

5694

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAR 18 1935

Acc. No. _____

Form 504
Rev. Dec. 1923
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 3
Hydrographic }

State Texas

LOCALITY

~~Coast of Texas~~

Corpus Christi Bay
(Eastern Part)

193 4

CHIEF OF PARTY

Earl O. Heaton

5694

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
MAR 18 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. 3

REGISTER NO. 5694

State Texas

General locality Coast of Texas Corpus Christi Bay
(Eastern Part)

Locality Corpus Christi and Redfish Bays

Scale 1:20,000 Date of survey April 1934 to Feb., 1935

~~Vessel~~ Project HT-118

Chief of Party Earl O. Heaton, Lieut.

Surveyed by J. L. Hale, Observer; W. R. Helm, Surveyor; & W. H. White, Observer.

Protracted by W. K. Doolittle, Surveyor

Soundings penciled by W. K. Doolittle, Surveyor

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by _____

Inked by Ben Schlechman, Sidney Rosen

Verified by L. Michelson, Ben Schlechman

Instructions dated Nov. 5, 1932; Nov. 16, 1933; Mar. 5, 1934 19
Letter dated Apr. 18, 1934.

Remarks: _____

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET #3
CORPUS CHRISTI BAY

Date of Instructions:

The instructions for this work were dated Nov. 5, 1932; with supplemental instructions dated Nov. 16, 1933; March 5, 1934. (Project HT-118)
Letter dated Apr. 18, 1934.

Survey Methods:

Most of the work was done with a launch using a lead line graduated in feet. For the remainder a sounding pole was used, having a plate about 6" in diameter on the lower end. For inshore work a skiff powered by an out-board motor was used.

No sounding was done in the Corpus Christi Ship Channel. Soundings which accidentally fell within that limit are marked c and were neither recorded nor plotted.

The High Water Line is transferred from the photo-topographic sheets Register Nos. 5365, 5367, 5368, & 5369. The Low Water Line on the south shore and on the north shore including Ingleside Cove and thence westward is from the topographic (plane-table) sheets S and T.

Discrepancies:

The day markers and reference line piles (see heading "Channels") on the Corpus Christi ship channel were all located individually by three sextant angles. There was a constant disagreement in check angles of about 5 meters, probably caused by the observer of the check angles taking a position in the boat separate from the other two observers or possibly by a constant error of about 4 minutes in sextant #666. The positions were plotted midway between the position of the pair of angles and the locus of the check angle.

At approximate Lat. $27^{\circ} 50.2'$ and Long. $97^{\circ} 14.9'$ the location of the closed water sign is from Topographic Sheet S. This sign has been destroyed ✓
of removed (Feb. 1935).

The following discrepancies in soundings were noted:

At 56-57K (green) a foot difference from 33F and 55F (green). Examination shows the line from 48K to 60K to be $\frac{1}{2}$ ft. too shoal on the average, as shown by many crossings. Therefore it is recommended that the parallel lines be considered most reliable.

At 39A to 40A (red) a discrepancy with 1-2N (blue). There is some trouble with this blue line which is not clear from the record. Trust the red A day.

At 16-17G (red) a foot difference from 59 to 60B (blue). Apparently the G day soundings are to be relied on because the cross line 58 to 60B seems from $\frac{1}{2}$ ft. to a foot too shoal.

At 22-23G (green) a foot difference from 19-20C (blue). It is recommended that the blue line be trusted at the crossing, since there is no apparent reason for rejecting either and the $9\frac{1}{2}$ ft. sounding is the shoaler.

Just before 27W (blue) with 27-28F (blue), a three foot discrepancy. This discrepancy is due to the uneven bottom where it drops off sharply. The 7 ft. sounding should be considered correct.

At 70-71W (blue) with 73-74K (blue) and 6r (red). This disagreement may properly be laid to uneven bottom on the spoil dump.

At 1G (red) a 2 ft. difference from 55c to 56c. 1G is apparently too far north, but no reason for changing its position can be found. The 6 ft. sounding should be retained.

