5767

Form 504
Ed. June, 1928

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

State: LOUISIANA

DESCRIPTIVE REPORT

~~*Topographic*~~
Hydrographic } *Sheet No.* 10

LOCALITY

GULF OF MEXICO

~~LOUISIANA COAST~~

SOUTH OF TRINITY SHOAL

1934

CHIEF OF PARTY

R. P. Eyman and R. F. Luce

U. S. GOVERNMENT PRINTING OFFICE: 1933

5767

Form 537
Ed. Dec., 1930

REG. NO.

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. 10

REGISTER NO. 5767

State LOUISIANA

General locality GULF OF MEXICO

Locality SOUTH OF TRINITY SHOAL

Scale 1:80,000 Date of survey Oct. 6 - Dec. 8, 1934

Vessel HYDROGRAPHER

Chief of Party R. P. Eyman and R. F. Luce

Surveyed by A. P. Ratti, R. W. Woodworth and P. C. Doran

Protracted by O. B. Hartzog

Soundings penciled by O. B. Hartzog

Soundings in fathoms ~~feet~~

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by M. Robinson

Verified by "

Instructions dated Dec. 17, 1932, Jan. 7, 1933, May 31 19 33

Remarks:

U. S. GOVERNMENT PRINTING OFFICE, 1931

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 10

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:

The positions for this entire sheet were obtained by R.A.R. with occasional bearings and angles when visibility permitted.

The buoys, used for control, were located by a system of triangulation brought out from shore objects and water signals. This was continued, out of sight of shore objects, by sextant angles between buoys wherever possible, then by bombed distances, taut wire measurement of distances, and azimuths by sun sights. This net work was then carried back inshore and tied into fixed objects. The entire scheme was then plotted on an aluminum sheet, and adjusted from both ends.

The two launches FARIS and PRATT were used as hydrophone stations. The positions of their hydrophones, relative to their buoy anchors, were obtained every half hour while sounding was in progress. They also obtained temperatures and water specimens (both top and bottom) morning and afternoon (with temperatures at noon) from which data, plus any ship data, the final velocity of sound was computed.

All soundings were taken with the fathometer. Comparisons with the hand lead were made at the beginning and end of each day

and at intervals of approximately two hours during the day. From this a curve was drawn for each day to obtain fathometer corrections.

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

PLOTTING SMOOTH SHEET:

As soon as the projection was checked and inked, circles (in light yellow) were drawn from each buoy at intervals of 10,000 meters, before the projection had time to distort. These circles were used as a constant check, in all directions, on distortion of the sheet. This was checked several times during each days plotting, from the meter bar, and if any discrepancy was found, a suitable correction was applied to the bomb distance.

The system of colors used on Sheet 10 is as follows:

Distance circles from buoys- - - - - - - - yellow

Distance arcs from Launch FARIS- - - - - -green

Distance arcs from Launch PRATT- - - - - - blue

Bearings- - - - - - - - - - - - - - - - - - violet

Position numbers- - - - - - - - - - - - - - red

In plotting the actual positions, preference was given to bomb distances in most instances, since the greater part of the sheet depends on bomb distance alone. Bearings, when obtained at not over a mile or two from the buoys, and having good intersection with the arcs were generally acceptable. At greater distances, or with poor intersection, they were not quite as good as time and course. Quite often time and course were resorted to (rather than long distance bearings) where both ends of a series of three or four positions were tied down with good positions. Occasional sextant angles were

taken where two or three buoys could be seen at one time, and checked very closely the positions obtained by bomb distances. Very little use had to be made of log distances, except in a very few cases where a line would turn on one bomb. In general, the positions on this sheet plotted unusually well.

DISCREPANCIES:

A DAY Positions one and eight were plotted and the rest adjusted between these two by single arcs, bearings, log distances and time and course.

On C day positions 13 through 16 will not check in any way. Bearings, bombs, time, course and log distances all give widely different positions. These positions should be rejected. This area was re-run on G day.

On E day positions 18 through 21 will not check courses, bombs or bearings, and should be rejected. This section was re-run on F day.

All other notes as to methods of plotting individual positions are given in the remarks column of the records.

