

5458

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1923

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director



State: LOUISIANA

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. C  
Hydrographic }

LOCALITY 5458

Gulf of Mexico

Calcasieu Lake

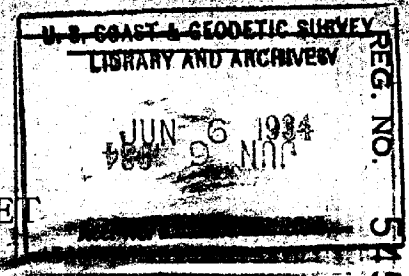
Northern Part

1933  
1934

CHIEF OF PARTY

J. C. Bose

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. "C"

REGISTER NO. 5458

State Louisiana

General locality Gulf of Mexico

Locality Calcasieu Lake, Northern Part

Scale 1:20,000 Date of survey Nov. 1933-Mar. 1934, 19

Vessel Party No. 6, Project No. HP-138

Chief of Party J.C. Bose

Surveyed by J.C. Bose

Protracted by H.R. Burfford

Soundings penciled by H.R. Burfford

Soundings in fathoms feet

Plane of reference 0.5 Ft. below mean water level

Subdivision of wire dragged areas by

Inked by E. R. Behn

Verified by E. R. Behn

Instructions dated September 8, 1933, 19

Remarks:

Descriptive Report to Accompany Hydrographic  
Sheet (Field) No. C

Instructions. The survey was made in accordance with Instructions dated September 8, 1933.

Limits. The area covered by sheet C is the northern half of Calcasieu Lake, Louisiana, from latitude 30° 03' to latitude 29° 54.6'.

Survey Methods. The usual methods of launch hydrography were used. Positions were determined by visual fixes. Due to the fact that the water in the entire area is very shallow, soundings were taken with a pole instead of a leadline. The pole was marked in feet and tenths of feet and was fitted at the lower end with a wooden disk, four inches in diameter, to prevent the pole from sinking far into the soft mud bottom.

General Description. Calcasieu Lake is very shallow and navigable only for small boats. The deepest water exists in the middle of the lake and is marked by a row of piles, driven in pairs or clusters of three, a distance of about 1500 feet apart. These markers were driven by the War Department.

The lake bottom is quite level and slopes gradually from the middle of the lake to the shore.

The boat traffic on the lake consists of small tugs and oil barges, fishing boats, pleasure craft, and trappers' boats.

Although Calcasieu Lake has no navigational importance, at the present time, it is possible that it may some day be the means of affording the Port of Lake Charles a direct outlet to the Gulf. There is a strong sentiment in Lake Charles in favor of dredging a deep channel through the lake and Calcasieu Pass. In the spring of this year, 1934, test borings were made by the U. S. Engineers to determine the feasibility of maintaining such a channel. However, in view of the expense involved, there is little likelihood that such a project will be undertaken for several years.

Channels. The channel leading from Calcasieu River southward into Calcasieu Lake, passes east of the small island. It is marked by brush stakes and piles. The controlling depth is 6 feet. A boat going north into Calcasieu River should steer 355½ true from the northernmost channel markers and follow the brush stakes around the east and north sides of the island. See volume 3, page 3.

Another channel leads from the middle of the lake to the mouth of Kelso Bayou. This channel is used mainly by small tugs, oil barges, and launches hauling drilling equipment to Hackberry Oil Field.

The course is 222° true from channel marker No. 4 to the mouth of Kelso Bayou. The controlling depth is  $6\frac{1}{2}$  feet in this channel but, as there is less water at the northern and southern entrance of the Lake, the channel is good for only 6 feet. For mid-channel line, see Volume 9, page 4.

All of the channels have a soft mud bottom. Consequently, it is possible for boats drawing somewhat more than the limiting soundings to get through.

At the settlement of Grand Lake (more commonly called Big Lake), there are several small piers and landings. None of these are used commercially. Some of them have small boat houses for speed boats. As the boat houses are not protected from waves in rough weather, the boats are usually kept hoisted.

*J. C. Bose.*  
J. C. Bose,  
Hydrographer,  
Chief of Party.