The $11\frac{1}{2}$ ft. sounding at Lat. $27^{\circ} 45.7'$, Long. $97^{\circ} 13.7'$ is proven to be leadsmans error by later development 56-63W (blue).

2

At 19b (red) to and including 24b there is a discrepancy with soundings on other lines and estimated distances from shore. The most probable explanation is that the sextant error which caused the rejection of the fixes after #24 actually began with #20. No way could be found to make the angles check with time and course. Soundings, plotted on time and course check the estimated distance from shore, therefore these were assumed correct and the line plotted accordingly.

Just before 12j (red) the skiff line should be preferred because of irregularity noted in speed of launch.

At 1p (red) the angles give a location near the tide gauge whereas the boat sheet plotting is about 70 m. away. Course and time favor angles as given.

In searching for a possible wreck which was not found, positions 66-73L (blue) the soundings taken seem too deep by about 1 foot.

Usually when the boat crossed the ship channel the time of crossing lines of beacons was noted. Some of these notes appear to be taken to the nearest ten seconds only and do not check time of the line, therefore some uniform procedure is advisable. The following is recommended: whenever the time of crossing beacon lines is given on a second not ending in 0, consider such notation the equivalent of a fix, since it is probable that the time is accurate.

Where seconds end in 0 the time note should be disregarded.

From 51F to 55F (blue) plus 3 soundings, covered by 41 to 47W (blue) reject the F day soundings. These F day soundings were apparently read 1 ft. off by the leadsmen.

From 43 to 48K day (green) + 4 sdgs. covered by 48 to 55W (blue), reject the K day soundings as they are apparently about $\frac{1}{2}$ ft. too shallow.

At $27^{\circ} 52.7'$, $97^{\circ} 16.4'$ the 6 and $6\frac{1}{2}$ ft. soundings (page 5, vol. 16) should be respectively 10 ft. and $10\frac{1}{2}$ ft., the error arising from the recorder confusing 11 with 7. This is proved by X day (blue) positions 19 to 26.

At 50-51E (blue) the $8\frac{1}{2}$ ft. sounding should be $10\frac{1}{2}$ ft. as proved by 9-26X (blue), at Lat. $27^{\circ} 47.4'$, Long. $97^{\circ} 10.8'$.

At $27^{\circ} 47.1'$, $97^{\circ} 11.9'$, 58-59F (blue) the $8\frac{1}{2}$ ft. sounding should be $9\frac{1}{2}$ ft. as proved by 17-18E (red) and 1-8X (blue).

Dangers:

At the south side of the channel between beacons #13 and #15 there is a shoal extending 750 m. west of the westernmost point of the spoil bank which shows above water. There is a $5\frac{1}{2}$ ft. sounding at the outer end of this shoal at $27^{\circ} 48.44'$ and $97^{\circ} 13.93'$. This shoal is dangerous to small boats. The $5\frac{1}{2}$ ft. sounding occurs between 68W and 69W (blue). ✓

Northeast of Bn. #8 325 m., at the east end of the spoil dump there is a shoal dangerous to small boats, being the shoalest water on the N spoil dump. The least depth $3\frac{1}{2}$ ft. occurs at position 73K (blue) plus 3 soundings. West of this 500 m. at the sounding before 22H (blue) there is a 4 ft. spot. ✓

Extending west from McGloin Bluff $2\frac{1}{2}$ miles from the extremity of the point there is a reef which is not named and which is dangerous to small boats. There is a two foot sounding at Lat. $27^{\circ} 50.29'$, Long. $97^{\circ} 15.86'$, about 120 m. NE from the reef marker, occurring at position 50c (red) plus 3 soundings; a point of the reef awash at M.L.W. at Lat. $27^{\circ} 50.34'$, Long. $97^{\circ} 15.68'$, located at *28j (red); a $5\frac{1}{2}$ ft. spot located at Lat. $27^{\circ} 50.19'$, Long. $97^{\circ} 17.25'$ occurring at 16A (blue) plus 7 soundings. ✓

