Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic / *Hydrographic* *Sheet No.* H-6398, 6399, 6400, 6401, 6402, 6403.

State TEXAS

LOCALITY

GULF OF MEXICO

TEXAS

1:40,000 sheets from Brazos River to middle of Padre Island.

1938

CHIEF OF PARTY

G. C. MATTISON

U. S. GOVERNMENT PRINTING OFFICE

Form 537
Ed. Dec. 1930

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. C. & G. S. APR [illegible] REG. 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. 41, 41a H6398a H6398b

REGISTER NO. H-6398a (41) H-6398b (41a)

State TEXAS

General locality GULF OF MEXICO

Locality APPROACHES TO ~~BRAZOS RIVER~~ FREEPORT HARBOR ENTRANCE.

Scale 1:40,000 Date of survey April 18-Aug. 25, 19 38

Vessel "H Y D R O G R A P H E R"

Chief of Party G. C. Mattison

Surveyed by L.P.Raynor, G.L.Anderson, P.C.Doran, E.B.Lewey, J.T.Jarman, C.W.Clark, G. W. Moore

Protracted by E. B. Lewey

Soundings penciled by E. B. Lewey

Soundings in fathoms feet Feet

Plane of reference Mean Low Water.

Subdivision of wire dragged areas by None.

Inked by Francis B. Kelly

Verified by Francis B. Kelly

Instructions dated February 17, 1937, February 23, 1938, 19

Remarks: Sub-sheet No. 41A on a scale of 1:20,000 for development of shoals south of Brazos River entrance.

U. S. GOVERNMENT PRINTING OFFICE

Form 537
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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. 42

REGISTER NO. H-6399 H6399

State TEXAS

General locality GULF OF MEXICO

Locality OFF MATAGORDA PENINSULA

Scale 1:40,000 Date of survey May 12-August 25, 1938

Vessel "H Y D R O G R A P H E R"

Chief of Party G. C. MATTISON

Surveyed by L.P.Raynor, C.L.Anderson, P.C.Doran, E.B.Lewey, J.T.Jarman, C.W.Clark and G.W.Moore.

Protracted by G. W. Moore

Soundings penciled by G. W. Moore

Soundings in ~~fathoms feet~~ Feet

Plane of reference Mean Low Water.

Subdivision of wire dragged areas by None.

Inked by G C Mc Gleason

Verified by G C Mc Gleason

Instructions dated February 17,1937, February 23,1938, 19

Remarks: Two supplemental boat sheets on scale of 1:20,000 showing development.

U. S. GOVERNMENT PRINTING OFFICE

Form 537
Ed. Dec. 1930

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. 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. 43 **H6400**

REGISTER NO. H-6400

State TEXAS

General locality GULF OF MEXICO

Locality APPROACHES TO PASS CAVALLO

Scale 1:40,000 Date of survey July 11, August 25, 1938

Vessel HYDROGRAPHER

Chief of Party G. C. Mattison

Surveyed by L. P. Raynor, G. L. Anderson, P. C. Doran, E. B. Lewey, J.T. Jarman, C. W. Clark, and G. W. Moore

Protracted by G. W. Moore

Soundings penciled by G. W. Moore

Soundings in fathoms feet Feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by None

Inked by G.H. Everett

Verified by G.H. Everett

Instructions dated February 17, 1937, February 23, 1938

Remarks:

U. S. GOVERNMENT PRINTING OFFICE

Form 537
Ed. Dec. 1930

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. 44 **H6401**

REGISTER NO. H-6401

State TEXAS

General locality GULF OF MEXICO

Locality Off Matagorda Island

Scale 1:40,000 Date of survey Aug. 5 - Sept. 14, 1938

Vessel HYDROGRAPHER

Chief of Party G. C. Mattison

Surveyed by L. P. Raynor, G. L. Anderson, P. C. Doran, E. B. Lewey, J. T. Jarman, C. W. Clark and G. W. Moore.

Protracted by C. W. Clark.

Soundings penciled by E. B. Lewey

Soundings in ~~fathoms~~ feet Feet

Plane of reference Mean low water

Subdivision of wire dragged areas by None

Inked by } H. F. Stegman
Verified by }

Instructions dated Feb. 17, 1937, Feb. 23, 1938, 19

Remarks:

U. S. GOVERNMENT PRINTING OFFICE

Form 537
Ed. Dec. 1930

REG. NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 45

REGISTER NO. H-6402 H6402

State TEXAS

General locality GULF OF MEXICO

Locality APPROACHES TO ARANSAS PASS

Scale 1:40,000 Date of survey Sept. 5 - Nov. 8, 1938

Vessel HYDROGRAPHER

Chief of Party G. C. Mattison

Surveyed by L. P. Raynor, G. L. Anderson, P. C. Doran, E. B. Lewey, J. T. Jarman, G. W. Moore.

Protracted by J. W. Stirni

Soundings penciled by J. W. Stirni

Soundings in fathoms feet Feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by None

Inked by Wallace A. Bruder and Joseph F. Vonasek

Verified by Wallace A. Bruder

Instructions dated February 17, 1937, February 23, 1938

Remarks:

U. S. GOVERNMENT PRINTING OFFICE

Form 537
Ed. Dec. 1930

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
APR 25 1939

REG. NO.

HYDROGRAPHIC TITLE SHEET

ACC. No.

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. 46 H6403

REGISTER NO. H-6403

State TEXAS

General locality GULF OF MEXICO

Locality OFF PADRE ISLAND

Scale 1:40,000 Date of survey Sept. 23-November 4, 1938

Vessel "H Y D R O G R A P H E R"

Chief of Party G. C. Mattison.

Surveyed by L. P. Raynor, G. L. Anderson, P. C. Doran, E. B. Lewey, J. T. Jarman, G. W. Moore.

Protracted by E. B. Lewey, G.B. Littlepage

Soundings penciled by G.B. Littlepage

Soundings in fathoms feet Feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by None.

Inked by R. H. Carstens

Verified by R.H. Carstens

Instructions dated February 17, 1937, February 23, 1938.

Remarks:

U. S. GOVERNMENT PRINTING OFFICE

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS: U. S. Coast and Geodetic Survey Ship HYDROGRAPHER,
Box 565, Galveston, Texas.

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

April 21, 1939.

To: The Director,
Coast and Geodetic Survey,
Washington, D. C.

From: Commanding Officer,
Coast and Geodetic Survey
Ship HYDROGRAPHER.

Subject: Sheet H-6403.

Reference: 21-RS, March 11, 1939.

In accordance with the reference, the projection for smooth sheet H-6403 has been prepared on this vessel, and all signals plotted. In addition, all positions not rigidly controlled by three point fixes have been plotted on the sheet. The adjoining three point fixes have also been plotted.

The attached sheet of notes will assist the draftsman who does the office plotting.

The smooth and boat sheets and records will be forwarded before the vessel sails for the working grounds.

