

***HYDROGRAPHIC
REPORT***

H - 5813

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Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 18
Hydrographic }

State Texas

LOCALITY

Matagorda Bay

Trespalacios, Turtle, and Carancahua

Bays

1934-'35

CHIEF OF PARTY

E. O. Heaton

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
JUN 14 1935
REG. NO.
Acc. No. _____

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. 18

REGISTER NO. **5813**

State Texas

General locality ~~Coast of Texas~~ Matagorda Bay
Trespalacios, Turtle, and Carancahua Bays.

Locality ~~Carancahua Bay, Trespalacios Bay, & Turtle Bay~~

Scale 1:20,000 Date of survey Nov. 1934 to Jan. , 1935

Vessel Project H.T.-118

Chief of Party Earl O. Heaton

Surveyed by W.H. White, Observer.

Protracted by W.K. Doolittle, Surveyor.

Soundings penciled by W.K. Doolittle, Surveyor.

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water.

Subdivision of wire dragged areas by _____

Inked by F.A. KNAPP

Verified by F.A. KNAPP

Instructions dated Nov. 5, 1932, Nov. 16, 1933, Mar. 5, 1934,
and by letter April 18, 1934. 19

Remarks: _____

Hydrographic Sheet No. 18 and the accompanying records have been inspected and are approved.

Clarence R. Reed

Clarence R. Reed,
Aid, C. & G. Survey.

CR

DESCRIPTIVE REPORT TO ACCOMPANY
HYDRO. SHEET #18

Date of Instructions:

The Instructions for this work were dated November 5, 1932; with supplemental instructions dated Nov. 16, 1932; March 5, 1934; April 18, 1934. (Project H.T. -118)

Survey Methods:

All of this work was done from launches with the exception of (a) and (b) days (red) at the beginning of the work which were done with a skiff powered by an outboard motor. A lead-line graduated in feet or a sounding pole graduated in feet, having a plate about 6" in diameter on the lower end was used.

The shore line is transferred from photo-topographic sheets, register no's. 5354 and 5355, except for the portion of Carancahua Bay shoreline north of parallel 28°- 40' , which was transferred from plane-table sheet "Y". The last named sheet was not done until after the hydrography, because although this part was not covered by photo-topography and would have to be done sometime, it was not certain that money would be available to do this work as part of Project H.T.-118.

The method used to enlarge the shoreline traced from photo-topographic sheets to a true 1:20,000 scale, was to subdivide the shoreline into segments of about half an inch long and to properly locate the segment in the projection rectangle by estimation of the differences at the edges. It is thought that no greater error than 5 meters (.01 inches) has resulted.

Short segments of the low water line are located with more or less accuracy by estimation from the ends of the sounding lines, but only in one case does the sounding reduce to zero and therefore with the exception of that portion from plane-table sheet "Y" the low water line is not surveyed.

The hydrographer has sketched it on the boat-sheet in blue short dash lines as well as he could from observation in the field.

The boundary of the reef southwest of Turtle Point was obtained from the boat-sheet.

Discrepancies:

A 1 foot discrepancy between 67-68 D and 72-73 D (red) seems to be caused by uneven bottom.

At 77 J (red) the note of passing the pier evidently does not belong on the time of the position, but more nearly on the check sounding thereafter.

Discrepancies of a half-foot are disregarded, because they may be caused by as little as one tenth of a foot difference in depth. The shoaler sounding is placed at the crossing.

Dangers:

In Lat. 28°- 37'.15; Long. 96°- 21'.82 there is found in 3½' of water, a group of 34 iron pipes projecting above M.L.W. (bare 3ft @ M.L.W. (pp. 67C)

In Lat. 28°- 43'.73 and Long. 96°- 24'.23 there is a detached portion of reef just awash at M.L.W. with 2½' just surrounding of it, which is dangerous to small boats. Positions 34G & 81G (red) are near. (pp. 18J)

In Lat. 28°- 40'.71; long 96°- 23'.87 there is a detached portion reef just awash at m.l.w. with 2½ ft. just outside of it which is dangerous to small boats. Positions 34G and 81G (Red) are near.