A three foot sounding is the shoalest point of a detached reef which extends about 500 m. in a northwesterly direction from this sounding is at Lat. $27^{\circ} 51.63'$ and Long. $97^{\circ} 15.46'$, and occurs at position 44B (blue). This reef is dangerous to small boats. A $5\frac{1}{2}$ ft. sounding occurs at 32B (blue) and is located 650 m. NW of the foregoing, surrounded by 8 ft. of water. ✓

"Donnel Reef" extends 1100 m. in a southwesterly direction from the point

* Sdg. records show two shell reefs bare at H.W.

of land at 27° 51.6', 97° 14.7'. The furthest point out from land which is awash at M.L.W. is about 750 m. out, located at 6d (red). About 100 m. S from this at Lat. 27° 51.28', Long. 97° 15.15' there is a 1½ ft. sounding occurring between 36 and 37a (red).

A long narrow reef extending in a northwesterly direction divides Ingle-side Cove into two parts. The most dangerous point is a 3½ ft. sounding at 27° 50.74' and 97° 14.58' occurring just after position 47A (blue). This reef is dangerous to small boats.

All notes on this sheet regarding the bare heights of markers, beacons, spoil dumps, and the stage of tide on reefs and depths on shoals are referred to mean low water as the plane of reference.

Channels:

Corpus Christi Ship Channel leads from Aransas Pass to the C.C. turning basin. This channel is used by ocean shipping to and from the Port of Corpus Christi. It is maintained by the U. S. Engineer Dept., examined monthly for shoaling and dredged to maintain 30 ft. over a 200 ft. bottom width. There are 3 sets of markers: (1) A line of lighted black beacons on the south and a line of lighted red beacons on the north, all placed 275 ft. from the channel center line. (2) A line of day marks, formed of a cluster of 3 piles fastened together nearer the center line than the beacons. (This type of mark is found westward from beacon 15 and single piles are found to the eastward). (3) A row of single piles used to mark a reference line for the control of dredging operations, outside of the line of beacons. These piles are at the south side of the channel westward from beacon 15 and at the north side to the eastward. They are supposed to be placed 400 ft. from the center line. This channel as originally dredged had passing places, as shown on chart 1286, but these are not now, and have never been maintained. In the eight years since they were originally dredged they have filled in until they are at present almost obliterated.

Access to the Humble Oil Co's. dock at Harbor City is thru a privately used and maintained channel with a controlling depth of 26½ ft. to the loading dock. This harbor is of no value as protection against hurricanes.

A channel across Redfish Bay furnishes entrance to the town of Aransas Pass from the south, for shallow draft boats. This was made by a dredge being brought in to construct a dike to serve as a sea wall for the town. It is not maintained and the markers, which are of a temporary nature, were established by the town. The controlling entrance depth is 5 ft. occurring approximately at Lat. 27° 52.3', Long. 97° 07.8', and the controlling depth in the channel is 6½ ft. occurring near station "Boat"

A channel called "Morris And Cummings Cut" lies in a northeast and southwest direction leading from Corpus Christi Bay to the draw bridge in Harbor Island causeway. This is used by small boats to avoid making the passage around Harbor Island to get to Aransas Bay and Rockport. The controlling depth is 4½ ft. found just south of the pair of beacons marking the southern entrance to the dredged portion. The spoil banks on each side are almost awash at M.L.W.

The "ferry channel" noted on page 21, vol. 15, sounding records simply refers to the landing used by a ferry which was operated for a time, when the Nueces Bay causeway was washed out by the storm of Sept. 1933. No dredged channel exists.

On r day (red) some time was spent in obtaining the deepest passage thru the gap in the spoil bank of the ship channel at Long. 97° 09'. A controlling depth of 5½ ft. was found, but this is subject to change from dredging operations in the channel.

4

Comparison with Previous Surveys:

Chart #1286 issued Oct. 12, 1934 is taken to represent all previous surveys.

In general the soundings in the main part of the bay are a foot shallower than on the chart being 12 and 13 ft. where the chart shows 13 and 14 ft.