G. C. Mattison,
Commanding HYDROGRAPHER.

b

37 to 47 M inclusive

57 to 58 M inclusive

10 to 13 N inclusive

40 to 46 N inclusive

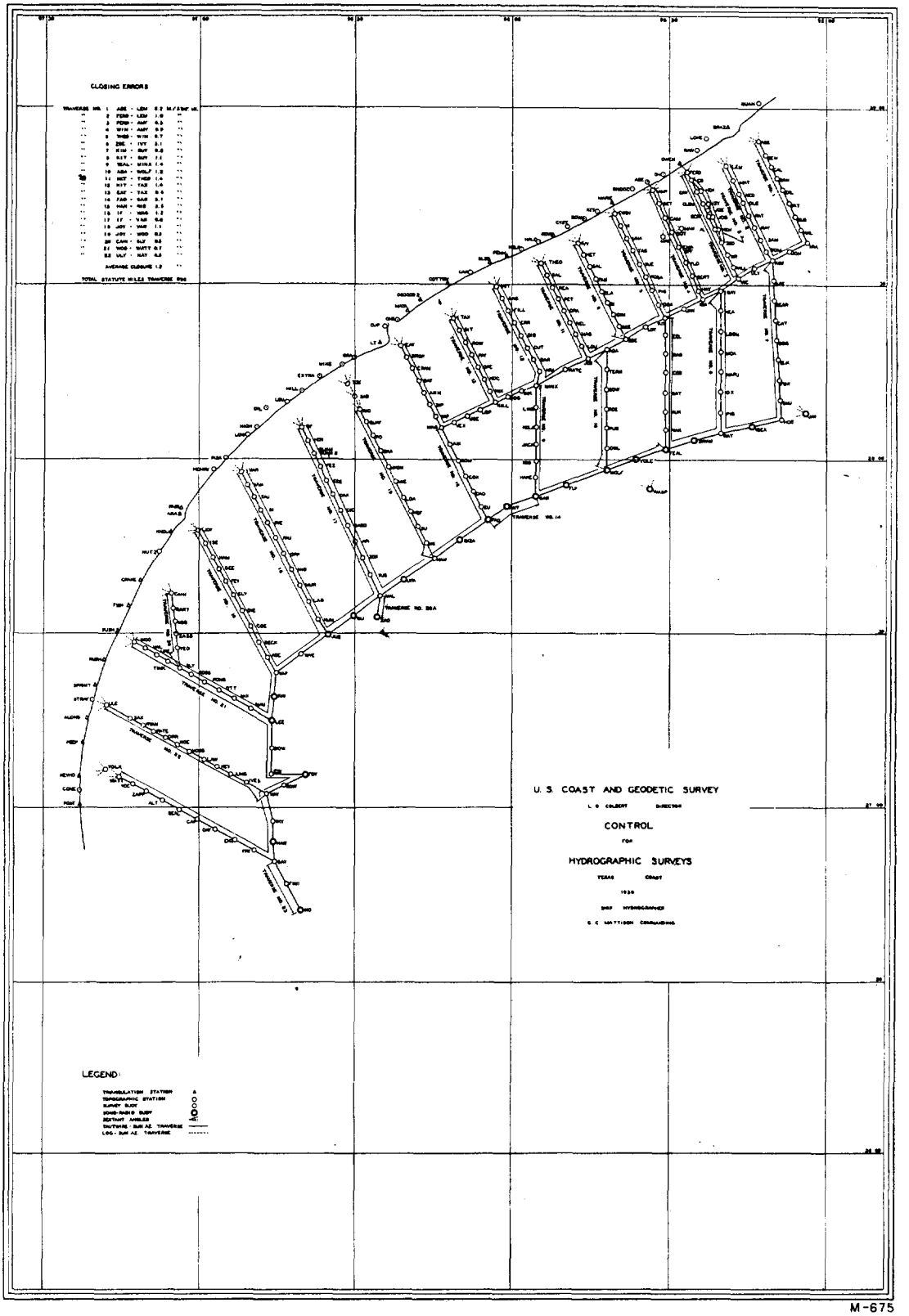
1 to 16 R inclusive

G. C. Mattison,
Commanding HYDROGRAPHER.

NOTES BY CHIEF OF PARTY

All records and sheets have been examined and are approved. Close touch was maintained with the field and office work on these sheets. The descriptive report for all these sheets was written by the Chief of Party, as the officers were needed for other office work and could not find time for the descriptive reports.

G. C. Mattison,
Chief of Party,
Comdg. HYDROGRAPHER.


CLOSING ERRORS
U. S. COAST AND GEODETIC SURVEY
CONTROL
FOR
HYDROGRAPHIC SURVEYS
1936
LEGEND

M-675

NOTES ON SHEET H-6403

FIELD NO. 46

The records for this sheet were carefully examined, and all doubtful positions plotted by E. B. Lewey. All those positions plotted by him were checked in the record with red pencil. They include all positions located by bearing and depression angle, or by single angle and bearings, or single angle without bearings. Enough rigidly controlled three point fixes were plotted to check the doubtful positions.

The adjoining sheet H-6402 had already been sent to the office so that it was impossible to plot 48 "A" or 1 "B", which are single range positions crossing the buoy line from sheet H-6402 to H-6403. With the sheet H-6402 at hand, there should be no trouble plotting these positions.

Plotted.

All remaining positions are well controlled by three point fixes. The turns in the lines should be plotted without trouble, as the time of the beginning and end of the turn is indicated in the records. If positions are not obtained at each end of the turn, it is the practice on board this vessel to plot the straight courses from each position and draw in the curve to fit the two ends of the tangent. Winds or currents are quite apt to affect the radius of the turn.

The following positions were plotted by E. B. Lewey.