43.40'

In Lat. $28^{\circ}-40'.71$; Long. $96^{\circ}-11'.47$ there is a submerged wreck, from which ~~are~~ 2" pipe projects. South of this about 40 meters is a group of piles which once formed the foundation of a pavillion. This immediate area is foul and dangerous to small boats. Position 45 N (red).

Two wrecks, one about Lat. $28^{\circ}-41'.82$; Long. $96^{\circ}-12'.60$ and the other about Lat. $28^{\circ}-41'.78$; Long. $96^{\circ}-13'.40$ are too close in to be considered dangers. The sunken object noted at position 13 D (blue) projects only $\frac{1}{2}$ foot above the bottom and should not be considered a danger.

In Carancahua Bay entrance, in the vicinity of Lat. $28^{\circ}-37'.86$; and $96^{\circ}-22'.35$ there are several $1\frac{1}{2}$ foot soundings which are the shallowest spots on the reef, and which are dangerous to small boats, the more so as they lie about the center of the entrance to the bay.

The reef extending southwestward from Turtle Point is dangerous to small boats, the furthest-out point of very shoal water being in the 2 foot sounding between position 139 N and 140 N (red), at Lat. $28^{\circ}-39'.26$; Long. $96^{\circ}-17'.72$. From this point along the axis of the reef for about 600 meters north and east there is two feet or less of water, with 4 foot depths on each side.

The detached $3\frac{1}{2}$ foot soundings near Lat. $28^{\circ}-39'.3$; and Long. $96^{\circ}-17'.0$ are the ~~shallowest~~ shallowest points of a reef surrounded by 5 and 6 feet of water. They occur at 9-10 M (red) and 34 to 35 F (blue), and are dangerous to small boats.

The detached 4 foot sounding occurring between 14 and 15 P (red) at Lat. $28^{\circ}-39'.51$; Long. $96^{\circ}-14'.70$ is surrounded by 6 feet of water and is dangerous to small boats.

A group of pipes apparently erected to serve as markers stand in 4 to 6 feet of water near Lat. $28^{\circ}-40'.85$; Long. $96^{\circ}-15'.20$. Any one of these might be dangerous to small boats seeking the Camp Hulen pier in darkness or thick weather. The furthest east of the four might be covered at some stages of the tide.

The note at 54 E (blue) does not indicate a danger as it is on the line of the reef extending out from Oliver Point which is developed as part of Sheet No. 15. Therefore this note should be disregarded as far as this sheet is concerned.

At $28^{\circ}-39'.80$; $96^{\circ}-23'.25$ there is a detached shell reef with $2\frac{1}{2}$ feet of water just outside of it, which is barely covered at M.L.W. and is dangerous to small boats. A ^{temporary} fishing stand has been erected at the southern tip which serves also as a reef marker.

Channels:

No channel worthy of the name exists on this sheet. Several lines were run at the entrance to Carancahua Bay to locate deepest water for entry, but nothing deeper than $3\frac{1}{2}$ feet for a controlling depth was found.

Comparison with previous surveys:

Chart 1284 issued October 12, 1934 is taken to represent all previous surveys.

Carancahua Bay - The entrance to this bay has widened from 160 meters as shown on chart to 610 meters between high water lines. Depths obtained in the main body of the bay are about $1\frac{1}{2}$ feet shoaler than shown on chart. Depths in the central portion between parallels $28^{\circ}40'$ and $28^{\circ}-44'$ are in close agreement with the chart. Upstream the depths obtained are about 1 foot shoaler than shown on the chart. The 1-foot spot just inside the entrance was not found, but a $1\frac{1}{2}$ foot sounding was obtained 125 meters N.E. from this point, in Lat. $28^{\circ}-37'.82$;

Long. $96^{\circ} - 22' .34$.

On the entrance bar the one-foot soundings shown at

Lat. $28^{\circ} - 37' .11$; Long. $96^{\circ} - 21' .86$,

" $28^{\circ} - 37' .21$; " $96^{\circ} - 21' .63$,

" $28^{\circ} - 37' .44$; " $96^{\circ} - 21' .49$, were not found.