The area north of the spoil dump between Bn. 15 and Bn. 17 shows considerable shoaling.

The area northeast of the line from the tip of Shamrock Point to Bn. 8 shows very little change.

In the area just south of Portland the bay has shoaled enough so that the 12 ft. curve is changed greatly.

The spur in the 12 ft. curve and the detached 12 ft. sounding at $27^{\circ} 43.95'$ and $97^{\circ} 11.4'$ are both found to be well within the 12 ft. curve, which follows the $97^{\circ} 12.3'$ meridian at this point.

The detached 12 ft. sounding at $27^{\circ} 42.8'$ and $97^{\circ} 15.6'$ was found to be 525 m. westward from its charted location. *The detached 12 ft. is now within the 12 ft. curve.*

The detached 11 ft. sounding at $27^{\circ} 47.4'$ and $97^{\circ} 15.9'$ was not found. Here the soundings are $12\frac{1}{2}$ and 13 ft. *Error in plotting on N-958. Should be $14\frac{1}{2}$ ft.*

The 16 ft. sounding at $27^{\circ} 49.65'$ and $97^{\circ} 17.35'$ was not found. Sounding here is 14 ft.

The 15 ft. sounding at $27^{\circ} 45.0'$ and $97^{\circ} 18.2'$ was not found. Sounding here is $13\frac{1}{2}$ ft.

Near the entrance to Ingleside Cove the 12 ft. curve shows great changes, being somewhat farther from shore.

The 2 ft. sounding at $27^{\circ} 51.7'$ and $97^{\circ} 15.6'$ was not found, but a 3 ft. sounding was found 150 m. southeast, which is the shallowest sounding obtained in this development. The 15 ft. sounding at $27^{\circ} 50.7'$, $97^{\circ} 18.1'$ was not found, the soundings in that locality being 12 ft. instead of 14 and 15 ft. The 12 ft. curve here shows great changes.

The 1 ft. sounding on Donnel Reef shown on the chart at Lat. $27^{\circ} 51.32'$ and Long. $97^{\circ} 15.15'$ is located about 70 m. further east on position 7d (red). There is a spot at $27^{\circ} 51.36'$ and $97^{\circ} 15.09'$ which bares at M.L.W. on 6d (red), the outer end of an almost continuous high portion, bare or just awash at M.L.W. At Lat. $27^{\circ} 51.50'$, Long. $97^{\circ} 14.85'$ there is an islet not shown on the chart, which is bare at M.H.W.

The 3 ft. sounding on the chart at $27^{\circ} 50.78'$, $97^{\circ} 14.68'$ was not found but $3\frac{1}{2}$ ft. exists at a point 90 m. ESE from this location, occurring just after position 47A (blue).

On the long nameless reef westward of McGloins Bluff the 5 ft. sounding at the tip at $27^{\circ} 50.16'$ and $97^{\circ} 17.27'$ was not found. A $5\frac{1}{2}$ ft. spot was found 90 m. NE of this location. The furthest point of the reef which shows 5 ft. is at $27^{\circ} 50.26'$ and $97^{\circ} 16.49'$ which is 450 m. E from the 5 ft. shown nearest to shore on the chart. The 2 ft. sounding shown on the chart at $27^{\circ} 50.25'$ and $97^{\circ} 15.77'$ is located about 160 m. NW from the position shown, occurring between 50 and 51c (red). The $\frac{1}{2}$ ft. sounding shown at $27^{\circ} 50.30'$ and $97^{\circ} 15.30'$ was not found. There is a 1 ft. sounding 80 m. SW, and 220 m. SE there is a point which is awash at MLW. A substantial beacon not shown on the chart marks this reef. See list of Aids to Navigation. At $27^{\circ} 50.34'$ and $97^{\circ} 15.66'$ approximately there are two parts of the reef which occur at positions 27 and 28j (red); one awash and the other bare $\frac{1}{2}$ ft. at M.L.W. These are not shown on the chart. The seven ft. sounding shown on the chart at $47^{\circ} 45.50'$ and $97^{\circ} 11.35'$ was found 140 m. south and another occurs one sounding after position 30F (blue) and is about 200 m. NW from position shown. The 7 ft. sounding shown about half a mile NW was not found, the soundings in that vicinity being $7\frac{1}{2}$ ft. and 8 ft.

