5857

Form 504
Rev. Dec. 1933

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

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 16 5857

State Texas

LOCALITY

Gulf of Mexico

(Lavaca Bay)

1934-5

CHIEF OF PARTY

Earl O. Heaton,
~~Dr. Roberts~~,

U.S. GOVERNMENT PRINTING OFFICE: 1934

5857

Form 537
Ed. Dec., 1930

REG. NO.

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. 16

REGISTER NO. 5857

State Texas

General locality Gulf of Mexico

Locality Lavaca Bay

Scale 1:20,000 Date of survey August 1934 to April ~~June~~, 1935

Vessel Project H.T. - 118

Chief of Party Earl O. Heaton ~~and E.B. Roberts~~

Surveyed by W.R. Helm, Surveyor and W.H. White, J.L. Hale, Observers. R.J Roberts

Protracted by C.W.O'Melveny, Surveyor

Soundings penciled by C.W.O'Melveny

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by Lee L. Straw

Verified by L. S. S.

Instructions dated November 5, 1932

Remarks: Supplemental Instructions were issued covering the worrk on November 16, 1933, March 5, 1934, letter of April 18, 1934 and on May 17, 1934.

U. S. GOVERNMENT PRINTING OFFICE: 1931

DESCRIPTIVE REPORT TO ACCOMPANY
HYDRO. SHEET 16. 5857

LAVACA BAY

Date of Instructions:

Instructions for this work were dated November 5, 1932; with supplemental instructions dated November 16, 1933, March 5, 1934, by letter of April 18, 1934, and May 17, 1934.

Survey Methods:

Except for some development work and inshore work by skiff, the hydrography on this sheet was accomplished from a launch. On both launch and skiff work a sounding pole was used; it was graduated in feet and had a thin, lead, perforated plate about 6 inches in diameter on the bottom to prevent its sinking in soft mud. For depths over 10 feet a lead line was used. On skiff work the power was furnished by an outboard motor. The shore-line as shown on the smooth sheet was transferred from the photo-topographic work of Ensign T.M. Price, Register numbers, 5351, 5356, and 5357.

Discrepancies:

No discrepancies were found except as shown below:

(a) Soundings from 17 to 36 AA (blue) are too deep by ½ to 1 foot as compared with the cross lines on the M day (blue) An example of the one foot difference is the sounding at 74 M of 4½ feet which occurs at the same place as the last sounding before position 20 AA (lat. 28°36.5, long. 96°37.0) and which shows a 5½ foot depth. Also on the AA day from 36 AA to the end of the day are discrepancies varying from ½ to 2 feet. The DD day (blue) from 48 to 60 DD replaced the AA soundings on the smooth sheet from 36 AA to the end of the AA day which were too deep. An example of the 2 foot difference is shown at the first sounding past position 37 AA which is 6 feet; this sounding and falls in the same place as position 49 DD (blue) which is 4½ feet. Just a few meters east of the fourth sounding past 31 M (blue) which is 4 feet .

These discrepancies are probably due to conditions arising from the direction of the wind on that day. Blowing from the N.W., the water was blown out of the main part of the bay at the Causeway tide-staff and was surged into Keller Bay. Later, the water returned to normal. No time interval was measured for this condition; it was noticed by the hydrographer, however, that the water was proportionately higher in Keller Bay during the period mentioned above.

Field positions accepted, Hum.

(b) By reason of a similar time interval and wind direction the soundings on small d day (red) are apparently too deep by about ½ to 1 foot, especially the soundings from 2 to 10 d. An example is the fifth sounding past 9 d (red) which occurs at the same place as 46 R (blue) and which shows a 6 foot depth as compared with a 5 foot sounding at the same place on the R day.

(c) The first four soundings after position 37 on the E day (37 to 38 E, blue) were too deep by 1 foot and were left out in favor of the soundings from 26 to 27 A (blue, launch) day. *In view of the conditions mentioned above the differences in depth are not considered excessive.*

Danger:

Several unmarked shoals exist in Lavaca Bay, but these are

well known to the boatmen in that vicinity and thus present no special danger.

