5488

Form 504
Rev. Dec. 1933

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

DESCRIPTIVE REPORT

~~Topographic~~ Hydrographic } Sheet No. 14 5488

State Texas

LOCALITY

Galveston Island

San Luis Pass

1933-4

CHIEF OF PARTY

Earl O. Heaton

U. S. GOVERNMENT PRINTING OFFICE: 1934

Hydrographic Sheet number 14 and its accompanying records have been inspected and are approved.

Earl O. Heaton

Earl O. Heaton,
Chief of Party, C& G.S.

Form 537
Ed. Dec., 1930

REG. NO. 5488

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. 14 5488

REGISTER NO.

State Texas

General locality Galveston Island

Locality San Luis Pass

Scale 1 : 10,000 Date of survey Nov. 1933 to Feb., 19 34

Project: HT-118

Chief of Party Earl O. Heaton

Surveyed by W. C. Russell & J. L. Hale

Protracted by W. T. White

Soundings penciled by G. E. McDaniel Jr. & C. W. O'Melveny

Soundings in feet

Plane of reference MLW

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated Nov. 5, 1932, 19

Remarks:

U. S. GOVERNMENT PRINTING OFFICE. 1932

DESCRIPTIVE REPORT TO ACCOMPANY
HYDRO. SHEET #14
SAN LUIS PASS

Date of Instructions:

Instructions for this work were dated November 5, 1932. Project HT-118.

Survey Methods:

The greater part of the work on this sheet was accomplished with a launch using a lead line or a sounding pole graduated in feet. The sounding pole had a thin plate about six inches in diameter on the bottom to prevent it sinking into the mud, and the lead was moulded so that its base was about four inches in diameter. For inshore work and for shoal areas a skiff with an outboard motor was used.

Occasional sounding will be found in the sounding records for this sheet for which there is no recorded time, soundings thus shown are check soundings and were taken on an average about ten seconds after the sounding to be checked.

Discrepancies:

The apparent discrepancies of some of the soundings in San Luis Pass are due to the irregular character of the bottom thru the pass. Where there was a conflict in depth of soundings, the shoal sounding was plotted.

Certain soundings and positions shown in the sounding records plotted off the sheet and were disposed of as follows:

Part of "A day" (red, launch) plotted on sheet 26 as "C day" (red, launch)
Part of "D day" (red, launch) plotted on sheet 26 as "D day" (red, launch)
Part of "C day" (red, launch) plotted on sheet 26 as "E" day (red, launch)
All of "e day" (green skiff) plotted on sheet 26 as "ee day" (green, skiff)

Positions 45F, 58F, and 96F (green launch) fell just outside the limits of the sheet. These positions were plotted on a seperate sheet of paper and soundings plotted on a line drawn to the position.

Positions 69b, 48d, and 49d (green, skiff) fell outside the limits of the sheet. Soundings were not plotted. The time interval between positions 19d to 27d (green, skiff) is irregular due, probably, to poor running motor.

There was a slight disagreement between this sheet and sheet #26 at the 30 ft. curve. See report for sheet #26 in regard to this discrepancy and how it was adjusted.

Channels:

San Luis Pass, Cold Pass, and Mud Island Channel are the only channels on this sheet. These channels are used by fishing boats, pleasure boats, and Coast Guard boats usually drawing less than four feet of water. San Luis Pass is the most important of the three and is quite important for Coast Guard boats and for boatmen who are familiar with its waters. Extreme caution, however, should be used by those who are not familiar with them, because it is unmarked and subject to changes in depth and position. The least depth entering from the Gulf is 10 ft. at ~~MLLW~~ MLW at Lat. 29° 05', Long. 95° 05.9', and the least depth entering from West Bay is 4 ft. at ~~MLLW~~ MLW. at Lat. 29° 06.7', Long. 95° 07.9'.

It is possible for boats drawing 7 ft. of water to enter Cold Pass through San Luis Pass and to go into Oyster Bay a short distance. They cannot go far into Oyster Bay, however, because of shallow water in the bay. This channel is unmarked and has a controlling depth of 7 ft.

Mud Island Channel has shoaled in West Bay to a controlling depth of 3 ~~3½~~ ft. at ~~MLW~~ and is used by fishing boats drawing less than 3½ feet of water. It is at present the Intra-Coastal Waterway, but it will eventually be abandoned and replaced by the Louisiana and Texas Waterway. It is at present marked by day beacons.

Comparison with Previous Surveys:

Extensive changes have occurred since the data for Chart #1282 was obtained. The center line of the scoured channel in San Luis Pass has moved from 150 to 300 meters SW, and the pass has widened by about 600 meters. The bar which extends into the gulf on the south side of the entrance has lengthened so as to close what formerly was the entrance, making it necessary to enter in approximately a W x S course instead of a NW course as shown on the chart. Within the pass, changes are likewise so extensive as to render detail comparison with former surveys fruitless.