*Applied to drawing of Chart No. 592.  
Jan. 9/35. B.*

STATISTICS TO ACCOMPANY HYDROGRAPHIC SHEET FIELD NO. 5

Calcasieu Lake, La.  
(Northern Half)

\*\*\*\*\*

|                                       |                                   |
|---------------------------------------|-----------------------------------|
| Statute miles of sounding lines ----- | <del>310</del> <sup>310</sup>     |
| Number of soundings -----             | <del>12971</del> <sup>13858</sup> |
| Number of positions -----             | <del>1500</del> <sup>1712</sup>   |

INSPECTION of H 5458

by Leo S. Straw

Calcasieu Lake (Northern Part)

Surveyed in 1933-34

by J. C. Bose.

Pole Soundings.

1; Records .

The records conform to the requirements of the Hydrographic Manual. ✓

2. Protracting .

The protracting is satisfactory. A general inspection, and actual checking of several positions indicates that the work was accurately executed. ✓

3. Cross lines .

The cross lines are adequate for this survey and are in good agreement with lines normal to them - except as noted in paragraph 4 (a). ✓

4. Discrepancies.

(a) Line 1 f to 6 f (blue) was shifted from five to twenty meters northwestward, with the maximum shift at 1 f, - better agreement with cross lines 35 d to 71 d (red) was obtained. Locality- mouth of Kelso Bayou. ✓

(b) Topographic signal "Cot" (Lat.  $30^{\circ}-03.54'$  Long.  $93^{\circ}-17.17'$ ) was plotted 10 meters too far north on H 5458. Since "Cot" was the left hand object of the fix East-Grand-Cot, with the recorded relation between the right and left angles - the slight correction of 10 meters on the Smooth Sheet resulted in the shift of the line on "f" day referred to in 4 (a). The Boat Sheet corroborated the correction. ✓

Positions on other lines using "Cot" were examined, and are satisfactory as plotted. (c) Stakes along sounding lines (~~35 d to 71 d~~), northeastward of Kelso Bayou, were not shown on the Smooth Sheet although recorded *stakes inked* in the records. It is recommended that the verifier plot them in pencil with the note "stake" and that they be either inked in or *as recorded in records* expunged from the sheet at the discretion of the reviewer. ✓ *J.C.B.*

5. Remarks.

(a) Channel markers which consist of a cluster of two to three piles (see paragraph 2, page 2 Descriptive Report T 4820) <sup>also page 1 of H 5458</sup> extend in a general north and south direction through the center of Calcasieu Lake. Their positions on H 5458 were checked and found to agree with T4820 by the undersigned. ✓

(b) The sounding line extending northeastward from Kelso Bayou, 1 f to 7 f, has been inked. Shoal soundings on crosslines (35 to 71 d (red) should be omitted if they conflict directly with the deeper soundings on the channel line - in so far as it extends. ✓

(c) This sheet, H 5458 makes satisfactory junctions on the north and south with H 5362 and H 5457 respectively. ✓

(d) No reference triangulation station was given on the Smooth Sheet. The  $\Delta$  Windmill (Grand Lake) Lat.  $29^{\circ}-58'+1702.1$  m. Long.  $93^{\circ}-14'+977.4$  m. N.A. 1927 (office computations) should be inked on the sheet. ✓

(e) The Assistant Chief of the Field Records Section has directed that: ✓

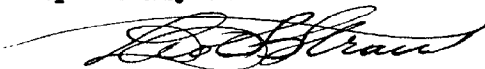
1. The  $6\frac{1}{2}$  foot soundings be inked to agree with the modified penciled curves on the Smooth Sheet. That all other halves, except critical soundings in channels, be omitted. ✓

2. The three foot curve will not be drawn. ✓

3. Where soundings are too close ink every alternate sounding. ✓

(f) There are no previous surveys of Calcasieu Lake by this Bureau. Further surveying is not required at this time. See fourth paragraph page 1 of the Descriptive Report by the Field-H 5458.(C). ✓

Respectfully submitted



July. 13.1934.

Leo S. Straw.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. H. 5458

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

|  |        |
|--|--------|
| Number of positions on sheet                         | .1712. |
| Number of positions checked                          | ...24  |
| Number of positions revised                          | ....5. |
| Number of soundings recorded                         | 13858. |
| Number of soundings revised                          | .....  |
| Number of signals erroneously plotted or transferred | ....1. |

Date:.....September 13, 1934.....