Location of Beacons:

The following beacons have been established since this survey was started and should be charted.

	Latitude	Longitude
Sand Point Light #1, fixed white	28-33 975 meters	96-30 1280 meters
" " " #3, " "	28-33 1226 "	96-31 68 "
Gallinipper Rf. Lt. #1, " "	28-35 1199 "	96-33 1175 "
" " " #3, " "	28-35 1403 "	96-34 30 "

Located by triangulation. Hoyns.

Channels:

There are two marked channels on this sheet; one across Gallinipper Reef and the other acrossSand Point Reef. Both channels are dredged to a minimum depth of 6½ feet. Another channel passes underneath the center of the Lavaca Bay causeway. The two marked channels mentioned above provide the only entrance to Port Lavaca for boats drawing as much as five or six feet. The channel at the center of the drawbridge of the Port Lavaca Causeway has a minimum depth of 5½* feet at M.L.W. and is used by fishing boats and other small craft. Lavaca River is used by nearly all boats around Port Lavaca as storm anchorage during hurricane weather. A fairly safe storm anchorage exists in Chocolate Bay but, although closer than the Lavaca River is not widely used as such.

Comparsion with previous surveys:

A comparision of Chart 1284 corrected to October 12, 1934 shows the following:

Generally, the entire area of Lavaca Bay as shown by the results of the present survey is shoaler than as shown on the chart. More particularly, the six-foot curve as shown on the chart west of Gallinipper Reef is shown as extending the deep water (over 6 feet) to a point near the center and west of the Port Lavaca Causeway. This is no longer the case because the shoaling has taken place and reduced the area over six-feet as shown on the chart by approximately one-third. East of Gallinipper Reef and north of Sand Point Reef, the extent of the deeper water has been increased. The six-foot curve is now (on the smooth sheet) closer inshore than on the chart.

The chart shows depths of 8 feet within the area west of Sand Point Reef; these should be removed and peplaced by the shoaler soundings from this survey.

A 17 foot spot shown on the chart at about Lat. 28-39.3, Long. 96-35.9 no longer exists and should be removed from the chart.

A 4 foot spot shown on the chart at Lat. 28-35.9, Long. 96-35.9 no longer exists and should be replaced by the 5 foot spot found.

The 6 foot spot shown at Lat. 28-31.6, Long. 96-29.5 and should be replaced by the 7 foot sounding in that area now.

The 6 foot spot shown at Lat. 28-32.2, Long. 96-28.7 was not found and should be replaced on the chart by the 9½ foot sounding now there.

See Rev. Par. 8a Hoyns.

The 1 foot spot shown on the chart at Lat. 28-36.3, Long. 96-31.2 no longer exists. It should be removed from the chart and replaced by the 4 foot sounding encountered.

The 1 foot spot shown at Lat. 28-36.5, Long. 96-27.9 in Keller Bay was thoroughly investigated and found to be no longer there. It should be removed from the chart and replaced by the 3½

*6½ ft. shown by soundings, however, 5½ feet contol s area to SE and 5 feet to northwestward. Hoyns.

foot soundings found.

The 1 foot spot at Lat. 28-37.2, Long. 96-27.2 no longer exists and should be replaced by the 3/4 foot sounding of the present survey.

East of Sand Point Reef along the western shore of Matagorda Bay, the 6 foot curve follows closely the curve on the chart. The same condition applies also to the north shore of Matagorda Bay except that there has been some deepening at the entrance to Lavaca Bay.

A considerable portion of Sand Point was washed away by the hurricane of the fall* of 1934; for this reason the shore-line was relocated by means of 3-point sextant fixes and the area thoroughly developed. This location agrees closely with that shown on T-5356 (1933-34).

* dated July, 1934 in D.R of T-5357 (1934).