At 27° 50.9', 97° 03.6' there is a sunken barge projecting about 2 ft. above the bottom in 7½ ft. of water. This comes properly within the limits of Sheet #4 but was investigated after that sheet had been sent in. Least sounding is 5½ ft. obtained on positions 2t and 4t (red).

Geographic Names:

Ingleside Point is a well established local name for the point extending westward from McGloin Bluff.

The long reef extending westward from Ingleside Point does not have a name but it is suggested that the name "Long Reef" might be appropriate for charting.

Statistics:

Statute miles of sounding line -----	1029.1
Number of soundings -----	28,709
Number of positions -----	3,755

Men in Charge of Hydrography:

The work of the Hudie and of the Frances Marie, green and red days, was in charge of J. L. Hale, Observer.

The work of the Gladys and of the skiff with the exception of s day was in charge of W. R. Helm, Observer.

W. H. White, Observer was in charge on s day (red, skiff).

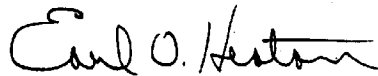
Inspected and approved:

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

Respectfully submitted,

W. K. Doolittle
W. K. Doolittle,
Surveyor

Hydrographic Sheet No. 3 and the accompanying records have been inspected and are approved.



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

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
AIDS TO NAVIGATION
LANDMARKS FOR CHARTS

Corpus Christi, Texas.

January 11, 1935, 193

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:

The odd numbered beacons are **FW**.

The even numbered beacons are **FR**.

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			
CORPUS CHRISTI CH. BNS.							
F "3" (Δ1934)	27 50	165.8	97 06	344.4	N.A. 1927	Triangulation	1286
F "5" (Δ1934)	27 49	1559.0	97 07	873.3	"	"	"
FR "2" (Δ1934)	27 49	1721.9	97 07	907.8	"	"	"
F "7" (Δ1934)	27 49	1096.5	97 08	1436.8	"	"	"
FR "4" (Δ1934)	27 49	1260.3	97 08	1470.8	"	"	"
F "9" (Δ1934)	27 49	641.7	97 10	323.9	"	"	"
FR "6" (Δ1934)	27 49	805.7	97 10	358.7	"	"	"
F "11" (Δ1934)	27 49	184.2	97 11	859.2	"	"	"
F "13" (Δ1934)	27 48	1568.1	97 12	1421.8	"	"	"
F "15" (Δ1934)	27 48	1094.9	97 14	387.1	"	"	"
FR "8" (Δ1934)	27 48	1262.6	97 14	401.6	"	"	"
F "17" (Δ1934)	27 48	1088.5	97 15	732.5	"	"	"
F "19" (Δ1934)	27 48	1080.4	97 16	1228.3	"	"	"
^c FR "10" (Δ1934)	27 48	1248.6	97 16	1228.4	"	"	"

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 identification. 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, flagstaves and like objects are not sufficiently permanent to chart.

Checked and verified by:

J. H. Burney

Date March 21, 1935

GEOGRAPHIC NAMES
TEXAS

Survey No. 5694

Chart No. 1286-1285

Diagram No. 1286-1285

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
	<u>Nueces Bay</u>	<u>Nueces Bay</u>			
	<u>Portland</u>	Same			T4904
	<u>La Quinta</u>	"			T4872
	<u>Donnel Reef</u>	Donnel Bar			
	<u>Ingleside On The Bay</u>	Same			T4872
	<u>Ingleside Cove</u>	"	<i>Inf after sheet is verified</i>		
	<u>Ingleside Point</u>	-----	Same		T4872
	<u>McGloin Bluff</u>	Same			
	<u>Harbor City</u>	"			
	-----	<u>Redfish Cove</u>			
	<u>Dagger Island</u>	Same			
	<u>Redfish Bay</u>	"			
	<u>Ransom Island</u>	"			
	<u>Ransom Point</u>	"			
	<u>Harbor Island</u>	"			
	-----	<u>Turtle Cove</u>			
	<u>Mustang Island</u>	"			
	<u>Shamrock Cove</u>	"			
	<u>Shamrock Island</u>	"			
	<u>Shamrock Point</u>	"			
	<u>Corpus Christi Bay</u>	"			
	-----	<u>Aberdeen</u>	<i>Aberdeen</i>		T4365
	<u>Long Reef</u>				