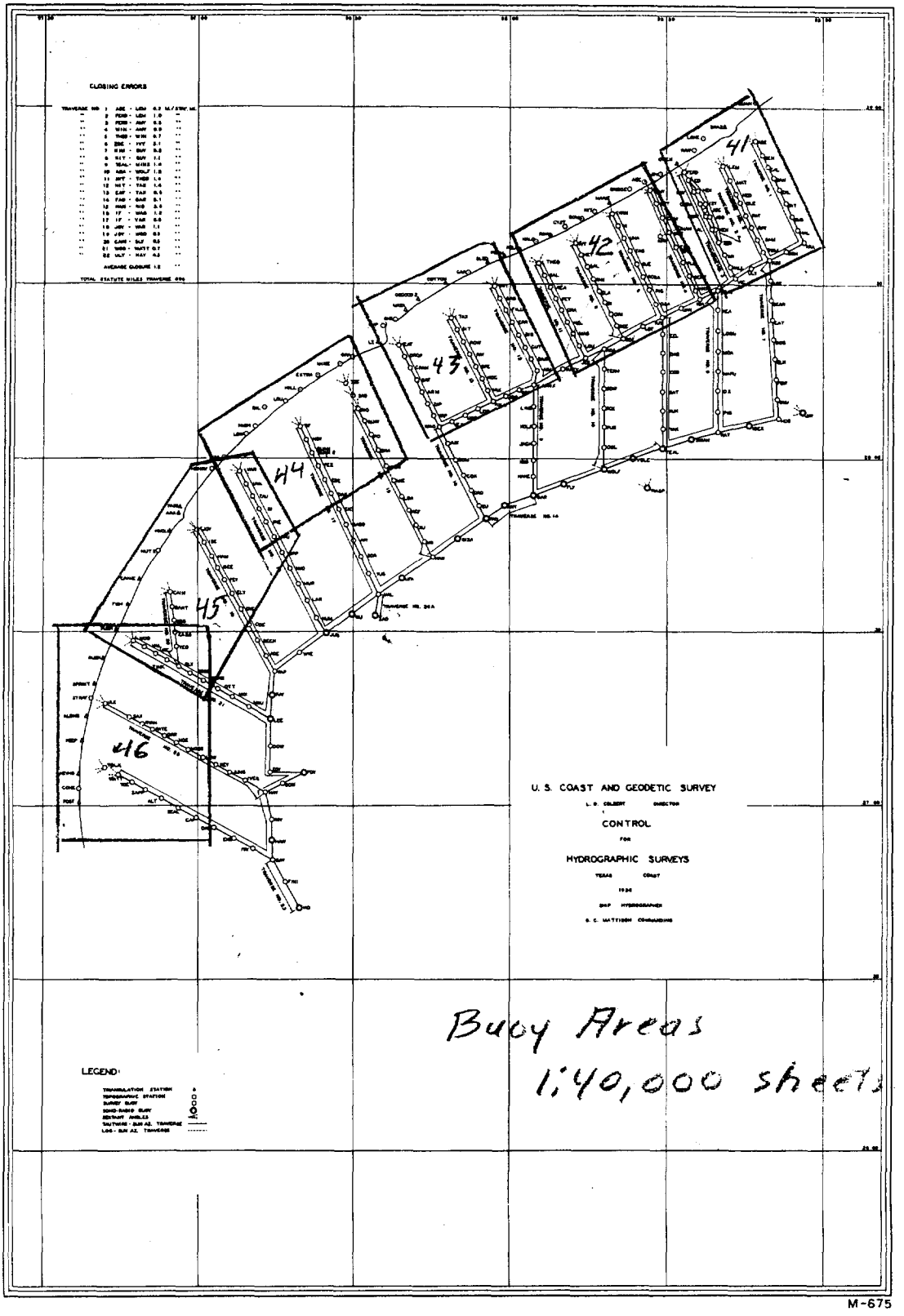
21 to 26 D inclusive

10 to 17 G inclusive

1 to 9 J inclusive

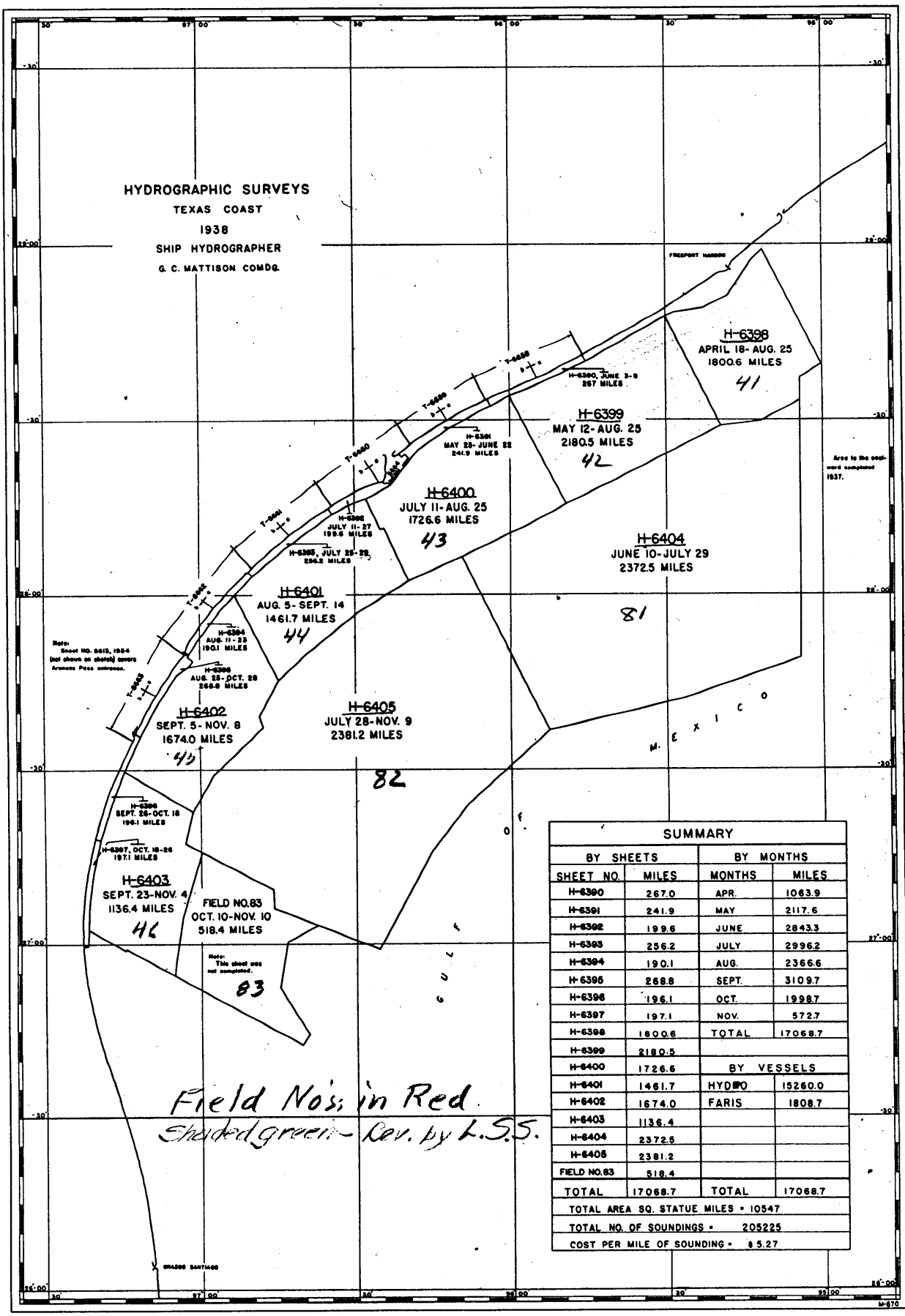
28 to 39 J inclusive

99 to 101 J inclusive



Buoy Areas
1:40,000 sheets

M-675



SUMMARY			
BY SHEETS		BY MONTHS	
SHEET NO.	MILES	MONTHS	MILES
H-6390	267.0	APR.	1063.9
H-6391	241.9	MAY	2117.6
H-6392	199.6	JUNE	2843.3
H-6393	256.2	JULY	2996.2
H-6394	190.1	AUG.	2366.6
H-6395	268.8	SEPT.	3109.7
H-6396	196.1	OCT.	1998.7
H-6397	197.1	NOV.	572.7
H-6398	1800.6	TOTAL	17068.7
H-6399	2180.5		
H-6400	1726.6	BY VESSELS	
H-6401	1461.7	HYDRO	15260.0
H-6402	1674.0	FARIS	1808.7
H-6403	1136.4		
H-6404	2372.5		
H-6405	2381.2		
FIELD NO. 83	518.4		
TOTAL	17068.7	TOTAL	17068.7
TOTAL AREA SQ. STATUE MILES = 10547			
TOTAL NO. OF SOUNDINGS = 205225			
COST PER MILE OF SOUNDING = $5.27			

Field Nos. in Red.
Shaded green - Rev. by L.S.S.

Ship HYDROGRAPHER G. C. Mattison, Commanding

Project HT-214

1938

DESCRIPTIVE REPORT TO ACCOMPANY

INSHORE SHIP HYDROGRAPHIC SHEETS

REGISTER NUMBER	FIELD NUMBER	SCALE	LOCALITY SEE INDEX SHEET	POSITIONS PLOTTED BY	SOUNDINGS PLOTTED BY
H-6398	41	1:40,000	Approaches to ~~Brazos~~ Freeport Harbor Entrance	E.B.Lewey	E.B.Lewey
	41A	1:20,000	~~Brazos Entrance,~~ Development of shoals	E.B.Lewey	E.B.Lewey
H-6399	42	1:40,000	Matagorda Peninsula	G.W.Moore	G.W.Moore
H-6400	H-6400 43	1:40,000	Approaches to Pass Cavallo	G. W. Moore	G.W.Moore
H-6401	44	1:40,000	Matagorda Island	C.W.Clark	E.B.Lewey ✓
H-6402	45 H-6402	1:40,000	Approaches to Aransas Pass	J.W.Stirni	J.W.Stirni
H-6403	46	1:40,000	Padre Island	G.B.LaHlepage	G.B.LaHlepage

GENERAL STATEMENT:

These six sheets include all the 1:40,000 sheets completed by the ship during the season. They have many common characteristics, which are covered in the main body of this report. Additional notes are made for each of the sheets wherever there is any deviation.

A graphical index of the sheets is included in this report. The limits of each of the sheets are shown.

INSTRUCTIONS:

The original instructions for project H.T. 214 were dated February 17, 1937. Supplemental instructions were dated February 23, 1938.

SURVEY METHODS:

1. CONTROL: The control was based on triangulation executed by E. O. Heaton in 1933 and 1934, which extended from the eastern limits of the work to the vicinity of Corpus Christi Pass. Fourth order triangulation and a beach traverse was carried by the party on the FARIS another 35 miles along the coast to latitude 27°, a point about midway between Aransas Pass and Brazos Santiago. These stations were later included in the second order triangulation executed by P. L. Bernstein in the spring of 1939, and the final smooth plotting was done following the receipt of his data.

Shore signals were built by the launch party on the FARIS, and the location of supplemental stations was by triangulation or tape traverse between triangulation stations.

All buoy control was based on the shore signals. A special report is being submitted describing the methods used in establishing the buoy control.

A system of buoy lines was established approximately normal to the coast line, with either three or four lines of buoys to a sheet. East of Aransas Pass the buoys were placed in rows bearing approximately 150° from the inshore buoy. South of Aransas Pass the rows were on a bearing of 120°. Sheets Nos. H-6398 H-6399 H-6400 41, 42, and 43 also included the cross lines of buoys which closed the traverses. On sheets Nos. H-6401 H-6402 44, 45, and H-6403 46, the connecting lines of buoys were further offshore, and did not come within the limits of the 1:40,000 sheets.

The rows of buoys were located by taut wire - sun azimuth traverse loops between inshore buoys whose positions were determined by sextant angles on shore objects. During the early part of the

season especially on Sheets H-6398 41 and H-6399 42, buoys occasionally dragged because of bad weather conditions, or strong currents. These buoys were re-located by short traverses between buoys that had remained in position. Occasionally, supplemental buoys were established between buoy lines for development work, and were located by sextant fixes. The report on control explains the method of location of each buoy.

Sounding lines were generally run parallel to the buoy lines, and located by three point sextant fixes on buoys or shore signals. Occasionally, if only two objects were visible, it was necessary to use a single angle and gyro bearing. These fixes seemed to give good results on the boat sheet, but were not as satisfactory on the smooth sheet. It was found advisable to question the accuracy of the bearings in several cases, and rely on the single angle and distance between three point fixes. When close to a buoy, a depression angle and gyro bearing was considered the best location.

All work was done in accordance with instructions, except that sheet No. H-6399 42 did not extend out to the 15 fathom curve. When the sheet was laid out, it appeared from an examination of sheet No. H-6398 41, that the 15 fathom curve would be within the limits of the sheet. Instead, a valley appeared, and the 15 fathom curve fell outside the sheet for a short distance.

It was not found practicable to run the lines at an angle of approximately 45° to the depth curves, as suggested in paragraph three of the supplemental instructions dated February 23, 1938. On sheets Nos. 45 and H-6402 46, the economical layout permitted some of the lines to be run at an angle of 60° to the depth curves. Reference is made to

my letter of March 11, 1938, and the Director's reply dated March 15th, reference 22-AB-1995-HY-4 regarding the direction of sounding lines.

2. SOUNDINGS: Practically all soundings were made with Dorsey Fathometer No. 1 or No. 2. During the latter part of the season, the No.1 fathometer developed trouble, which became greater as the season progressed. Accordingly, it became necessary to use the No. 2 fathometer in shoaler water. The first sheets were all done with No. 1, but gradually No. 2 was used closer and closer to shore, in some cases in depths of 10 or 11 fathoms. The records contain notations regarding the type of fathometers used at the time.