Discrepancies at crossings and where lines joined (with the exception of one place) were never more than one fathom, and usually crossed with the same sounding. Since one foot can cause a change of a fathom, the crossings on this sheet are unusually good.

The soundings on E day positions one to eleven do not cross those of F day positions 14 to 24 very well where the two lines cross at 20F, there is a difference of two fathoms. The rest of the two lines, running very close together, shows a consistent difference of one to two fathoms. At the lower end of the two lines, positions 11E 25F and 28H all seem to check exactly.

DANGERS:

There are no dangers on this sheet. The bottom slopes very uniformly from 9 to 24 fathoms, with soft or sticky mud bottom. The three shoal spots, northeast of Buoy FOX and northwest of Buoy LAG, plotted on the boat sheet (of 7 and 10 fathoms) taken from Chart 1116, do not show up at all. Evidently these shoals do not exist. See paragraph 7 of Review.

COMPARISON WITH PREVIOUS SURVEYS:

On the west edge of this sheet, where it joins Sheet 3 (of the previous season) soundings from the two sheets agree very well, no difference of more than a fathom being shown, and then only for a few soundings.

On the north the junctions with sheets seven, eight and nine are very satisfactory.

On the south, Sheet eleven also joins very well.

Respectfully submitted,

O. B. Hartzog

O. B. Hartzog, Ensign,
Coast and Geodetic Survey.

Examined and Approved:

R. F. Luce

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

STATISTICS FOR SHEET NO. 10

Total number of statute miles	1,148
Total number of soundings,	5,753
Total number of positions,	1,021

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5767

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

Number of positions on sheet	1021
Number of positions checked	80
Number of positions revised	None
Number of soundings recorded	5753
Number of soundings revised	100
Number of signals erroneously plotted or transferred	0

Date: 6-11-35

Verification by Michael Robinson Time: 35

Review by [illegible] Time: 17½

HYDROGRAPHIC SURVEY NO. 5767

Smooth Sheet 1

Boat Sheet 1 for H 5767 and H 5768 (Combined)

Sounding Records 8 Vols.

Descriptive Report yes

Title Sheet yes

List of Signals Vol 1 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 Recd

Special Chart for Lighthouse Service (Circular Nov. 30, 1933) None Recd

Remarks

Survey No. H 5767

GEOGRAPHIC NAMES

Date. May 16, 1935 LOUISIANA

Chart No. 1277 &1116

Diagram No. Same

Approved by the Division of Geographic Names, Department of Interior. ✳

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	[illegible]	~~Trinity Shoal~~ ✓			
		No name			

(M-136)

LQ C

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 29, 1935

Division of Hydrography and Topography:

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

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5767

Locality South of Trinity Shoal, Louisiana Coast

Chief of Party: R. F. Luce and R. P. Eyman 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.

Condition of records satisfactory except as noted below:

Paul T. Whitney

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

6-11-'35

Verifier's Report on H-5767

1- Hydrographic Manual instructions were adhered to in the Records. Sounding were obtained in fathoms and feet by the R.A.R. method and were so shown on H-5767

2- Areas were well developed to show depth curves completely, except as noted under (6) "Remarks."

3- The field plotting was well done and checked within 300 meters of the computed theoretical distance. Bearings on Signals checked creditably well.

4- All Positions and Soundings from 8 to 11 fathoms were given without the fraction and these were correctly supplied from the Records.

5- Sheets:- H5764-65-66 and H5768 are the adjoining sheets, but the actual overlapping has not been done as yet.

6- The time spacing and general appearance of the Sheet wiss commandable. except for few corrections, such as soundings reading in the reverse order between Positions. In a number of cases where lines overlapped or crossed each other soundings proved reliable. In a few cases geographic positions had to be supplied. Bottom characterististics were insufficiently scattered. The Change to 10 and fractions would also change the depthcurve on the Sheet. Hop ⊙ and Kid ⊙: Hydrographic Signals which appear on the Boat Sheet were not transferred to the Smooth Sheet. These Signals were used for Bearing in the Records, however distances were not computed from them. Cat ⊙ Signal similarly used appears on the Smooth Sheet.