Several reefs in the north end of Lavaca Bay were found by development. These reefs were not shown on the chart and should be charted. The locations are as follows:

0	foot	sounding	at	Lat. 28-42.08,	Long.	96-38.16
1/2	foot	sounding	at	Lat. 28-41.36,	Long.	96-38.42
0	"	"	"	" 28-42.2	"	96-38.45
0	"	"	"	" 28-42.05	"	96-38.07
0	"	"	"	" 28-41.99	"	96-38.4
1	"	"	"	" 28-42.57	"	96-36.14
1	"	"	"	" 28-42.28	"	96-38.4
1/2	"	"	"	" 28-41.36	"	96-36.65
1/2	"	"	"	" 28-42.18	"	96-37.41
1	"	"	"	" 28-42.12	"	96-38.31

The 1 foot spot at Lat. 28-41.7, Long. 96-36.8 was thoroughly developed and still exists. The correct position is Lat. 28°41!8, Long. 96°36!7.

The day beacons shown on the chart were replaced by lighted beacons (See paragraph, "Location of Beacons" this report.) and the symbols should be changed on the chart.

The 7 foot sounding shown in Cox Bay on the chart at Lat. 28-38.1, Long. 96-31.6 should be shown as 6 feet, the present sounding.

At Port Lavaca, the previous charts show a number of piers jutting out into the water. These no longer exist and should be removed from the chart. The area concerned is now built-up shell with wharves and buildings.

The 6 foot sounding on the chart off Gallinipper Point at Lat. 28° 35!4, Long. 96° 33!35 does not exist and should be replaced by the 7½ ft. sdgs. now shown to prevail. A 6½ ft. sdg. not now charted occurs nearby, however, at Lat. 28° 35!18, Long. 96° 32!77

Geographic Names:

Geographic Names differing from the ones shown on the chart, namely, Cox Point and Rhodes Point, are locally accepted names and were so found by Ensign T.M.Price and which were included in his report. Swan Lake was found to be a well-known local name; it is reccommended for charting purposes. The Port Lavaca Causeway location was left off the smooth sheet in order not to obscure the soundings; it may be plotted from the photo-topographic location of Ensign T.M. Price.

Statistics for Field Sheet # 16:

Statute Miles of Sounding Lines	970.6
Number of Soundings	27, 546
Number of Positions	3, 978

Men in Charge of Hydrography:

Walter R. Helm, Surveyor did all the work on this sheet except the two red launch days (A & B) which were done by J.L.Hale, Observer and some launch development work near the causeway and in Chocolate Bay which was done by W.H. White, Observer, and one day (EE blue) by R. J. Roberts.

Respectfully submitted

C.W.O'Melveny,
Surveyor, C. & G.S.

Approved:

Clarence R. Reed

Clarence R. Reed, Aid,
U. S. Coast & Geodetic Survey.

Hydrographic Sheet number 16 and the accompanying records have been inspected and are approved.

Along the south-east edge of the sheet hydrography was done on the boat sheet to a limit just off the edge of the smooth sheet. The positions which fall off the edge of the smooth sheet were plotted on a temporary extension of the sheet and the soundings then plotted in their true position up to the edge of the sheet. The soundings which fall off the edge of the sheet are in no case shoaler than the adjacent inshore soundings shown on the sheet. Positions which fall off the edge of the sheet are:

E day (blue) 43-44-56-57-69-70-82-83-95-96
G day (blue) 25-26-40-41
H day (blue) 25
J day (blue) 64-65
N day (blue) 37-38-50-51
T day (blue) 37-38-49-61-62
DD day (blue) 29-30-35
CC day (blue) 5-16-17-26-27-36-37-46-47-55-56-64-65-73-74-81-82-89-90-97-98-104-105-110

Clarence R. Reed

Clarence R. Reed, Aid,
U. S. Coast & Geodetic Survey

Office plotting of above positions on an extended portion of the sheet is not considered necessary. See reviser's report, par. 7. KWM.

