

5315

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

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton Director



State: Louisiana

DESCRIPTIVE REPORT

~~COASTAL~~
Hydrographic

Sheet No. 1

5315

LOCALITY

Gulf of Mexico

Coast of Louisiana

1933

CHIEF OF PARTY

H.A. Seran, Commander

5315

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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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. 1

REGISTER NO. **5315**

State LOUISIANA

General locality GULF OF MEXICO

Locality SOUTH OF MERMENIAU RIVER

Scale 1-40,000 Date of survey March, April, 19 33

Vessel OCEANOGRAPHER

Chief of Party H.A. Seran

Surveyed by H.A. Seran

Protracted by Fred Natella

Soundings penciled by William K. Doolittle

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by Wm. Miller

Verified by

Instructions dated December 17, 1932
January 24, 1933

Remarks

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NUMBER 1

Project H-T 123 and H-T 124

U.S.C. & G.S.S. OCEANOGRAPHER

H.A. Seran, Commanding.

INSTRUCTIONS:

The hydrography on this sheet was performed in accordance with the Director's Instructions dated December 17, 1932 and January 24, 1933.

LIMITS AND SCALE:

This sheet was surveyed on a scale of 1:40,000. ✓
Located off the coast of Louisiana south of the Mergantau River, the area is bounded on the north by latitude $29^{\circ} 35'$, on the south by latitude $29^{\circ} 23'.5$, on the west by longitude $93^{\circ} 12'$ and on the east by longitude $93^{\circ} 02.8$. At its western limit the work joins surveys performed by the U.S.C. & G.S.S. BACHE in 1923 and at its north, south and eastern limits it joins the current surveys being performed by the U.S.C. & G.S.S. HYDROGRAPHER.

CONTROL:

The control consisted of survey buoys located as follows:

Buoys E, F, A and P were planted at the approximate limit of shore visibility and their positions determined by three point sextant fixes on tall hydrographic signals on shore, located by the ship HYDROGRAPHER. Taking a departure at buoy F, buoys G, D, H and I were planted approximately $2\frac{1}{4}$ miles apart in an approximate north and south line. Similarly, starting at buoy P, buoys O, N, M, L and K were planted the same distance apart and in a north and south line. The first line of buoys was located by full speed double runs and sun azimuths. The second line of buoys was located by the taut wire base measuring apparatus and sun azimuths. A detailed description of the taut wire apparatus and its efficient and successful performance on this project will be found in the Commanding Officer's special report and its accompanying exhibits of June 15, 1933. Buoy I, the offshore buoy of the first line, was also located by a taut wire distance and azimuth from buoy K. This position of I was considered stronger than the one obtained by the double run, so it was held fixed and the intermediate buoys between I and E adjusted to the double run.

SURVEY METHODS:

The area was surveyed with a system of sounding lines running north and south spaced about a quarter mile, with east and west cross lines spaced about every three miles. Positions were obtained by three point sextant fixes on buoys, and all soundings were obtained by hand lead.

On lines running close to the lines of buoys, three point fixes could be obtained only at intervals of about $2\frac{1}{2}$ miles. These positions were held fixed and intermediate positions obtained by combinations of single angles, compass bearings, range-finder distances and log distances were adjusted between them. Positions of "E" and "J" days were obtained by this method.

CROSSINGS:

In general, soundings crossed within one foot. No crossing exceeded three feet in disagreement. These larger discrepancies are ascribed to the inexperience of leadsmen.

TIDAL NOTE:

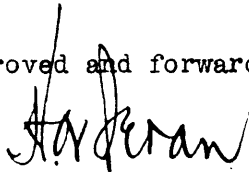
Soundings were reduced to mean low water from tidal data obtained from the standard gage located on the Lighthouse Dock in Calcasieu Pass. The gage was installed and operated by the ship HYDROGRAPHER. The plane of reference for mean low water, as determined in the Washington office, was 3.48 feet on the staff.

Respectfully submitted,



Fred Natella,
Lieutenant (jg), C. & G.S.