On September 27th, a series of comparisons was made between the No. 1 and No. 2 fathometers. The soundings were recorded at 15 second intervals, alternating between the two machines. When seperate curves are drawn, it is noted that there is an irregular deviation between the two machines. It may be that this is caused by the personal equation of each of the observers in reading to the nearest $\frac{1}{2}$ foot. The results seemed to indicate that the No. 2 Dorsey could be used in depths of 11 fathoms with the same degree of accuracy obtained by the No. 1 ~~on that date~~ in that depth. The comparative readings are recorded in the records for Sheet No. H-6403 46, "C" day, positions 54 - 56, 59 - 61, 118 - 121.

3. FATHOMETER CORRECTIONS: A seperate report has been prepared on the fathometer corrections for the season. Two corrections were entered in the sounding volume, the first combined the temperature and salinity, the second, the index, draft and settlement. All reducers were entered in tenths of feet.

4. CROSS LINES: Cross lines were run in accordance with instructions. In general the crossings were very good. Whenever differences occurred, they are noted in the report on the individual sheets.

5. TIDE REDUCERS: A tide gauge was established at Pass Cavallo with the expectation that it would be satisfactory for the tide reducers for the early part of the season. This proved a very poor location, and the records could not be used for ship work. The tide gauge at Aransas Pass was used for practically all these sheets, and the standard Galveston gauge was used on those days when the Aransas Pass gauge was not in operation. The plane of reference was mean low water at Aransas Pass or Galveston. The curves plotted from the hourly heights are attached to this report. The tide gauge used in each case is indicated. A copy of the letter from the Director regarding tidal data is attached to this report.

6. BOTTOM CHARACTERISTICS: Samples from the bottom were obtained from buoy anchors and at various ship anchorages. Samples were also obtained from all shoals, in order to determine the composition of the shoal, if possible. A great deal of difficulty was experienced when attempts were made to obtain samples from the row of shoals located about 10 miles south of Brazosport light. These shoals had been reported to be of coral structure, but a sample from only one of the heads was the only speciman showing any coral.

DANGERS

The only dangerous shoals found were on Sheet No. H-6348 41. These will be described in the section pertaining to that sheet.

CHANNELS

No channels fall within the limits of the hydrography on these sheets.

ANCHORAGES

Although this vessel did not experience any hard blows during the middle of the season, it was found that the holding qualities of the bottom were rather poor under severe weather conditions at the beginning and end of the season. Dragging occurred while the vessel was anchored in the vicinities of Sheets Nos. H-6398 41 and H-6403 46. It is reported that the holding qualities of the bottom off Pass Cavallo are rather poor. We did not experience any difficulty in that locality, probably due to the fact that we had no severe test while anchored in the vicinity.

It seemed probable that the reason for dragging anchor, especially in the eastern section of the work, was due to hard clay subsoil. The grey mud bottom usually was sufficient to hold under ordinary conditions, but apparently under adverse conditions, the anchor would slide along the top of the clay.

BOTTOM CONFIGURATION

The configuration of the bottom was quite regular on all these sheets except Sheets Nos. H-6398 41 and H-6399 42 and the immediate vicinity of Pass Cavallo and Aransas Pass. The coral heads and other hard pinnacles which apparently are coral heads, are localized off Brazosport entrance. The shell and sand ridges further offshore on Sheets Nos. H-6398 41 and H-6399 42 seem to indicate a submerged delta radiating from the Colorado River. Other indications on the offshore 1:80,000 sheets

suggest this possibility.

Further remarks on the bottom configuration will be found under the subject matter of the individual sheets.

COMPARISON WITH PREVIOUS SURVEYS

It is recommended that all previous surveys and offshore charted soundings be disregarded. Apparently the early work was done under poor conditions for control, and was in the nature of a reconnaissance. Local fishermen seem to have a very accurate knowledge of conditions, and they all verify our results and conclusions.

SHEET H-6398a
H-6398b
FIELD NO. 41

This sheet, which was the first one of the season, proved the most difficult to complete in the field, and also required a great deal of work in the smooth plotting. The visibility was poor, and there was difficulty in taking angles on buoys. High winds and seas, and a strong current hampered the work. Four buoys dragged in one blow, and many of the buoys lost their targets because of the weather. Some of the sounding had to be done at reduced speed, as the excessive pitching caused air bubbles under the ship which obstructed the echo. Apparently, the proper soundings were obtained as the cross lines check very well. This sheet contained a larger area of irregular bottom and a greater number of shoals than all the other sheets combined.

There was no room available on the sheet for the large scale development of the row of coral heads south of Freeport, so it was necessary to construct a sub-sheet (H-6398b) on a scale of 1:20,000.

There are three different types of submarine configuration on this sheet that are of interest. The lone coral head with a least depth of 50 feet, in a general depth of 65 feet is located in latitude 28° 50.6', longitude 95° 08.1'. This coral head is only 60 meters across.

The second feature is the row of coral heads or hard shoals, divided into three groups known locally as East Bank, Middle Bank, and West Bank, the development of which is shown on the sub-sheet. Captain F. J. Smith reported in a letter to the Director that these shoals are white, but we were never able to verify this owing to the muddy water.

This row of coral heads is marked by three gaily painted oil drum buoys advertising a Houston newspaper. The buoys are ordinary 55 gallon drums painted red, white and blue. Labelled "Houston Press" on ends of buoys and "East Bank", "Middle Bank", and "West Bank" respectively on upper surface. Each buoy carries a metal triangular flag supported by a short upright. The flag is painted red and labelled in white letters "Fishing with Andy". The position of the easterly buoy is in latitude 28° 47.9', longitude 95° 17.75'. It is labeled "East Bank". It is northeast of the easterly shoal, which is an irregular shaped area with its longest axis (½ mile) running in a northeast and southwest direction. In addition to having an irregular outline, the depths are also irregular. Sounding lines run across the shoal shot up and down so rapidly that it was only possible to record the shoalest flashes, The shoalest depth found in this section was 42 feet. Critical depths are as follows:

Depth	Latitude	Longitude
45'	28° 47.7'	95° 17.85'
43'	28 47.72	95 17.95
42'	28 47.65	95 17.95
44'	28 47.55	95 17.98
42'	28 47.63	95 17.99
43'	28 47.68	95 18.00
45'	28 47.62	95 18.16
44'	28 47.43	95 18.2

The middle bank is marked on its north side by "Middle Bank" buoy, which is located in latitude 28° 46.7', longitude 95° 20.7'. Middle Bank is in the form of a plateau rising 15 or 20 feet from the bottom. The top is more regular than east bank, and depths vary from

38 to 41 feet over large sections of the top. The plateau is about $\frac{3}{4}$ mile in length and 1/10 of a mile wide, the long axis running in an ENE and WSW direction. Some of the critical depths are listed below:

Depth	Latitude	Longitude
38'	28° 46.65'	95° 20.37'
39'	28 46.66	95 20.47
40'	28 46.51	95 20.79
40'	28 46.45	95 20.97

A detached head off its easterly end has a least depth of 39 feet in latitude 28° 46.69', longitude 95° 20.12'.

West Bank is marked by "West Bank" buoy, located in latitude 28° 46.1', longitude 95° 22.5'. Three seperate shoal areas were found with least depths as follows:

Depth	Latitude	Longitude
44'	28° 46.21'	95° 21.74'
46'	28 46.17	95 21.97
45'	28 46.01	95 22.53

The third interesting submarine feature is the flat sand and shell ridge running in a northeast and southwest direction from 8 to 12 miles offshore, extending more than half way from the west edge of the sheet, and forming a flat valley between the ridge and the row of coral heads, as indicated by the 10 fathom curve. This ridge is not a menace to navigation. Some of the least depths found are as follows:

Depth	Latitude	Longitude
57'	28° 46.6'	95° 15.92'
57'	28 46.1	95 16.7

Depth	Latitude	Longitude
52'	28° 44.4'	95° 18.5'
53'	28 44.1	95 18.75
53'	28 43.4	95 19.6
48'	28 40.1	95 22.5
55'	28 39.1	95 24.4
56'	28 37.8	95 24.5

A flat rise was found near the offshore limits of the sheet in latitude 28° 33½', longitude 95° 16½'. A least depth of 92 feet was found in this area, being the least found in an area of a mile or two in extent, where a slight rise of only a foot or two above the general bottom is noted.

Position 6 "V" day records a jump of one fathom in depth on one sounding. This was overlooked by the recorder at the time the field work was done, and was not shown on the boat sheet. Regardless of the proximity of this slight rise, it is believed that this was an erroneous recording of one fathom. yes. This sounding not plotted.