LaCe

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

August 21, 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

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

Tide Reducers are approved in
16 volumes of sounding records for

HYDROGRAPHIC SHEET 5857

Locality Lavaca Bay, Texas

Chief of Party: Earl O. Heaton in 1934-1935
Plane of reference is mean low water reading
2.6 ft. on tide staff at Half Moon Reef Light
1.9 ft. below B.M.1
2.8 ft. on tide staff at Drawbridge, Lavaca Causeway
5.4 ft. below B. M. 1
2.2 ft. on tide staff at Port Lavaca
5.4 ft. below B. M. 1
2.6 ft. on tide staff at Port O'Connor
Bench marks not available for Port O'Connor
Height of mean high water above plane of reference is 0.5 ft. at Half Moon Reef; 0.5 ft. at Drawbridge, Lavaca Causeway; 0.5 ft. at Port Lavaca; 0.4 ft. at Port O'Connor.

Condition of records satisfactory except as noted below:

Ham

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

GEOGRAPHIC NAMES

Survey No. 5857

Date: Aug. 16, 1935

Chart No. 1284

Diagram No. "

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
	Swan Lake		same		
	Venado Creek	same			
	Placido Creek	" Placedo	= USLB decision		
	Garcitas Cove	Garcitas Cove			
	Lavaca River	same			140
✓	Chocolate Bay ✓	"			140
✓	Huisache Creek *	"			
✓	Cox Point	unnamed	same		
✓	Noble Point	same			
✓	Pt. Comfort	"			
✓	Olivia	"			
✓	Cox Bay ✓	"			140
✓	Port Lavaca ✓	"			140
✓	Gallinipper Reef ✓	"			100
✓	Keller Bay ✓	"			140
✓	Rhodes Pt.	~~Cox Pt.~~	Rhodes Pt.		
✓	Sand Pt. ✓	same			120
✓	Sand Pt. Reef ✓	"			100
✓	Gallinipper Pt. ✓	"			120
✓	Alamo Beach	"			
✓	Magnolia Beach	"			
			APPROVED NAMES UNDERLINED IN RED H.L. Flemer		

(M-136)

GEOGRAPHIC NAMES

Date. Aug. 16, 1935

Survey No. 5857

Chart No. 1284

Diagram No. "

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
	Indian Pt.	same			
	Matagorda Bay ✓	"			175
	Indianola Island	"			
	Huisache Cove ✓				1[illegible]
	Keller Creek	[illegible] 6/5/36 see T5356			
	Sixmile Creek	(USGB decision)			

APPROVED NAMES
UNDERLINED IN RED
H. L. Flemer

(M-136)

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5857

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

Number of positions on sheet	3978
Number of positions checked	40
Number of positions revised	0
Number of soundings recorded	27546
Number of soundings revised	30
Number of signals erroneously plotted or transferred	0

Date: April 7. 1936.

{Taking and Verification by} [signature]

Time: 75¼ hours

Review by Harold W. Murray

Time: 17¼ "

Ver. corrections by H.W.M

¾ "

HYDROGRAPHIC SURVEY NO. 5857

Smooth Sheet 1

Boat Sheets 3

Sounding Records 16 Vols.

Descriptive Report yes

Title Sheet yes

List of Signals Vol 1

Landmarks for Charts (Form 567) yes

Statistics yes

Approved by Chief of Party ~~No~~ see approval sheet.

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service (Circular Nov. 30,1933) No no floating aids.

Remarks

Verification Report

Section of Field Records

Hydrographic Survey 5857(1935) Field Number 16.
Lavaca Bay, Gulf of Mexico, Texas.

1. Condition of Records.
The records are neat, legible and conform to the requirements of the Hydrographic Manual except as noted in the review.

2. Shore Line and Control.
The shoreline and shoal areas were compared with the Air Photo Compilation surveys T-5351(1933); T-5356(1933-34) and T-5357(1934) and found to be satisfactory except for the small island in the entrance to Chocolate Bay-Lat. 28°35.05' Long. 96°36.45' on T-5357(1934). Only two small shoal spots in the vicinity of the above mentioned island were located by the Hydrographic party, noted in sounding records and sketched in pencil on the Boat sheet. It was also noted that two 1½ ftl and one 2 ft. sounding falls on the island as delineated on T-5357(1934). The photographs were exanined and the large island is clearly visible, but 6 or 7 months passed between the time the pictures were taken and the time of the Hydrographic Survey, it is probable that the island has worn away leaving only the two small shell reefs in this vicinity. see rev. par. 11a

The Graphic Control sheets for this area have not ~~as yet~~ been received. According to the D.R. of the A.P. sheets, no graphic control sheets were made in this area. yum.

