between positions 53 and 53 H). The 25 foot sounding should be expunged from chart No. 1277. This sounding is correctly charted on chart No. 1116.

Because of the changes noted, the time elapsed since the previous survey, and the fact that all important areas were adequately developed on the present survey, H-5764 (1934), should supersede the above survey (H-1776, 1887-88) for charting purposes.

b. See Addenda attached to this review.

7. Comparison with Chart No. 1277, No. 1278 and No. 1116.

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

8. Field Plotting.

The field plotting is satisfactory and conforms to the requirements of the Hydrographic Manual.

9. Additional Field Work Recommended.

This survey is complete; and no additional work is required.

10. Superseding Old Surveys.

Within the area covered the present survey supersedes the following survey for charting purposes: H-1776 (1887-88) in part, H-1139a and b(1872) in part.

11. Reviewed by - L. S. Straw, July 31, 1936.
R. J. Christman, August 5, 1935.

Inspected by - R. L. Johnston.

Examined and approved:

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

T. S. Borden
Chief, Section of Field Work.

R. O. Albert
Chief, Division of Charts.

J. H. H. H.
Chief, Division of H. & T.

Addenda to Review of H-5764 (1934)

Paragraph 6. Comparison with Prior Surveys.

b. H-1139a (1872) and H-1139b (1872).

The few soundings on H-1139a (1872) cover Trinity Shoal, a portion of which is shown on the present survey. Soundings are in fair agreement in the shoal areas but vary 1 to 5 feet shoaler than those on the present survey in several deeper areas. The few soundings on H-1139b (1872) which fall within the limits of the present survey actually originate with H-1139a (1872).

Reviewed by - Harold W. Murray, Dec. 4, 1935.

Inspected by - A. L. Shalowitz.

Applied to Chart 1051 Aug 1937 Chas. P. Bush
" " " 1277 Sep. 1937. H.S.S.