200

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 13, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
18 volumes of sounding records for

HYDROGRAPHIC SHEET 5694

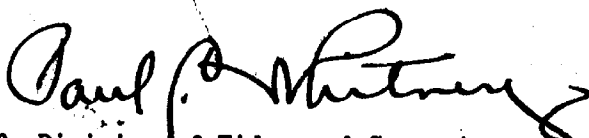
Locality Corpus Christi Bay (Eastern Part), Texas

Chief of Party: E. O. Heaton in 1934-1935
Plane of reference is mean low water reading
2.5 ft. on tide staff at Corpus Christi
4.5 ft. below B.M. 1

2.5 ft. on tide staff at Harbor City
11.8 ft. below B. M. 1
2.7 ft. on tide staff at Port Aransas
17.6 ft. below B.M. 1

Height of mean high water above plane of reference is approximately
0.3 ft. at Corpus Christi and Harbor City; 1.1 ft. at Port Aransas.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. .5694

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

Number of positions on sheet	.3755..
Number of positions checked	.389..
Number of positions revised	..7...
Number of soundings recorded	28,709.
Number of soundings revised	.287.
Number of signals erroneously plotted or transferred	..0...

Date:

Verification by IRVIN MICHAELSON
BEN SCHLACKMAN

Time: 159 hrs

Review by P. J. Christman July 11, 38

Time: 18 hrs.

Section of Field Records

Report on H-5694

Chief of Party Earl O. Heaton

Protracted by W. K. Doolittle

Verified by { Irvin Michaelson
Ben Schlachman

Inked by { Ben Schlachman
Sidney Rosen

Surveyed in April 1934 - Feb. 1935

Surveyed by J. L. Hale
W. R. Halon
W. H. White

Soundings plotted by W. K. Doolittle

- 1- The records are legible, and complete, conforming to the general requirements of The Hydrographic Manual. All fractions were plotted and inked. Since the greater portion of the area covered varied in depth by only 1 ft., the 12 ft. curves were confusing due to the 12½ ft. soundings. Many 12½ ft. soundings were changed to 12 ft. in order to smooth out the 12 ft. curves. If the inker had left the fraction in pencil, it would have saved time for the verifier.
- 2- The remaining curves were completely drawn. ✓
- 3- Soundings were correctly plotted with few exceptions. The protracting was excellently done. The crossings were good. ✓
- 4- The field drafting was good, except for the stations, which were only fair. The curves and geographic place names were dug into the paper with a hard pencil which made it difficult to remove the lines. The day letters were clear and properly spaced. ✓
- 5- The sheet was compared with the air. photo compilations T-5365, T-5367, T-5368 and T-5369. In some cases the low water line was modified by the Hydrography. Two ✓ piles were transferred from T-5367 that were not in the records.
They are at position { Lat 27° 50.77' Long 97° 13.69' and { Lat 27° 50.63' Long 97° 13.59'
- 6- Junctions:
On the West by H-5612 (1934) ✓

on the North by H-5693^v (1934-35)

No overlaps were made since these sheets have not yet been verified.