3. Sounding Line Crossings.
The sounding line crossings are in good agreement. See paragraph "a" of the Descriptive Report.

4. Depth Curves.
The depth curves can be satisfactorily drawn.

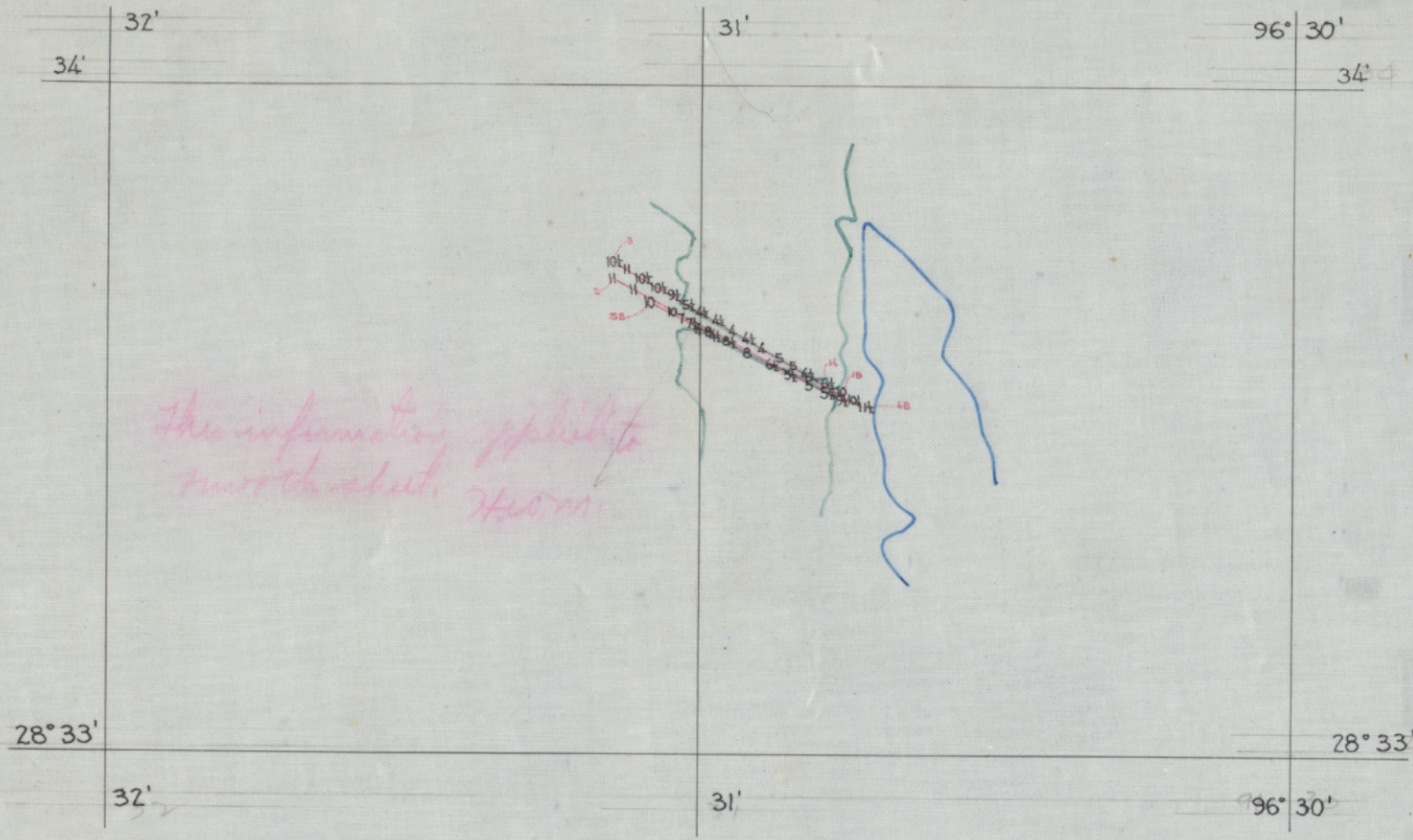
5. Junctions with Contemporary Surveys.
This sheet (H-5857) makes a satisfactory junction with H-5866(1935) on the southeast. will be considered in rev. of that sheet. yum.