The only beacon on chart #1282 which is still apparently in the original position is Mud Island Beacon #1. West Bay Channel Beacon #43 has been destroyed and Beacons #45 and 47 are only marked by temporary stakes. see review, par 7a

It is recommended that the following beacons and piles be charted:

Mud Island Beacon #1
Hydrographic signal RED
Hydrographic signal PILE
2 - 3" iron pipes at Lat. 29° ~~06~~ 06.7', Long. 95° 07.2'.

New Names:

Well established names which have not previously appeared on the chart are: Titlum-Tatlum Island and Cold Pass.
See Landmarks for Charts

Statistics:

Total number of positions	1124
Total number of soundings	8409
Statute miles of sounding lines plotted	214.4

Men in Charge of Hydrography:

Ensign W. C. Russell was in charge of the hydrography done with the Launch "Gladys".

J. L. Hale, an observer, had charge of the work done with the Launch "Hudie" and the skiff.

Approved:

Earl O. Heaton

Earl O. Heaton,
Chief of Party, C.& G.S.

Respectfully submitted,

Geo. E. McDaniel Jr.

Geo. E. McDaniel, Jr.
Draftsman.

Form 567
Rev. Jan. 1933

Hydro. Sheet 14 5488

DIVISION OF CHARTS, FILE NO.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

5488 Duplicate

LANDMARKS FOR CHARTS

Corpus Christi, Texas

July 18, 1934

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Earl O. Heaton
Earl O. Heaton
Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE		DATUM		
	° ′	D.M. METERS	° ′	D.P. METERS			
(1,2,3) San Luis Coast Guard Station, finial	29 06	1501.4	95 04	1543.6	1927	Triangulation	1282, 1117
(1) Titlum-Tatlum Is., Hunting Lodge Chimney	29 04	857.1	95 08	1313.8	1927	"	1282

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive indentification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

U.S. GOVERNMENT PRINTING OFFICE: 1934 25379

Hydro. Sheet 14 5488

Form 567
Rev. Jan. 1933

DIVISION OF CHARTS, FILE NO.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

July 18, 1934

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U.S. GOVERNMENT PRINTING OFFICE: 1934 25379

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. H-5488

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

Number of positions on sheet	1124
Number of positions checked	91
Number of positions revised	0
Number of soundings recorded	8409
Number of soundings revised	12
Number of signals erroneously plotted or transferred	0

Date: December 10, 1934

Cartographer: James M. McLaughlin

Verification of protracting / Verification & inking of rocks and shoals) by J. M. McLaughlin Jr. Time: 30 hrs.

Verification and inking by J. M. McLaughlin Jr. Time: 55½ hrs.

Review by John G. Lodge Time: 12 "

Mr. Bacon
From L.S.S.

Survey No. H 5488

GEOGRAPHIC NAMES
TEXAS

Date. Oct. 19, 1934

Chart No. 1282

Diagram No. 1282-2

Names underlined in red approved Oct 22, 1934 H.B.

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

¢, Not Approved by the Division of Geographic Names, Department of Interior.

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

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
✓	Titlum-Tatlum Island See Landmarks for charts	-----	Same	Same	29° 04.5' 95° 09'
✓	Cold Pass	----	"	"	29° 04.1' 95° 09'
✓	Mud Island Channel	Same			29° 06' 95° 09.6'
✓	Galveston Island	Same			
✓	San Luis Pass	Same			
✓	San Luis Island	Same			
✓	Mud Island	Same			
✓	Gulf of Mexico	Same			

Capt Ellis

LAC

November 17, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 5488

Locality San Luis Pass, Galveston Bay, Texas

Chief of Party: E. O. Heaton in 1933-1934
Plane of reference is mean low water, reading
2.2 ft. on tide staff at San Luis Pass
6.4 ft. below B.M. 1

3.6 ft. on tide staff at Christmas Point
4.5 ft. below B.M. 1

1.7 ft. on tide staff at South Jetty
3.1 ft. below B.M.1

Height of mean high water above plane of reference is 1.4 feet at South Jetty; 1.0 feet at San Luis Pass and 0.7 feet at Christmas Point.

Condition of records satisfactory except as noted below:

Harmer
Act Chief, Division of Tides and Currents.

Verification Report H. 5488.

December 10, 1934.

1. The soundings recorded were neat and legible and conformed to the general instructions given in the Hydrographic Manual.

2. The one, two, three and five fathom curves could be completely drawn. Parts of the low water line were changed to the zero curve as a result of soundings. In many instances fractions of half feet were added to smooth out the curves. Fractions of half feet were also added in all shoal areas to indicate the least depths.

3. Field plotting was very complete with few mistakes or omissions. Numerous positions were reprotracted and all were found to be located with extreme accuracy. Twelve soundings were incorrectly ~~transferred~~ plotted.

4. The sheet was compared with the boat sheets and all differences investigated. In each case the smooth sheet was correct.

Additional soundings were plotted at the north edge of the sheet carrying them to the extreme limits of the sheet. This was done to eliminate the necessity of an overlap as adjoining sheet H. 5489 contains the same soundings on its south edge.

Temporary buoy 70D, Vol. 1, Page 70, called for in the sounding records was not shown on the smooth sheet.

Approximately forty percent of the soundings had to be changed because of corrections in the tide reducers by the office.