A search was made for the three ten fathom spots shown offshore on Chart 1283 and 1117, but they were not found. Local fishermen have searched for these three shoals and state that they do not exist in the positions shown. It is believed that they are erroneous locations of the ridge further inshore. Par. 6 a of Review.

Although a lot of this work was done in quite rough weather, practically all soundings on cross lines checked within one foot. Discrepancies of more than one foot are listed below, with an explanation of the probable reason for the differences.

The launch work was done during the 1937 season. It is noted

that most of the 1938 ship work shows a shallower depth by one or two feet. The assumption is made that the fathometer recorded the top surface of soft mud, while the hand lead penetrated it a foot or so, or else the hand lead line was not vertical.

A cross line 1 to 20 "M" day, which was run just outside the 5 fathom curve was done under quite rough weather conditions, and difficult reading of the fathometer. Many of the soundings are one or two feet deeper than on the lines that are crossed. These soundings should not be considered as accurate as those on the regular lines.

All other crossings checked within one foot with the exception of a few isolated cases, where the difference was two feet.

An army engineer blueprint of a survey of Brazos River entrance made in August - November 1938 (BP. 32657) is forwarded with the smooth sheet. It is noted that wherever there is a discrepancy between soundings that the engineer's work is deeper by one or two feet. It is probable that the same premise holds true, as mentioned previously with respect to hand lead and fathometer soundings.

SHEET H-6399

FIELD NO. 42

The only difficulty on this sheet occurred when sounding at the eastern end with the first row of buoys, Adverse weather conditions made it necessary to use a single angle and gyro bearing at times, but enough three point fixes were obtained to control the lines. The work on the other rows of buoys was done under more favorable weather conditions, and no difficulty was noted in the plotting. The eastern section also included the irregular bottom, the remainder of the sheet being of even slope. This sheet was the division point between the irregular bottom off Brazos Entrance, and the more or less even slope which continued from here to the southern and western limits of the season's work.

The soundings on the cross lines all check very closely with a maximum difference of one foot. This is also true with respect to the launch sheet of this season, except at the easternmost junction line where the fathometer is two feet shoaler than the hand lead. The same difference of two feet was noticed with respect to the launch work of the previous season, which joins the sheet at the eastern end. It is also noted that the deeper soundings made by the ship's launch in the vicinity of the five fathom curve near longitude 95° 42' are about two feet deeper than the fathometer soundings. This ship launch work was done to disprove the 3¼ fathom sounding shown on chart No. 1117. It is believed that the fathometer soundings are more accurate than the hand lead in these cases of discrepancies.

Near position 26"C" day, a sounding of 44 feet was recorded. The observer was positive of the sounding. Later this area was closely covered by a series of lines and no indication was found of a shoal. Lat. 28°40.5' Long. 95°28.2' It is believed that this was a third echo and consequently should be rejected. However it is remotely possible that this was a small coral head, so it has been left in the records and on the sheet, pending action in the office verification. If it is a coral head it is different in character from those to the eastward on the adjoining sheet, as they all have indications of shoaler depth near them. This would have to be one of the pinnacle type, as we covered the vicinity with closely spaced lines. This third and fourth echo trouble became more frequent towards the latter part of the season.

44 ft. sounding retained.

Two flat ridges and part of a third, extending in an easterly direction fall within the limits of this sheet. These ridges in conjunction with formations on other sheets indicate the possibility of a delta radiating from the Colorado River. One ridge is in approximate latitude 28° 40', longitude 95° 30', and has several shoal spots varying from 42 to 44 feet in depth. Several samples of the bottom were obtained and they indicated sand and shell formation. In some cases it was impossible to obtain bottom specimens, as the bottom was too hard.

The other ridge was at the center of the offshore edge of the sheet. This is an unimportant ridge, being rather flat, and in a depth of 15 fathoms. It extends into the offshore sheet. Lat. 28°38' Long. 95°25'

H6398(1938)

The western end of a ridge on sheet No. 41 continues on to this sheet in latitude 28° 38'.

A hard pinnacle with a least depth of 42 feet in a general

depth of 50 feet was found in latitude 28° 43.1', longitude 95° 31.3'. The development of this area is shown on an insert on a scale of 1:20,000.

A 44 foot shoal in a general depth of 48 feet was found in latitude 28° 43.0', longitude 95° 32.6'.

The remainder of the sheet was quite regular in bottom configuration.

SHEET H-6400

FIELD NO. 43

Very little difficulty was experienced on this sheet either in the field or the smooth plotting. Practically all lines were rigidly controlled by three point fixes. Only occasionally was it necessary to resort to single angles and gyro bearings.

The bottom was quite regular throughout the sheet, except close to Pass Cavallo. A group of small shoals with least depths of 30 feet were found about ½ mile outside the 30 foot curve. Samples from the shoals indicated they were of sand and shell formation. They are unimportant as they are too close to the shallow entrance.

Soundings on cross lines were in close agreement, except on the line between 128 and 130 "D" day. These soundings were rejected as it was very evident that the recorder read the stray that gave a depth two feet greater than the true depth. It was the first time he had read the fathometer, and its jittery operation in these depths must have caused the discrepancy.

Junctions with adjoining launch sheets were in very good agreement, the maximum difference being one foot.

SHEET H-6401

FIELD NO. 44

Occasional difficulty was experienced with this sheet in the field work and smooth plotting. Entries in the records cover all cases of trouble. There were a few breakdowns of the fathometer which interrupted field work. Some difficulty was experienced in plotting gyro bearings, and it was necessary to reject some of them. Fortunately there were comparatively few of them, and practically all lines were rigidly controlled by three point fixes.

All crosslines and junctions with launch sheets checked very closely with respect to depth, the maximum difference being one foot.

The bottom was very regular, and there were no shoals found.

Between positions 14 and 15 on "S" day, there was an error in recording which wasn't noticed until the smooth plotting was done. The recorder put down 10 fathoms instead of 11. When questioned, the recorder stated that a wrong entry must have been made, as he would have called attention to a jump in depth on the fathometer. The boat sheet soundings did not show a shallower depth.

The last four positions on "T" day were plotted with either a single angle or on course and time. This was a cross line, and was completed late in the evening, the signals gradually fading from view.

SHEET H-6402

FIELD NO. 45

There were no particular difficulties on this sheet either in the field work or office smooth plotting. The fathometer caused some trouble but the correct depths were obtained as indicated by the cross lines. All cross lines and junctions with adjoining sheets agreed within one foot, except in two or three cases where there was a difference of two feet.

The bottom was quite regular throughout the sheet, except close inshore south of Aransas Pass. A shoal extends offshore south of the entrance somewhat as shown on the chart. This shoal was well developed by the Launch FARIS.

A few sand ridges about a mile or two offshore were noted between Aransas Pass and the south limit of the sheet. These are unimportant as the rise is only a foot or two. These indications were covered by cross lines.

The approaches to Aransas Pass were sounded with a three hundred meter spacing of lines out to the eleven fathom curve.

SHEET H-6403

FIELD NO. 46

This sheet was completed near the end of the season, and some of the work was done under adverse weather conditions. The smooth plotting of the sheet could not be completed in the field, and the sheet was forwarded to the office for plotting in accordance with a letter from the Director, a copy of which is included in this report. The records were carefully examined, and those positions which might prove difficult to plot in the office were plotted by Lt. E. B. Lewey. The smooth sheet projection with all signals plotted was prepared in the field in accordance with the letter. There should be no difficulty in plotting the sheet. A copy of the notes prepared regarding the smooth plotting is attached to this report.

The bottom configuration is very regular. A few slight rises were noted within a mile or two from shore. These were covered by cross lines but there were no indications of dangers.

TABLE OF STATISTICS FOR

1:40,000 SHEETS

Hydrographic Sheet No.	No. of Positions	No. of Soundings	Stat. Miles Sounding lines	Area Sq. Stat. Miles
H-6398	2865	20,461	1800.6	554.0
H-6399	3303	24,833	2180.5	817.0
H-6400	2376	18,526	1726.6	763.0
H-6401	2138	16,180	1461.7	604.0
H-6402	2640	18,286	1674.0	738.4
H-6403	1807	13,119	1136.4	599.0

DEPARTMENT OF COMMERCE

OFFICE OF THE DIRECTOR — U. S. COAST AND GEODETIC SURVEY

30-McC — WASHINGTON

October 20, 1938.

C
O
P
Y

To: Commanding Officer,
U.S.C. & G.S. S. HYDROGRAPHER,
P. O. Box 565,
Galveston, Texas.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Tide Data, Texas.

Further reference is made to your letter of September 24, 1938, requesting data for the reduction of soundings off the coast of Texas.