6. Field Plotting.
The Field plotting was well executed, however soundings between pos. 43 and 47 DD day were inadvertently omitted on the smooth sheet.

7. A number of soundings fall just off the edge of the sheet at its junction with H-5866. They have not been plotted on either sheet since no gaps in the junction of the two sheets resulted.

Verified and inked by

Leo S. Straw.
April, 7, 1936.



OVERLAY TO ACCOMPANY
HYDRO. SHEET 16
PROJECT H.T. 118

5857

OVERLAY TO ACCOMPANY
HYDRO. SHEET 16
PROJECT H.T. 118

5857

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5857 (1934-5) FIELD NO. 16

Lavaca Bay, Gulf of Mexico, Texas
Surveyed in 1934 - 35
Instructions dated Nov. 5, 1932; Nov. 16, 1933; Mar. 5,
Apr. 18, and May 17, 1934 (E. O. HEATON).

Hand Lead and Pole Soundings. 3 Point fixes on shore signals.

Chief of Party - E. O. Heaton.
Surveyed by - W. R. Helm, W. H. White, J. L. Hale and R. J. Roberts.
Protracted by - C. W. O'Melveny.
Soundings penciled by - C. W. O'Melveny.
Verified and inked by - Leo. S. Straw.

1. Condition of Records.

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

a. A number of hydrographic signals fall outside the high water line but do not show the features on which they are located. They are described in the records as "flags mounted on poles" and in the case of signal "Bad" (latitude 28°35.9', longitude 96°35.5'), a notation "temporary signal" is shown on the boat sheet. It is assumed from this that the other signals are likewise of temporary nature and no further consideration is necessary.

b. Topographic signals taken from the air photo surveys were shown on the smooth sheet in red. It is desirable to use distinctive color to designate signals located from aerial photographs. The accepted office practice is to show them in green. The red circle should be reserved for signals located by standard plane table methods.

The Descriptive Report is exceptionally clear and comprehensive and satisfactorily covers all matters of importance, except that the customary paragraph describing the type of control usedon the survey was not included.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project.

The absence of hydrography in Swan Lake (not charted) is probably due to depths too shoal for sounding. Some reference, however, regarding the degree of navigability should have been made in Descriptive Report of sounding records.

3. Shoreline and Signals.

The shoreline originates with air photo compilations: T-5351 (1933), T-5356 (1933-34), and T-5357 (1934).

The topographic signals originate with the above mentioned air photo compilations. These are all natural objects except signals MIN, JET and JUNE in Huisache Cove which were spotted on the photographs and subsequently projected to the smooth sheet. A number of hydrographic signals were also used and were located by 3 point fixes and sextant cuts recorded in the sounding records.

4. Sounding Line Crossings.

Agreement of sounding line crossings is in general very good. A few discrepancies of 1 and 2 feet occur and have been fully discussed by the Hydrographer in the Descriptive Report (page 1).

5. Depth Curves.

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

6. Junctions with Contemporary Surveys.

The junction with H-5866 (1935) will be considered in the review of that survey.

7. Comparison with Prior Surveys.

a. H-727 (1860).

This 1:20,000 scale survey covers most of the area in Matagorda Bay. Depths generally agree within 1 foot with those of the present survey and only the following items require special mention:

(1) The 6 foot shoal spot (charted) in latitude 28°31.6', longitude 96°29.5' and falling in a well developed area in depths of 7 feet on the present survey was not found. According to the records of the old survey, the 6 (actually 6.2) is one of many 6.2 feet soundings obtained on a line of soundings, although plotted as 6 feet in some cases and 6-1/2 feet in others. These soundings are consistently 1/2 feet shoaler than depths on the present survey, and they should be disregarded in future chartings.