Cartographer:.....

Verification of plotting ~~by~~ by Leo S. Straw

~~Verification of taking of notes and sketches~~  
and

Verification of taking by Eric R. Behn

Review by

*John G. Reed*

Time: 2 3/7 da.

Time: 6 1/7 da.

Time: 5 hours



Mr. Ellis LAC

P2

June 13, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
9 volumes of sounding records for

HYDROGRAPHIC SHEET 5458

Locality Calcasieu Lake, Northern Part, Louisiana

Chief of Party: J. C. Bose in 1933

\*Plane of reference is mean low water, reading  
4.1 ft. on tide staff at Triangulation Station GRAND LAKE  
2.3 ft. below B. M. 1

\* Since there is practically no periodic tide the plane of reference  
was taken 0.5 foot below mean water level.

Condition of records satisfactory except as noted below:

*Hammner*  
Chief, Division of Tides and Currents

Section of Field Records

Report on H. 5458.

Surveyed in Nov. 1933 to Mar. 1934.

Chief of Party - J. C. Bose.

Surveyed by - J. C. Bose.

Protracted by - H. R. Burfford.

Soundings plotted by - H. R. Burfford.

Verified and inked by - E. R. Behn.

The records conform to the requirements of the General Instructions.

The usual depth curves were completely drawn. The field plotting was complete with the exception that quite frequently such features as stakes, piles, platforms and channel markers which were recorded in the sounding volumes, were not plotted and the few which were, were not identified as to whether they were stakes, piles, etc. Bottom characteristics were often shown where there was no mention of a bottom characteristic in the records. Also a bottom characteristic of "CLAY" was frequently shown where the records show "Hrd".

*corrected to  
agree with  
records  
E.R.*

Junction with H. 5362 on the north was satisfactory as was the adjoining sheet on the south, H. 5457.

No part of the drafting done by the field party had to be done over. The quality of the field drafting was good.

Submitted by - E. R. Behn,  
Sept. 13, 1934

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5458 (1933-34)

Calcasieu Lake, Northern Part, Gulf of Mexico, Louisiana.  
Instructions dated September 8, 1933 (J. C. Bose).  
Surveyed Nov. 1933 - March 1934.

Pole Soundings and 3 Point fixes on Shore Signals.

Chief of Party - J. C. Bose.  
Surveyed by - J. C. Bose.  
Protracted and soundings penciled by - H. R. Burfford.  
Verified and inked by - L. S. Straw; E. R. Behn.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual with the following exceptions:

- a. Numerous bottom characteristics as shown on the smooth sheet in pencil by the field party could not be verified by the records or boat sheet and consequently were not inked.
- b. A number of stakes, piles, and markers which were recorded in the sounding volumes were not shown on the smooth sheet. These have been added in the office.
- c. A reference to  $\Delta$  Sta. was not shown on the smooth sheet. This has been added in the office.
- d. Topographic signal "cot" was plotted 10 meters in error. Six positions had to be replotted as a result of the correction in the plotting of this signal.

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project.

3. Sounding Line Crossings.

There are a few sounding line crossings although none were called for in the instructions. They are in good agreement.

4. Depth Curves.

The usual depth curves could be drawn.

5. Junctions with Contemporary Surveys.

The junctions with H. 5362 (1933) on the north and H. 5457 (1933-34) on the south are satisfactory.

6. Comparison with Prior Surveys.

There are no prior surveys of the area as covered by this sheet.

7. Comparison with Chart No. 1279.

There is no hydrography shown on the chart within the area of this survey.

8. Field Plotting.

The field plotting is satisfactory.

9. Additional Field Work Recommended.

No additional field work is recommended.

10. Superseding Old Surveys.

There are no prior surveys in the area of this survey.

11. Reviewed by - John G. Ladd, Sept., 1934.

Inspected by - A. L. Shalowitz.

*K.T. Adams*  
K. T. Adams,  
Chief, Section of Field Records.

Examined and approved:

*L.O. Polk*  
Chief, Division of Charts.

*J.S. Borden*  
Chief, Section of Field Work.

*G. Wade*  
Chief, Division of H. & T.

*Applied to chart 1279  
12/27-35 g.H.S.*

Applied to Dept 884 March 30, 1950. M. Hunsberger