In view of the fact that tide records could not be obtained by use of the fathometer and that no outside tide stations were successfully maintained except for short intervals, it will be necessary to rely on the records of the Aransas Pass atation for tide reducers. Hourly heights for this station for the period April 24-August 2, 1938, have been tabulated in this office and are inclosed herewith. The tabulated heights are referred to the zero of the tide staff, which is 2.2 feet below mean low water.

For the hydrographic work of the previous season the tides offshore were assumed to occur one hour earlier and with a range 50% greater than the tides at our primary station in Galveston Harbor. Since the records show the tides at Aransas Pass to be practically the same as at the Galveston primary station, the same allowances for time and range can be assumed to apply to the Aransas Pass records in obtaining tide reducers for this season's work.

(S) L. O. Colbert,
Director.

C O P Y

C O P Y

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6398 a + b

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

Number of positions on sheet	2865
Number of positions checked	12
Number of positions revised	1
Number of soundings recorded	20,461
Number of soundings revised	27
Number of soundings erroneously spaced	34
Number of signals erroneously plotted or transferred	0

Date:

Verification by Francis B. Kelly Time: 21 days 1 hr (148 hr)

Review by Scott Strait Time: 19½ hr.

2629

Verifies report on H 6398a+b

The records conform to the requirements of the General Instructions.

The tops & bodies original & their origin is indicated on the inside cover of Vol I of the sounding records.

The junctions with H 5524 (1934), H 6305 (1937) & H 6314 (1937) on the north were poor & considerable adjustment & plotting of ± foot soundings was required to make the sheet fit.

The junctions with H 6253 (1937) on the east, with H 6291 (1937) on the south & with H 6399 (1938) on the west were good.

H 6404 (1938) which joins on the south has not as yet been noted.

H 6398b is a development of a series of sheets in letter 2046 & is on double scale. a blue rectangle was placed on H 6398a + no soundings were noted in this area on the a sheet. Quite a few soundings had to be transferred from "a" to "b" in order that within the area all soundings would appear on the "b" sheet & this should be used. For the 60 ft. curve however the "a" sheet should be used.

Francis B. Kelly
June 26, 1939

H-6398a
HYDROGRAPHIC SURVEY NO. H-6398b

Smooth Sheet Yes (One for H-6398a & One for H-6398b)

Boat Sheet Yes (" " " " " ")

Records; Sounding 10* Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes**

Title Sheet *

List of Signals Vol.#1

Landmarks for Charts (Form 567) None

Statistics Total statitics only in D.R.

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) ---

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

Hydrography: Total Days 21 * ; Last Date August 25, 1938 *

Remarks *Applies to H-6398a & H-6398b. ** Covers H-6398a, H-6398b, & H-6399 to H-6403 inclusive.

2776

H-6398 a

	Remarks	Decisions
1	For title	
2	" "	USGB
3	" "	
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6	Location of tide gage	
7	" " "	
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M 234

GEOGRAPHIC NAMES

Survey No. H6398

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Gulf of Mexico										1
Texas										2
Freeport Harbor										3
										4
		Names underlined in red approved								5
Aransas Pass		by L. Heck on			7/14/39					6
Galveston										7
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M 234 VR

	Remarks	Decisions
1	For title	
2	" "	USGB
3	" "	
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6	These three names are entered for future reference	
7	in connection with possible naming of this bank.	
8	(now marked by buoys advertising a Houston news-	
9	paper---see Desc. Report)	
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GEOGRAPHIC NAMES

Survey No. H6398b

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Gulf of Mexico										1
Texas										2
Freeport Harbor										3
										4
		Names underlined in red approved by L. Heck on 7/14/39								5
East Bank										6
Middle Bank										7
West Bank										8
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M 234 ✓R

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6399

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

Number of positions on sheet	3303
Number of positions checked	9
Number of positions revised	0
Number of soundings recorded	24,833
Number of soundings revised	17
Number of soundings erroneously spaced	0
Number of signals erroneously plotted or transferred	0

Date: June 21, 1939

Verification by G.C. McGlasson Time: 14 days 3½ hours (111½ hr.) 101½

Review by [signature] Time: 19 hr.

2629

HYDROGRAPHIC SURVEY NO. H-6399

Smooth Sheet Yes

Boat Sheet 3

Records; Sounding 12 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes(See D.R. of H-6398a)

Title Sheet Yes

List of Signals Vol. #1

Landmarks for Charts (Form 567) None

Statistics Total statistics only

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) ---

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

Hydrography: Total Days 21 ; Last Date July 25, 1938

Remarks Fathometer Corrections (HYDROGRAPHER-1738) (Library 877 SHS 6390-6405 1938 S-1663)

Geographic Positions of Hydrographic Signals } 2 cahiers Vol I & II
Taut Wire & Sun Azimuth data
877 SHS 6404 1938

S 1642

2776

H-6399

	Remarks	Decisions
1	For title	
2	" "	USCB
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M 234

GEOGRAPHIC NAMES

Survey No. H6399

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Matagorda Peninsula										1
Texas										2
Gulf of Mexico										3
										4
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										6
		L. Heck		7/14/59						7
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M 234 VR

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6400

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

Number of positions on sheet	2376
Number of positions checked	22
Number of positions revised	1
Number of soundings recorded	18526
Number of soundings revised	17
Number of soundings erroneously spaced	—
Number of signals erroneously plotted or transferred	—

Date: 12/6/39

Verification by G.H. Everett Time: 75 Hours

Review by Harold W. Murray Time: 8½ "

2629

Report on Verification H 6400 (1938)

Contemporary Topo Surveys

T6658 b (1938)
T6659 a,b (1938)
T6660 a,b (1938)
} Plane Table surveys

No shoreline added to this survey because it is an offshore survey.
Shore control from above listed topo surveys
Buoy control (see D.R. for source)

Records: Neat and conform to general requirements

Field Drafting: Excellent

Junctions: Junctions made to date have good agreement.
Junctions with H 6392, H 6401, H 6405 pending the completion of verification.

Curves: The 30 foot curve is only complete on inshore surveys.

Buoy at Lat. 28°-19.2'; Long. 96°-23.2' was transferred from H 6392 because it was used for control of lines on this survey.

Submitted 12/6/39

H Everett

HYDROGRAPHIC SURVEY NO. H-6400

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 9 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes (Same as H-6398a)

Title Sheet Yes

List of Signals Vol. #1

Landmarks for Charts (Form 567) None Yes

Statistics Total statistics only

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) ___

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

Hydrography: Total Days 16 ; Last Date August 25, 1939

Remarks

2776

GEOGRAPHIC NAMES

Survey No. H6400

Name on Survey	A, On Chart No. 1284, 1285	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	K,	
Matagorda Peninsula	✓									1
Pass Cavallo	✓		USGB decision							2
Matagorda Island	✓									3
Gulf of Mexico	✓									4
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Names underlined in red approved by GSE on 7/26/39

M 234

	Remarks	Decisions
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M 234		

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6401

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

Number of positions on sheet	2,138
Number of positions checked	14.
Number of positions revised	3
Number of soundings recorded	16,180
Number of soundings revised	27.
Number of soundings erroneously spaced	2
Number of signals erroneously plotted or transferred	0

Date: 1/12/40

Verification by H.F. Stegman Time: 9¼ hr.

Review by J.A. McCormick 1/13/40 Time: 6 hr.

2629

SOUNDING LINE CROSSINGS - Satisfactory

FIELD PLOTTING - Satisfactory

DISTRIBUTION OF TIME

Inking	7 days	1¾ hrs
Verification	3 days	
Junctions	2 days	4½ hrs
Report & misc.		1 hr
Total	13 days	¼ hr

Respectfully submitted

Jan. 15, 1940

Harold F. Stegman

VERIFICATION REPORT
ON H-6401 (1938)

CONDITION OF RECORDS - Neat and legible and in conformity with instructions of the Hydrographic Manual. ✓

SHORELINE - Not shown as this is on offshore survey. ✓

SIGNALS - Topographic signals are from Graphic Control surveys T-6660 b, T-6661 a & b, and T-6662 a, all of 1938 ✓ Hydrographic (buoy) signals were located by the party making this survey. See page 2 of the Descriptive Report for discussion of method of control. Buoy Bago, used on two fixes, does not fall within the limits of the sheet. It appears on H-6405 (1938)

DEPTH CURVES - Satisfactory ✓

JUNCTIONS WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

The following junctions were made:

H-6392, H-6393, H-6394 all of 1938, adjoining inshore. ✓

H-6400 and H-6402, both of 1938, adjoining to eastward and westward respectively.

H-6405 1938 adjoining offshore.

