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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

O. H. Tittmann

Superintendent.

State: Texas

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 3669 and 3669<sup>a</sup>

LOCALITY:

Gulf of Mexico

Sabine Bank

Vicinity of Sabine Bank Light

1914

CHIEF OF PARTY:

Charles Yates

11-4645

3669A

3669

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEETS NOS. 1 and 2  
OF SURVEY OF SABINE BANK IN THE GULF OF MEXICO BY THE  
U. S. C. & G. S. SHIP BACHE FROM MAY 1st to  
23d, 1914.

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Chief of Party: Charles Yates, Assistant, C. & G. Survey, Commanding

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Explanation: On account of the work being located off shore and the reconnoissance character of the survey very little information is contained in this report as to Coast Pilot and other data.

Object of Work: On April 29th, the Bache commenced operations on her working grounds connected with the survey of Sabine Bank in the vicinity of Sabine Bank Light House. The object of the work being to investigate the existence of shoals on which several ships were supposed to have grounded in 15 to 22 feet reported as being located  $3/4$  mile to  $1-3/4$  miles from Light House.

The Survey Methods used were those described in the "General Instructions for Field Work" except as modified in accuracy by necessity of using floating hydrographic signals difficult to locate and difficult to see at many times.

The plotting of the hydrographic signals on sheet No. 2 ( scale 1-20,000 ) was accomplished by the transfer of the geographic positions of these signals as scaled from Sheet No. 1 ( scale 1-40,000 ). The positions of the signals on Sheet No. 1 being located by "direction cuts" from Sabine Bank Light, and by sextant angles at floating signals taken at night from top mast of the Bache between

Sabine Bank Light and Sabine Pass Light. Sheet No. 1 was checked as to location of hydrographic signals by the Chief of Party and probably gives the best determination of their location that can be obtained from the observations recorded in the record books of soundings.

Also, it is thought the plotted positions are sufficiently accurate for the purpose of plotting and verifying the soundings given in pencil. Many of these positions are plotted by a combination of data of single angles and bearings together with time and log readings probably subject to the best interpretation by those taking part in the work. Other positions were plotted by a combination of "direction cuts" from Sabine Bank Light to foremost of ship and a single sextant angle at the ship. The "direction cuts" being recorded in a separate record book of Angles accompanying the sounding records.

The plotting of the soundings in pencil requires careful verification both as to selection and as to actual depths. The latter error being known to exist in all soundings of the first three days which were reduced for lead line corrections of the opposite sign to those which should have been used.

The Results of this work from a navigational point of view tended to prove that the existing chart was not so greatly in error as the reports of the shoals seemed to indicate. From a talk with the Light House keepers it was gathered that the ships in question had grounded much nearer the Light than reported. That if they had followed the indications of the chart as to a proper course for passing over the Bank

they would not have grounded.

The survey as made will probably furnish all the necessary information to correct the existing chart so that similar accidents will not occur in the future. Especially if the buoy now located on the eastern side of the channel is removed to western side on the shoalest point making out to the eastward from the Light.

With the buoy in this position ships either going out or coming in can first make a land fall on the Light, then steer to round the buoy to the eastward avoiding all dangers for any draft to 30 feet. As the buoy is now located, it is so far away that it can not always be seen from the point of landfall, and when seen an indeterminate course between the Light and the buoy might be easily taken that would bring the ship in the shoal water near the light.

Respectfully submitted

Charles Yates

Asst. C. + S. Survey Comdg.  
Washington Oct 5<sup>th</sup> 1914

VEC  
Nov. 6, 1914.

HYDROGRAPHIC SHEET 3669. 3669<sup>a</sup>

Sabine Bank, Gulf of Mexico, off coast of Texas, by  
Assistant C. C. Yates in 1914.

TIDES.

	Sabine Bank Light Staff 2 ft.
Mean low water, or plane of reference on staff	2.4
Lowest tide observed " "	1.0
Highest " " " "	4.1
Mean range of tide	0.7

*L.P.S.*

Hyd = 3669.

The work on this sheet consists of a survey of Sabine Bank in the Gulf of Mexico.

Positions and soundings were plotted by the field party and verified in the office.

Comparing the present work with that of the Hyd = 1596<sup>c</sup> it appears that some radical change took place in this locality, the present work indicating a greater depth than the old work. For this reason it was thought best not to transfer any of the old work unto the present survey.

The survey methods and the results of the work are touched upon by the chief of the party in his Descriptive Report.

Soundings were plotted in feet.

J. B. Shklean

March - 6 - 15.

Hyd = 3669<sup>a</sup>

Positions and soundings were plotted in the field & verified in the office. Part of the work was done by "direction cuts" from Sabine Bank Light to the foremast of the ship and a single sextant angle at the ship, while the rest of the positions were obtained by a combination of data of single angles and bearings together with time and log readings. The latter part of the work (to the right of pos. 90G) had to be stretched out and made to follow the remark opposite <sup>112</sup>VG, when the buoy appeared 250 meters abeam.

The work of this sheet overlaps that of sheet 3669, but only a few soundings, namely those that help in running the depth curves, were transferred.

Soundings were plotted in feet.

J. P. Shea

March 6 - 1915

H. 3669 & 3669<sup>a</sup>.

General survey of Sabine Bank, Gulf of Mexico.-- The sound-  
ings appear sufficient with the exception that the shoal soundings  
shown on former surveys should have been transferred to the boat  
sheet and a special effort made to prove their existence or non-  
existence by additional soundings.

Sheet examined in D  
of Hyd'y & Top'y.