(2) No authority was found for the detached 6 foot spot charted in latitude 28°32.2', longitude 96°28.7'. It first appears on obsolete chart 207, edition of 1872 and falls in depths of 9 to 10 feet on the 1860 survey as well as in similar depths on the present

survey. It is believed to have been a typographical error in charting from the 1860 survey and should be expunged from the chart.

b. H-1098 (1868-71) and H-1095 (1871).

These are 1:20,000 scale surveys; the former covering Lavaca Bay and adjacent waters, and the latter covering a small portion of the inshore area northeastward of latitude 28°35', longitude 96°27'. Depths on the present survey are generally deeper by 1/2 to 1 foot. A few areas, however, are in very close agreement in some cases and vary 1/2 to 1 foot deeper in others. A number of shoal spots (charted) with least depths of 1 to 6 feet, originating with H-1098 (1868-71), are confirmed on the present survey by similar depths or depths not differing by more than 1 foot. Other shoal spots, not found by the present survey, such as the 1 foot sounding (charted) in latitude 28°36.3', longitude 96°31.2', differ as much as 3 feet from the depths in these areas on H-5857 (1934-35). An inspection of the 1868-71 survey reveals that the shoals areof such an extent that the development on the present survey could not have failed to indicate their presence if they still existed. They probably have been washed away during the many years since the above survey was made and they should not be used in future charting.

Because of the changes indicated above, the lapse of time since the surveys were made, and the close development on the present survey, H-5857 (1934-35) should supersede the above surveys for charting purposes, except that soundings from H-1098 (1868-71) may be used to supplement the hydrography in the relatively unimportant Keller Creek and extend it to the northward of that shown on the present survey.

8. Comparison with Chart 1284 (New Print dated Mar. 1, 1935).

a. Hydrography.

Soundings shown on the above chart originate with surveys discussed in preceding paragraphs of this review.

b. Controlling Depths in Channels.

The charted depths in the dredged channels in the vicinity of latitude 28°36', longitude 96°34', and latitude 28°34', longitude 96°31' is 7 feet as of June 1934. Chart letter No. 630 (1935) which is subsequent to the above information states that the controlling depth is 6 feet as of Oct. 1934. Depths on the present survey are consistent with the later report.

c. Aids to Navigation.

The four charted beacons marking the two channels discussed in the foregoing paragraph are in substantially the same positions as those shown on the present survey.

9. Field Plotting.

Field protracting and plotting were excellent and conform to the requirements of the Hydrographic Manual except that soundings of line 43 to 47DD day (blue) were inadvertently omitted. These were added in the office.

10. Additional Field Work Recommended.

This is an excellent survey and no additional field work is necessary.

11. Note to Compiler.

a. Air photo compilation T-5357 (1934) shows a small island in latitude 28°35.1', longitude 96°36.5'. The present survey shows depths of 1 to 2 feet directly over the eastern half, and in addition, two shell reefs baring 1 foot at MLW just northwestward of the island. A hurricane swept this vicinity in July 1934 which date was 5 months after the topographic survey and 9 months prior to the hydrographic work in this area. The island has undoubtedly shifted in position and partially washed away. The representation on the present survey should be used for charting purposes.

b. Attention is directed to the continued use of H-1098 (1868-71) for charting purposes discussed in paragraph 7b(2) of this review.

12. Superseding Previous Surveys.

Within the area covered H-5857 (1934-35) supersedes the following surveys for charting purposes:

H-727 (1860) in part
H-1095 (1871) " "
H-1098 (1868-71) Entirely, except as noted in par. 7b.

13. Reviewed by - Harold W. Murray, April 24, 1936.

Inspected by - R. J. Christman, May 26, 1936.

Examined and approved:

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

L. O. Colbert
Chief, Division of Charts.

Fred. C. Peacock
Chief, Section of Field Work.

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

applied to chart 1284 - Jan 28, 1938 J.G.L.

app to chart 522 Dec 22, 1969 Hall