Respectfully submitted

Michael Robinson

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5767 (1934) - FIELD NO. 10

South of Trinity Shoal, Gulf of Mexico, Louisiana
Surveyed in 1934
Instructions dated Dec. 17, 1932-Jan. 7, 1933 (HYDROGRAPHER)

Fathometer Soundings - RAR control.

Chief of Party - R. P. Eyman and R. F. Luce.
Surveyed by - A. P. Ratti, R. W. Woodworth and P. C. Doran.
Protracted by - O. B. Hartzog.
Soundings penciled by - O. B. H.
Verified and inked by - Michael Robinson.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual:

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. However, it would have been desirable to extend a few of the sounding lines far enough south in lat. 28°39.0', long. 91°57.0' to completely define the 20 fathom curve.

3. Sounding Line Crossings.

No general system of cross lines were run but the adjacent lines show a good agreement.

4. Depth Curves.

The 20 fathom curve, except in lat. 28°39', long. 91°56.5' and portions of the 10 fathom curve may be satisfactorily drawn.

5. Junctions with Contemporary Surveys.

Junctions with H-5411 (1933) and H-5417 (1933) on the west and southwest are satisfactory.

The junction with H-5768 (1934) on the south is satisfactory.

The junctions with H-5764 (1934), H-5765 (1934-35) and H-5766 (1934-35) on the north will be considered in the reviews of those surveys.

6. Comparison with Prior Surveys.

a. H-657 (1858).

This is a reconnaissance survey on a scale of 1:635,000. Only 3 soundings fall within the limits of the present survey. The 15½ fathom sounding (charted 15) in lat. 28°46.5', long. 92°25' and the 14 fathom sounding (charted) in lat. 28°46.5', long. 92°08.3' both fall in depths of 18 fathoms on the present survey. The 16 fathom sounding (charted) in lat. 28°47.6', long. 91°52' falls in depths of 14 fathoms on the new survey. The above soundings are evidently in error in depth. Because of the age and character of the old survey these soundings should be disregarded in future charting.

b. H-1350 (1875-77).

This survey contains sounding lines spaced about 30 miles apart on a scale of 1:600,000. The few soundings which fall within the limits of the present survey are from ½ to 1½ fathoms shoaler than those of the present survey. The new survey, with sounding lines spaced on an average of 2 miles apart shows the bottom to be of a uniform slope from 9 to 24 fathoms with no shoal indications. The soundings on H-1350 (1875-77), within the limits of this survey, H-5767 (1934), should not be used in future charting.

c. H-1776 (1887-88).

A few soundings of this survey which fall within the northeastern limits of the new survey H-5767 (1934) are in good agreement.

d. H-5303a (1933).

This is a "track" fathometer survey controlled by dead reckoning and astronomical positions on a scale of approximately 1:1,000,000. It is of a reconnaissance value only and contains no information which conflicts with the new survey. Because of its nature, it should be superseded by the present survey.

7. Comparison with Chart No. 1116.

a. The 7 fathom sounding in lat. 28°52.8', long. 91°56.0' falls in depths of 13 fathoms, uniform bottom, on the present survey. The 7 originates with Chart Letter No. 568 of 1925, but the letter could not be found in the files at the present time. Inasmuch as the 7 is not the result of a survey, its position is doubtless approximate. The extreme uniformity of the bottom negatives its existence in the charted location and it should be disregarded in future charting.

b. The authority for the 10, 11, 12 and 13 fathom soundings in the vicinity of lat. 28°54.0', long. 91°55.0' could not be traced. They are in good agreement with the present survey with the exception of the 10 (lat. 28°53.0', long. 91°50') which falls in depths

of 12 fathoms. These soundings first appeared on the chart between 1914 and 1918. Because of its uncertain origin and character, the 10 fathom should be superseded by the present survey.

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; no additional work is required.

10. Superseding Old Surveys.

Within the area covered the present survey supersedes the following for charting purposes:

H-657 (1858) - in part.
H-1530(1875-77) - in part.
H-1776 (1887-88) - in part.
H-5303c (1933) - in part.

11. Reviewed by - L. S. Straw, June, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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

L. O. Colbert
Chief, Division of Charts.

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

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

Applied to Drawing of 1116, Aug 9, 1935 H. Bacon
" " cut. 1277 Sept. 1936 - H. L. B.