All junctions were very satisfactory. ✓

HYDROGRAPHIC SURVEY NO. H-6401

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 7 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes (same as H-6398a)

Title Sheet Yes

List of Signals ~~Vol.~~ #1

Landmarks for Charts (Form 567) None

Statistics Total statisitics only

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) ---

Special Chart for Lighthouse Service None
(Circular Nov.30, 1933)

Hydrography: Total Days 19 ; Last Date Sept. 14, 1938

Remarks

3776

GEOGRAPHIC NAMES

Survey No. H6401

Name on Survey	A, On Chart No. 1285	B, On previous survey No.	C, On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Matagorda Island	✓									1
Gulf of Mexico	✓									2
										3
										4
										5
										6
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Names underlined in red approved by GHE on 7/28/39										23
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M 234

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Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6402

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

Number of positions on sheet	2,640
Number of positions checked	32
Number of positions revised	2
Number of soundings recorded	18,286
Number of soundings revised	1
Number of soundings erroneously spaced	2
Number of signals erroneously plotted or transferred	0

Date: Approximately ⅓ of inking by J.A. Worcuck = 43h 15m
⅔ by W.A. Bruder.

Verification by Wallace A. Bruder Time: } = 69 45 / 113h 00m Total

Review by J.A. McCormick 12/11/39 Time: 10 hr.

2629

Verifiers Report H-6402

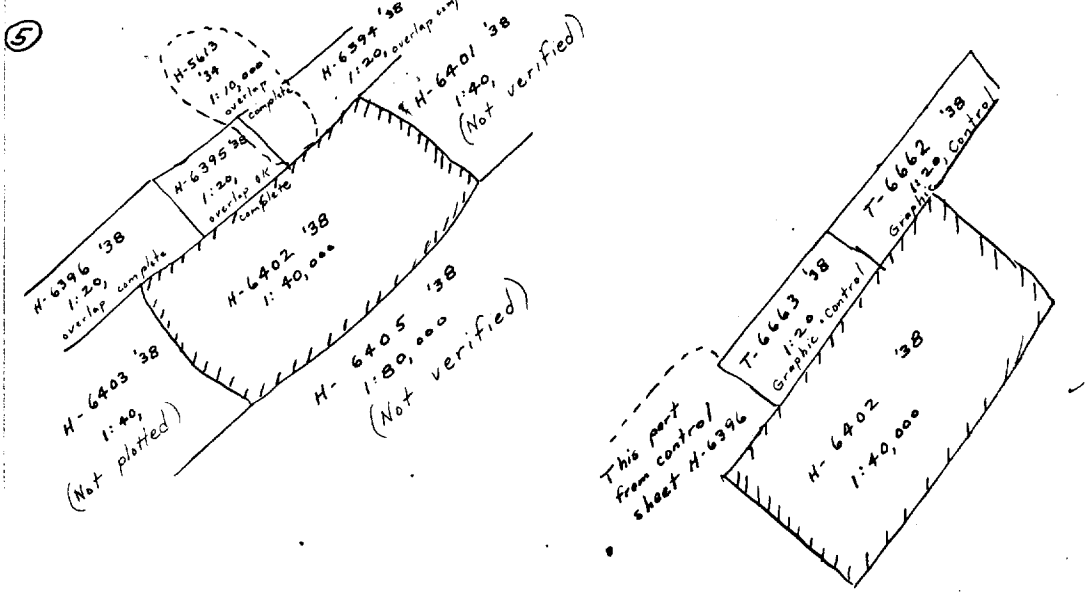
① The records conform very well to the requirements of the General Instructions. ✓

② The usual depth curves can be completely drawn, the 30 foot and 60 foot curves being the only two that appear on this offshore sheet. ✓

③ The field plotting was complete to the extent prescribed in the Hydro. Manual. ✓

④ The office draftsman did not have to do over any part of drafting done by field party, with the following addition: degree and minute marks were added to the projection numbers. (° ') No comment in review.

⑤



⑥ Remarks

a. Note scarcity of bottom characteristics. Par. 6a, review.

b. Knoll 1933 $\left.\begin{matrix}\phi\ 27°\ 47.5' \\ \lambda\ 97°\ 06.6'\end{matrix}\right\}$ changed by verifier on H-6402 to Knoll 1934 as per T-6663 and also geographic position list of Texas coast. ✓

c. Signals S.W. of T-6663 falling on H-6402 came from H-6396 control sheet filed with H-6396. These signals are shown as topographic signals on H-6402, but as 1939 triangulation signals on H-6396 (since H-6396 descriptive rpt: says were cut in by triangulation later in 1939). checked by proportional dividers and the positions on both sheets appear identical. Noted in review.

Respectfully Submitted,
Wallace A. Bruder
12/4/39

GEOGRAPHIC NAMES
Survey No. H6402

Name on Survey	A, On Chart No. 1285	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	K	
St. Joseph Island	✓									1
Aransas Pass	✓									2
Mustang Island	✓									3
Corpus Christi Pass	1286	(Do not ink name)								4
Gulf of Mexico	✓									5
Padre Island	1286									6
										7
										8
										9
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	Names underlined in red approved by GHE on 7/28/39									25
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M 234 ✓R

	Remarks	Decisions
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4	of no importance to this survey	
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M 234

HYDROGRAPHIC SURVEY NO. H-6402

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 9 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes (Same as H-6398a)

Title Sheet Yes

List of Signals Vol.#1

Landmarks for Charts (Form 567) None

Statistics Total statistics only

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524)----

Special Chart for Lighthouse Service (Circular Nov.30, 1933) None Chart submitted for H-6395 (inshore) gives available information.

Hydrography: Total Days 24 ; Last Date Nov. 8, 1938

Remarks

2776

Verification Report of H-6404 (1938)

Field # 46

1. As this is an offshore sheet no shoreline was transferred to it.
The source of signals is given in the descriptive report ~~for Proj. HT-214~~ Control sheets H-6396 (1938) and H-6397 (1938) cover the shoreline.
2. The depth curves could be satisfactorily drawn.
3. Sounding line crossings were very good.
4. Junctions with contemporary surveys H-6396 (1938), H-6397 (1938) H-6402 (1938) and H-6405 (1938) were satisfactory.
5. Condition of the sounding records was satisfactory
6. The protracting was very good.
7. The ~~field~~ office plotting of soundings was very good.

Respectfully submitted

R. H. Carstens

2/13/40

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6403 (1938)

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

Number of positions on sheet	1807
Number of positions checked	14
Number of positions revised	7
Number of soundings recorded	13,119
Number of soundings revised	0
Number of soundings erroneously spaced	0
Number of signals erroneously plotted or transferred	0

Date: Febr 13, 1940

Verification by R.H. Carstens Time: 59 - 4 hrs.

Review by J.A. Mc Cormick 2/15/40 Time: 5 hrs.

2629

HYDROGRAPHIC SURVEY NO. H-6403

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 6 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes (same as H-6398a)

Title Sheet Yes

List of Signals Vol.#1

Landmarks for Charts (Form 567) -None

Statistics Total statistics only

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) ---

*Special Chart for Lighthouse Service None
(Circular Nov.30, 1933)

Hydrography: Total Days 17 ; Last Date Nov. 4, 1938

Remarks

2776

	Remarks	Decisions
1		
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26		
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M 234		

GEOGRAPHIC NAMES

Survey No. H6403

Name on Survey	A, On Chart No. 1286, 1287	B, On previous survey No.	C, On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Padre Island	✓									1
Gulf of Mexico	✓									2
										3
										4
										5
										6
										7
										8
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										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
	Names underlined in red approved by GHE on 7/28/39									21
										22
										23
										24
										25
										26
										27

M 234 ✓R

June 21, 1939

Report on H 6399 (Field No 42)
Verifying and Inking

1. Condition of Records.

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

2. Shoreline and Signals.

This is an offshore survey and no shoreline is shown.

Topographic signals originate with T 6611 (1937), T 6612 (1937), T 6658a (1938), T 6658b (1938), and T 6659a (1938).

Buoy signals were located by three point fixes on shore signals or by taut wire and sun azimuth.

3. Sounding Line Crossings.

The sounding line crossings are, in general, very good.

4. Depth Curves.

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

In Lat. 28°36.5', Long. 95°28.2', The one half was added to the 60 foot soundings when

justified in order to smooth the ten fathom curve.

5. Junctions with Contemporary Surveys.

The present survey joins with H 6314 (1937) and H 6315 (1937) on the north, and the soundings are in good agreement.

This survey also joins on the north with H 6390 (1938), which has not been verified, Consequently the report on this junction will be made on H 6390 (1938).

This survey joins on the west with H 6400 (1938) and on the south with H 6404 (1938), neither of which have been verified, Consequently the report on these junctions will be made on H 6400 (1938) and H 6404 (1938) respectively.

This survey joins on the east with H 6398a (1938) and the soundings are in good agreement.

6. Field Platting.

The field platting appeared to be very good however the degree and minute marks were omitted from the sheet.

7. Notes to Reviewer.

In Lat. 28°28.1', Long. 95°54.5'. Volume 10 — page 69, between position 194-195, T day. There is recorded a 44 foot sounding which is rejected by the Chief of Party. This sounding was omitted from the smooth sheet

and attention is called to this feat.