This area has deepened + depths curves are different

A 2 foot sounding 120 meters east of the first obtained between position 55 & 56 C (red), a $1\frac{1}{2}$ foot sounding 190 meters southwest of the second, obtained on position 55 C (red) and a $1\frac{1}{2}$ foot sounding 175 meters southeast from the third obtained between positions 35 & 36 D (red), seem to be the most dangerous shoal soundings in this locality, and to fairly delineate the southwest edge of the shoal area which the 1-foot soundings on the chart represent.

Turtle Bay - In general, the soundings obtained in this bay agree with those on the chart. The 1-foot sounding at Lat. $28^{\circ} - 39' .22$; Long. $96^{\circ} - 17' .75$, was not found but a two-foot sounding was found 100 meters north-northeast from this point, Position 139 - 140 N (red) which seems to be the shoalest portion of the reef in that vicinity. As far as this survey shows there are no soundings shoaler than $1\frac{1}{2}$ feet south of $28^{\circ} - 39' .55$, position 1 Q.

Trespalacios Bay - The main body of this bay seems to be about a foot deeper than shown on the chart. The detached 4-foot spot in Lat. $28^{\circ} - 39' .57$; Long. $96^{\circ} - 14' .75$, was found 150 meters S.E. from the charted location, between positions 14 P and 15 P (red). The 3-foot spot in Lat. $28^{\circ} - 39' .36$; Long. $96^{\circ} - 17' .00$ was found 60 meters S.W. from its charted location, between positions 9M and 10M (red).

The 4 foot spot, falls about 60m. from its position on H1094

Geographic Names:

The following new geographic names are recommended for charting, being accepted local names for their respective localities.

Camp Hulén	Redfish Lake
Turtle Point	Salt Lake
Grassy Point	Coon I.
El Campo Club	Coon I. Bay
Gánado Club	

It is recommended that the town symbol at Carancahua be removed, as there is now nothing there, but that the name be allowed to designate the locality.

Statistics:

Statute Miles of sounding lines	336.0
Number of soundings	12,652
Number of positions	1,764

Men in charge of work:

W.H. White, Observer, was in charge of all the work on this sheet.

Respectfully submitted

W.K. Doolittle

W.K. Doolittle, Surveyor.

HYDROGRAPHIC SURVEY NO. H5813

Smooth Sheet 1

Boat Sheet 1

Sounding Records 7 Vols. _____

Descriptive Report No Yes

Title Sheet Yes

List of Signals Yes in Vol. 1

Landmarks for Charts (Form 567) No Yes

Statistics Yes

Approved by Chief of Party E. O. Neaton

Recoverable Station Cards (Form 524) Yes

Special Chart for Lighthouse Service
(Circular Nov. 30, 1933) _____

Remarks _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ...5813

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

Number of positions on sheet	1764
Number of positions checked	189
Number of positions revised	3
Number of soundings recorded	12652
Number of soundings revised	18
Number of signals erroneously plotted or transferred	0

Date: Aug. 30, 1935

Verification by F. KNAPP *G. Riegan*

Time: 149 HRS. -- $7\frac{1}{2}$ hrs.

Review by *G. Riegan*

Time: 23 $\frac{1}{2}$ hrs.