7- Only part of each note pertaining to piles, dolphins, pipes, etc., were inked. However, the complete notes were left in pencil in order that the reviewer might make any additions if he desires. 53 a (red) ✓ was found to be a weak fix and was rejected. Hence, soundings between 53 a and 54 a (red) were also rejected

Respectfully Submitted,
Ben Schlochman

July 3, 1935

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5694 (1934-5) - FIELD NO. 3

Corpus Christi Bay, Eastern Part, Texas
Surveyed in April, 1934 - February, 1935
Instructions dated November 5, 1932; April 18, 1934 (E. O. Heaton)

Hand Lead and Pole Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - E. O. Heaton.
Surveyed by - J. L. Hale, W. R. Helm, W. H. White.
Protracted by - W. K. Doolittle.
Soundings penciled by - W. K. Doolittle.
Verified and Inked by - Irvin Michaelson, Ben Schlachman, Sidney Rosen.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

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

2. Compliance with Instructions for the Project.

The plan and extent of development are in accordance with the instructions.

3. Sounding Line Crossings.

Cross lines are in very good agreement.

4. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn, including portions of the low water line.

5. Junctions with Contemporary Surveys.

Junctions with H-5612 (1934) to westward and with H-5693 (1934-5) to the northeast will be considered in the reviews of those sheets.

There is no contemporary survey to the south in Laguna Madre.

6. Comparison with Prior Surveys.

H-958 (1868), H-995 (1869).

The plane of reference on these surveys is "mean tide." Making an allowance for the difference in planes, the depths in the main part of the bay are still 1 to $1\frac{1}{2}$ foot greater than those shown by the

present survey. Aside from the Corpus Christi Channel, which has been dredged since these surveys, the greater changes occur in the northern part of the bay probably the result of an adjustment to changed conditions as a result of the placing of the spoil banks along the channel line. Under "Comparison with Previous Surveys" the Descriptive Report (page 4) lists the important differences as represented on the chart. The 11 foot spot (charted) lat. $27^{\circ}47.4'$, long. $97^{\circ}15.9'$ was an error in plotting on H-958 (1868), the sounding record showing it should be $14\frac{1}{2}$ feet. The other differences noted may be traced to the difference in planes of reference and to natural changes occurring over a long period of time.

Because of the many minor changes and the more important changes in the vicinity of the dredged channel as well as the lapse of time since these surveys were made they should be superseded by H-5694 (1934-5) for future charting purposes.

7. Comparison with Chart 1286.

a. Hydrography.

Within the area of the present survey the chart is based on the surveys discussed in the foregoing paragraphs except that a few soundings on Long Reef (westward of McGloin Bluff) were taken from B. P. 13287 (1909) and the dredged channel areas (Corpus Christi Channel) from B. P. 20688-9 (1926).

b. Controlling Depth.

The U. S. Engineers periodically furnish the controlling depths for the channels through Aransas Pass and Corpus Christi Channel. The present survey does not show any soundings in the dredged channels.

The present survey shows that the Morris and Cummings Cut channel (lat. $27^{\circ}52'$, long. $97^{\circ}07'$) is not being maintained and the note on the chart " $7\frac{1}{2}$ feet deep" is misleading.

c. Aids to Navigation.

Day marks along Corpus Christi Channel are not charted. Lighted beacons along the eastern section of the channel are charted about 150 meters westward of the positions given by the present survey. In the western section the charted positions agree with the survey except No. 17 which also is about 150 meters westward of the position given on H-5694 (1934-5).

Two beacons marking the channel at Morris and Cummings Cut and a beacon on Lone Reef are not charted.

The black buoy on the west side of the channel leading to Harbor City was gone at the time of survey and has not been located.

8. Field Plotting.

Protracting of positions and penciling of soundings were very well done.

9. Additional Field Work Recommended.

This survey was well executed and is complete and satisfactory. No additional work is needed.

10. Superseding Old Surveys.

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

H-958 (1868) in part.
H-995 (1869) " "

11. Reviewed by - R. J. Christman, July 11, 1935.

Examined and approved:

K. T. Adams
K. T. Adams,
Asst. Chief, Division of Charts.

L. O. Robert
Chief, Division of Charts.

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

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

Applied to drawing of Chart 1286, Jan 1936, S. B. Maize
" " " " 1117 May 1940 g. H. S.
Applied to (new) Chart 1285, May 1940 P. B. C.
Applied to Chart 523 April 1945 W. H. S.