Approved and forwarded:



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

STATISTICS

Day	Statute Miles Sounding Lines	Number of Positions	Number of Soundings
A	42.5	125	761
B	31.0	77	482
C	38.0	86	612
D	44.8	115	713
E	75.5	162	1277
F	51.4	139	859
G	22.4	39	319
H	5.8	9	79
J	16.6	15	237
K	40.3	110	682
Totals	<u>368.3</u>	<u>877</u>	<u>6021</u>

Area: 106 sq. Statute Miles

October 28, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5315

Locality South of Mermentau River, Louisiana, Gulf of Mexico

Chief of Party: H. A. Seran in 1933
Plane of reference is mean lowwater, reading
3.5 ft. on tide staff at Calcasieu Pass Lighthouse
5.8 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: Reducers
Have been entered and checked to nearest whole foot. It is noted, however,
that the soundings are less than 10 fathoms which, according to the Hydro-
graphic Manual, page 16, would require reducers to the nearest half-foot.

at 133

H. A. Seran
Acting Chief, Division of Tides and Currents

November 2, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SURVEY 5315

Locality South of Mermentau River, Louisiana, Gulf of Mexico

Chief of Party: H. A. Seran in 1933
Plane of reference is mean low water, reading
3.5 ft. on tide staff at Calcasieu Pass Lighthouse
5.8 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:

H. A. Seran
Acting Chief, Division of Tides and Currents

Field Records Section

Nov. 10,

Report of verification of Hydrographic Sheet no. 5315

South of Mermentau River, Gulf of Mexico.

Surveyed by H. A. Seran, March, 1933.

Chief of party, - H. A. Seran.

Protracted by Fred Natelle

Soundings penciled by W. K. Doolittle.

Verified and inked by J. Miller.

Records and Notes

The field records are complete enough, with all information necessary for the plotting of the sheet, and conformed with all the requirements of the Hydrographic Manual.

Accuracy of Protracting

The sheet was assigned with the protracting previously inspected by H. W. Murray.*

Plotting of the Soundings

The soundings were, in a few cases, erroneously plotted and in one case several soundings were plotted that were not recorded in the records. The field protracting of this sheet was inspected by H. W. Murray. He also made inspections of the crossings and observed that with a few exceptions, sounding lines run in an East to West direction were from 1-3 feet deeper than those run in a West to East direction. The cross soundings included by 58C-59C, 60C-67C, 69C-73C and 110D-111D were omitted because of a too great discrepancy.

Because of the uniformity of the depths, the instructions for verifying this sheet were that approximately every other sounding was to be inked in. This was followed by the verifier.

General

No recent surveys bordered the North, East or South limits of this survey. However, the West side was compared with two bordering sheets, nos. 4364 & 4372. (1929) and the soundings compared very well. Only differences of one foot at the most were noted.

J. Miller

* On account of the uniformity of the bottoms, smoothness of lines and general agreement with the ~~the~~ Boat Sheet, little if any checking was deemed necessary. In general, the inspection was limited to the more obvious errors which would present an untrue picture of the bottoms.


SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5315.
South of Mermentau River, Gulf Of Mexico, Louisiana.
Surveyed March-April 1933.
Instructions dated Dec. 17, 1932, Jan. 24, 1933 (Oceanographer)
Proj. HT.124.

Chief of Party - H. A. Seran.
Surveyed by - H. A. Seran.
Protracted by - F. Natella.
Soundings pencilled by - W. K. Doolittle.
Verified and inked by - H. W. Murray and Irvin Miller.

1. The records conform to the requirements of the Hydrographic Manual.
2. The plan and extent of development conform to the regulations and satisfy the specific instructions.
3. Soundings are consistent; depth at crossings of lines are in good agreement (within 1 foot) except on several of the crossings near the western edge of the sheet where the differences are from 2 to 3 feet in a general depth of 40 feet. The differences are probably due to inexperienced leadsmen (see Descriptive Report). The shoaler soundings only have been inked on the smooth sheet.
4. Depth curves. The bottom is very flat and none of the standard curves come on the sheet.
5. Junctions with H. 4364 and H. 4372 surveyed in 1924 are satisfactory. No contemporary surveys are available on the north, east and south.
6. Comparison with H. 1645 (1885) and current edition of Chart 1278 shows practically the same depth, possibly 1 to 2 feet deeper water on H. 5315.
7. Field drafting. - Positions were plotted satisfactorily. Soundings were not spaced according to time recorded. In many cases the interval between positions was three minutes with soundings every 30 seconds, the draftsman penciled a depth on the positions and 3 equally spaced depths in between the positions. About every other sounding was inked by the draftsman without respacing to make them agree with the record. Due to the uniform character of the bottom no material error has been introduced into the hydrography by this procedure.
8. Recommendation. This sheet (H. 5315) should supersede all previous surveys for charting the area covered by it.


No further surveys are deemed necessary at this time.


9. Reviewed by - R. J. Christman - Dec. 1, 1933.


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


Chief, Field Work Section.

Examined and approved:


Chief, Division of Charts.


Chief, Division of H. & T.

Applied to drawings of charts 1007 & 1116
Oct. 15/34 C. N. S.