GEOGRAPHIC NAMES
TEXAS

Date. 18 June, 1935

Survey No. H5813

Chart No. 1284

Diagram No. 1284

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
	(On Boatsheet) <u>Five Mile Branch</u>	-----			
	<u>Carancahua</u>	Same			
	<u>Palacios</u>	"			
	<u>Grassy Point</u>	-----			
	<u>Collegeport</u>	Same			
	<u>Camp Hulen</u>	-----			
	<u>Turtle Bay</u> ✱✓	Same			
	<u>Turtle Point</u> ✓	-----			
	<u>Trespalacios Bay</u> ✱✓	Same			
	<u>Coon Island Bay</u> ✓	-----			
	<u>Coon Island</u> ✓	-----			
	<u>Oliver Point</u> ✓✓	Same			
	<u>Well Point</u> ✓✓	"			
	<u>El Campo Club</u>	-----			
	<u>Carancahua Bay</u> ✱✓	<u>Kawankawa Bay</u>			
	<u>Ganado Club</u>	-----			
	<u>Salt Lake</u> ✓	-----			
	<u>Redfish Lake</u> ✓	-----			
	<u>Matagorda Bay</u> ✓✓	Same			
	(On Boatsheet) <u>B.Y.P.U. Point</u>	-----			
	(On Boatsheet) <u>Redfish Bay</u>	-----			
	(On Boatsheet) <u>Palacios Bayou</u>	-----			

APPROVED NAMES
UNDERLINED IN RED
H. L. F. L.

* Names lettered after sheet is inked - F.B.

Verifier report on H-5813

Aug. 30, 1935

The records conform with the requirements of the general instructions. ✓

The six foot depth curve is the only curve completely drawn. * ✓

The field plotting was very well done and complete to the extent prescribed in the Hydrographic Manual. ✓

The office draftsman did not have to do over any of the field drafting. †

There are no contemporary adjacent sheets. ✓

There is no recent Topo sheet. ✓

The air photo sheets T-5354[‡] and T-5355[‡] were used for comparison of the shore lines, but could not be used for the low water lines.

The low water lines were taken from the boat sheets.

The Descriptive reports has been checked see notes in same.

Capt. Ellis advised me to show the half foot soundings.

J. A. Knapp ✓

* The 3 foot curve was added in some places to better delineate important features R.

‡ Aerial sheets - not registered at this date, Oct 1/35

⊕ "Ba" (bottom character), should have been corrected and inked on the sheet, "B", for bottom.

LaC

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 28, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 5813

Locality Trespalacios, Turtle and Karankawa Bays, Coast of Texas

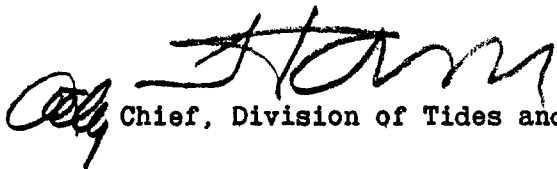
Chief of Party: Earl O. Heaton in 1935
Plane of reference is mean low water reading
2.1 ft. on tide staff at El Campo Club, Karankawa Bay
7.0 ft. below B.M. 1

1.7 ft. on tide staff at Camp Hulen
8.8 ft. below B.M. 1

2.6 ft. on tide staff at Half Moon Reef Light
1.9 ft. below B.M.1

Height of mean high water above plane of reference is 0.5 feet at
El Campo Club, ~~Karankawa~~ Karankawa Bay; 0.6 foot at Camp Hulen; 0.6 foot at
Half Moon Reef Light.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5813 (1934-35) - FIELD NO. 18

Trespalacios, Turtle, and Carancahua Bays, Matagorda Bay, Texas
Surveyed in 1934 - 1935

Instructions dated November 5, 1932; November 16, 1933;
March 5, 1934; April 18, 1934

Hand Lead and Pole Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - E. O. Heaton.
Surveyed by - W. H. White.
Protracted by - W. K. Doolittle.
Soundings penciled by - W. K. Doolittle.
Verified and Inked by - F. A. Knapp.

1. Condition of Records.

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

- a. The signals that were taken from the air photo sheets were shown in red on the smooth sheet, instead of differentiating them from signals located by the plane table. These have been changed to green in the office, which is the adopted office color for such purposes.

The Descriptive Report is complete as to essential details and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The instructions for the project have been satisfactorily complied with. The hydrography in Carancahua Bay north of lat. $28^{\circ} 40'$, although executed prior to the plane table work, should have been smooth plotted, using the topographic determination of the signals instead of the sextant location in order to complete this area. (See page 1, D. R.). These signals have been compared with the plane table locations on T-4927 (1935) and found to agree so close as to not warrant a replotting of the hydrography. The sextant determinations of the signals have been retained on the smooth sheet.