All notes, both on the smooth sheet and the descriptive report referred to MLLW. These were changed to MLW.

Soundings not plotted were not marked N P in the sounding records. This practice was also abandoned by the verifier.

Changes in direction of line were not noted in the sounding records in many instances. All low water line shown on the smooth sheet was in dashed lines. This was replaced by the correct symbol. Much new low water line was added from the topo sheet.

There seemed to be a difference in the soundings off Galveston Island depending on whether the boat was moving toward shore or away from shore. No cross lines were run to it so it was impossible to verify this.

Position 9f, Vol. 5, Page 64, lat. 29°05'.6, long. 95°07'.6, appears from inspection to be incorrectly located. It was checked against boat sheet and also reprotracted and found to be O.K. Reviewer is invited to investigate further. The one fathom curve was smoothed out by moving the soundings out and respacing where the boat was running at normal speed and plotting the soundings close when the boat was running at reduced speed. Checked under the direction of Capt. Ellis.

J. R. M. Lum

5. Sheet H. 5489 which joined the north and east had not been verified. Sheet H. 5521 which joined the south had not been verified.

6. Good crossings were obtained at all places except position 9f, Vol. 5, Page 64, previously noted in the report.

James M. McQueen Jr.

Submitted by - J. M. McQueen, Jr.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5488

San Luis Pass, Galveston Island, Texas.
Instructions dated November 5, 1932 (E. O. Heaton)
Surveyed in 1933-1934

Hand Lead and Pole Soundings - Three Point Fixes on Shore Signals

Chief of Party - Earl O. Heaton.
Surveyed by - W. C. Russell, J. L. Hale.
Protracted by - W. T. White.
Soundings penciled by - G. E. McDaniel, C. W. O'Melveny.
Verified and Inked by - J. M. McQueen.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual, with the following exceptions:

a. All the topographic detail outside the high water line had not been transferred from the contemporary topographic sheet to the smooth sheet. This has been done in the office.

b. The low water line was inked on the smooth sheet, whereas par. 160 (m) states that it should be in pencil only.

2. Compliance with Instructions.

The survey satisfies the instructions for the project, with the following exceptions:

a. The dredged channel running from Mud I. Channel to Beacon Oar (approx. Lat. 29°06.3', Long. 95°09.3') at the northern end of Mud I. and forming part of the present Intra Coastal Waterway should have been surveyed at least with a single line of soundings.

b. The survey of Cold Pass is inadequate for a development of the principal depth curves.

c. The spacing of lines in portions of San Luis Pass is too open for a proper development of the area.

3. Sounding Line Crossings.

There is no regular system of cross lines, however the cross lines that result from the work, as well as a comparison of the adjacent parallel lines, show good agreement.

4. Depth Curves.

On the open coast the usual depth curves can be drawn except for a portion of the 6 foot curve off Galveston Island. In the inside area much of the 6 foot and portions of the 12 foot curves could only be approximated.

5. Junction with Contemporary Surveys.

A satisfactory junction is made with H. 5521 (1934) on the south and west. The junction with H. 5489 (1934) on the north and northeast will be considered in the review of that survey.

6. Comparison with Prior Surveys.

a. H-389 (1853), H-473 (1855) and H-931 (1867).

These three surveys together cover the major portion of the present survey. A comparison with these surveys and the present survey shows that radical changes have taken place in San Luis Pass and the surrounding areas. A detailed discussion of these changes would simply emphasize the general changeable character of the area without serving any navigational purpose. It is therefore dispensed with.

7. Comparison with Chart No. 1282.

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and the U. S. Engineers Blueprint No. 18243 (1922). A comparison of this blueprint with the present survey shows the changes to be so extreme that a detailed comparison is considered unnecessary. The Engineer's survey should be superseded by the present survey.

b. Aids to Navigation.

West Bay channel Beacons No's. 45 and 47 are not shown on the present survey. (See D. R. page 2) which states that they are marked by temporary stakes. Hydro signals "Oar" and "Flag" are apparently the stakes referred to, which are in the same general vicinity as the charted beacons.

8. Field Plotting.

The field plotting was very satisfactory.

9. Additional Field Work Recommended.

a. A line of soundings in dredged channel running from Mud Island Channel Beacon to Signal "Oar" (approx. Lat. 29°06.3', Long. 95°09.3') at the northern end of Mud Island.

b. A more complete development of Cold Pass and its junction with San Luis Pass.

c. Same split lines in San Luis Pass proper at approx. Lat. 29°05', Long. 95°07.2'.

d. A development of the secondary channel (if of sufficient importance) between the Gulf and West Bay and which passes just to the west of Signal "Tide" at Lat. 29°05.25', Long. 95°07.25'.

10. Superseding Old Surveys.

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

H-389 (1853)	Entirely.
H-473 (1855)	In Part.
H-931 (1867)	" "

11. Note to Compiler.

Attention is called to the recommendation in the Descriptive Report, page 2, under "Comparison with Previous Surveys" regarding the beacons and piles to be charted.

12. Reviewed by - John G. Ladd, December, 1934.

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.

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

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