3. Shoreline and Signals.

The shoreline in Carancahua Bay north of lat. $28^{\circ} 40'$ originates with T-4927 (1935).

The shoreline and topographic signals on the portion south of lat. $28^{\circ} 40'$ in Carancahua Bay, and Turtle and Trespalacios Bays, originate with photo-topo sheets T-5354 (1933) and T-5355 (1933). Other signals are from hydrographic determinations (see preceding paragraph).

4. Sounding Line Crossings.

The cross lines as well as the adjacent lines show good agreement.

5. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

The junction with H-5866 (1934-35) will be considered in the review of that sheet.

7. Comparison with Prior Surveys.

a. H-727 (1860).

This survey is on a scale of 1:20,000 and overlaps the present survey with only a few soundings near the entrance to Carancahua Bay. The eastern portion of the overlapping area shows a shoaling of from 2 to 4 feet since the earlier survey, while the remaining soundings to the west show good agreement.

b. H-1094 (1871).

This survey is on a scale of 1:20,000 and covers Trespalacios and Turtle Bays. In general the main portion of Trespalacios Bay has deepened from $\frac{1}{2}$ to 1 foot, while in approximate lat. $28^{\circ} 44'$, long. $96^{\circ} 11.5'$ and in Coon Island Bay the areas have become shoaler by as much as 1 foot.

The 1 foot sounding (charted) in lat. $28^{\circ} 38.8'$, long. $96^{\circ} 16.1'$ and the 1 foot sounding (charted) in lat. $28^{\circ} 39.2'$, long. $96^{\circ} 17.7'$ fall among depths of 3 feet on the present survey in areas where a general deepening has occurred.

The present survey has adequately surveyed the same areas covered by H-1905 (1871) and should supersede the latter.

c. H-1905 (1871).

This survey is on a scale of 1:20,000 and covers Carancahua Bay, the Entrance to Carancahua Bay and a small portion of Matagorda Bay.

In general, Carancahua Bay has shoaled from $\frac{1}{2}$ to $1\frac{1}{2}$ feet, the greatest change being in the area in approximate lat. $28^{\circ} 39'$, long. $96^{\circ} 24'$.

In Carancahua Bay Entrance a marked change in the shoreline as well as the configuration of the bottom has occurred. The entrance has become wider by as much as 400 meters between high water lines and has generally deepened, except where the old channel existed the present survey shows shoaler depths by as much as 10 feet.

The 1 foot sounding (charted) in lat. $28^{\circ} 37.1'$, long. $96^{\circ} 21.8'$ falls on the present survey among depths of $3\frac{1}{2}$ feet and in the area where a general deepening has occurred.

The overlapping area of Matagorda Bay to the entrance to Carancahua Bay shows a general change has occurred in the shoreline and configuration of the bottom. Depths on the old survey are in very poor agreement with present depths. Shoalings of from 1 to 4 feet are noted in a number of places.

Since the present survey has adequately covered the areas discussed above it should supersede the old work for charting purposes.

8. Comparison with Chart No. 1284 (Corrected to March 1, 1935).

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

b. Aids to Navigation.

The Oliver Point beacon, off Oliver Point, was located in approximately the same position as charted.

The beacon at Carancahua Bay Entrance (triang. sta. "Kar") is not on the present charts.

The 6" post beacon, 220 meters west of "Kar", is noted in the sounding volume No. 3, pos. 31H as being of the same construction as beacon "Kar". The field party recommends this beacon be charted.

9. Field Plotting.

The protracting of positions and the plotting of soundings was well done.

10. Additional Field Work Recommended.

No additional field work is required.

11. Note to Compiler.

Attention is called to paragraph 8b, Aids to Navigation, in this review, regarding the post beacon opposite triangulation station "Kar" at the entrance to Carancahua Bay.

12. Superseding Old Surveys.

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

H- 727 (1860) in part.
H-1094 (1871) " "
H-1095 (1871) " "


13. Reviewed by - G. Risegari, September 30, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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


Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H. & T.

applied to chart 1284 - Jan 6, 1937
applied to chart 522 12/23/69

J. S. L.
Hall