In Lat. 28°41', Long. 95°32.5', Volume 2 - page 38. Position 111, D dog. There is recorded a fish buoy which is not platted on the smooth sheet for lack of specific information.

In Lat. 28°40.5', Long. 95°28.2', Year position 26, C dog. Volume 1 - page 53. There is recorded a 44 foot sounding which is questioned in the Description Report. It is possible that this sounding is correct, Consequently it was platted on the smooth sheet and attention is called to this feat.

Respectfully submitted,

G. C. McGlasson

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTOSTAT COPY~~

No. H-6400, H, 6402
H-6398ab, H-6399
H-6403, H-6405
~~None~~

received Apr. 10-25, 1939
registered May 2, 1939
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed

✓ JBR

rac

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

May 6, 1939

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

Plane of reference approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 6398 a-b

Locality Approaches to Brazos River, Texas Coast.

Chief of Party: G. C. Mattison in 1938
Plane of reference is mean low water reading
2.2 ft. on tide staff at Port Aransas (see H 6395)
5.0 ft. below B. M. 1

On a few days, when observations were not obtained at Aransas Pass, observations from the standard gage at Galveston were used.

Height of mean high water above plane of reference is 1.1 ft.

Condition of records satisfactory except as noted below:

L P Disney

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography: May 6, 1939

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

Plane of reference approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 6399

Locality Off Matagorda Peninsula, Texas Coast

Chief of Party: G. C. Mattison in 1938
Plane of reference is mean low water reading
2.2 ft. on tide staff at Port Aransas
5.0 ft. below B. M. 1

Height of mean high water above plane of reference is 1.1 ft.

Condition of records satisfactory except as noted below:

R P Kinney

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

Page

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography: May 6, 1939.

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

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 6400

Locality Approaches to Pass Cavallo, Texas Coast

Chief of Party: G. C. Mattison in 1938
Plane of reference is mean low water reading
2.2 ft. on tide staff at ~~mean low water reading~~ Port Aransas (see H 6395)
5.0 ft. below B. M. 1

Height of mean high water above plane of reference is 1.1 feet.

Condition of records satisfactory except as noted below:

L P Disney
Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154337

RGC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 6, 1939.

Division of Hydrography and Topography:

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

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 6401

Locality Off Matagorda Island, Texas Coast

Chief of Party: G. C. Mattison in 1938
Plane of reference is mean low water reading
2.2 ft. on tide staff at Port Aransas (See H 6395)
5.0 ft. below B. M. 1

Height of mean high water above plane of reference is 1.1 ft.

Condition of records satisfactory except as noted below:

L P Disney

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

Pae

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 7, 1939.

Division of Hydrography and Topography:

Division of Charts: Attention: Mr. H. R. Edmonston.

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 6402

Locality Approaches to Aransas Pass, Texas Coast.

Chief of Party: G. C. Mattison in 1938
Plane of reference is mean low water reading
2.2 ft. on tide staff at Port Aransas (see H6395)
5.0 ft. below B. M. 1

Height of mean high water above plane of reference is 1.1 feet.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

LG

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography: July 7, 1939

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 6403

Locality Off Padre Island, Texas Coast

Chief of Party: G. C. Mattison in 1938
Plane of reference is mean low water reading
2.2 ft. on tide staff at Port Aransas (see H 6395)
5.0 ft. below B. M. 1

Height of mean high water above plane of reference is 1.1 ft.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6398a and 6398b (1938)
FIELD NOS. 41 and 41a

Approaches to Freeport Harbor Entrance, Gulf of Mexico, Texas.
Surveyed in April - August 1938, Scale 1:40,000
Instructions dated February 17, 1937 and February 23, 1938.

No. 1. Dorsey Fathometer Soundings.

3 Point fixes on shore signals and buoy signals.

Chief of Party - G. C. Mattison.
Surveyed by - L. P. Raynor, G. L. Anderson, P. C. Doran, E. B. Lewey, J. T. Jarman, C. W. Clark, and G. W. Moore.
Protracted by - E. B. Lewey.
Soundings plotted by - E. B. Lewey.
Verified and inked by - F. B. Kelly.

1. Shoreline and Signals.

a. This is an offshore survey and no shoreline is shown.

b. The control is furnished mainly by buoy signals supplemented by signals from T-6610 (1937), T-6611 (1937), T-6612 (1937) and 1931 and 1934 triangulation.

c. The buoy signals were located by adjusted taut wire-sun azimuth traverse loops fixed at the inshore ends by sextant angles on object ashore. The data is filed in cahier I and II, "Geographic Positions of Hydrographic Signals", marked HYDROGRAPHER, G. C. Mattison, 1938 - Library No. S 1642.

2. Depth Curves.

The usual depth curves can be satisfactorily drawn. For charting purposes the 10 fathom curve, within the limits of H-6398b, is satisfactorily indicated on H-6398a.

3. Sounding Line Crossings.

Except for the crossline 1 to 20 "M" mentioned in the descriptive report, the agreement of soundings at cross lines throughout this survey is very good.

4. Junctions with Contemporary Surveys.

a. The junctions with the inshore surveys H-6314 (1937), H-6305 (1937), and H-5521 (1934) are

satisfactory as to extent but within the common area, many of the depths on the present survey vary from 1 to 2 feet shoaler. This is frequently the case where Dorsey Fathometer soundings join hand lead soundings. Because of these discrepancies a few 31 and 32 foot soundings were removed from H-6314 (1937) where the depths on H-6398a justified such action, consequently a satisfactory junction was made at the 30 foot curve.

b. The junctions with offshore surveys H-6253 (1937), H-6291 (1937), and H-6399 (1938) are satisfactory.

c. The junction with H-6404 (1938) on the south will be considered in the review of that survey.

5. Comparison with Prior Surveys.

a. H-474 (1855) Scale 1:20,000 and H-539 (1856) scale 1:20,000.

Portions of each of these sparsely developed surveys taken together cover the present survey out to the ten fathom curve. The agreement in depths is generally poor; some areas are from 3 to 10 feet deeper while others are 1 to 4 feet shoaler. The discrepancies are probably due to inaccurate control of the old surveys. The present survey contains 4 to 10 times as much development as these old surveys and should, within the common area, supersede them for charting purposes.

b. H-1350 (1875-77) Scale 1:600,000.

Several soundings controlled by dead reckoning fall within the limits of the present survey, only one of these soundings (13 fathoms) is shown on Chart 1117 in lat. 28° 31.8', long. 95° 20.0'. It is 15 feet shoaler than the surrounding depths on the present work, and is undoubtedly out of position. Because of the better development and control the present survey should supersede the old survey for charting the common area.

6. Comparison with Chart 593 (New Print dated Oct. 1, 1938)
Chart 1283 (New Print dated Apr. 11, 1938)
Chart 1117 (New print dated Feb. 7, 1939)

a. Hydrography.

The hydrography shown on the charts is based mainly on surveys discussed in the preceding

paragraphs, U. S. Engineers surveys (blueprints 28215-17 (1934), 28970 (1935) and Chart Letter 322 (1938).

Within the limits of the present survey there are eight soundings (Chart 1117) outside of the ten fathom curve including the three spots mentioned in the descriptive report which probably originate with British Admiralty sources. Some of them are shown on British Admiralty Charts 392, edition 1882, and 1639, edition 1922. They vary from 10 feet deeper to 29 feet shoaler than the present survey depths. The shoalest of these soundings were searched for by the field party and do not exist. All of these soundings are undoubtedly out of position and should be disregarded in future charting.

The information charted from Chart Letter 322 (1938) originates with the present survey. The complete information on the present survey should supersede this chart letter for charting purposes.

The Army Engineers' survey (blueprint 32657) made in August-November 1938, scale 1:10,000, overlaps the present survey from 1/4 to 1/2 mile between long. 95° 14', and long. 95° 19'. As stated in the descriptive report, the Engineers' survey is generally 1 to 2 feet deeper than the depths on the present survey, however, no difficulty will be encountered in compiling the charts.

b. Aids to Navigation.

The existence of the lighted bell buoy, charted in lat. 28° 54.68', long. 95° 14.92' and shown on H-6305 (1937) was verified in the sounding records of the present survey. No other aids to navigation fall within the limits of the present survey.

7. Condition of Survey.

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

b. The descriptive report satisfactorily covers all matters of importance.

c. The field plotting is excellent.

8. Compliance with Instructions for the Project.

This survey satisfies the instructions for the project.

9. Additional Field Work Recommended.

This is a well developed survey and no additional field work is necessary.

10. Superseded Prior Surveys.

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

H-474 (1855) in part
H-539 (1856) in part
H-1350 (1875-77) in part.

11. Reviewed by - Leo S. Straw, July 1, 1939.

Inspected by - H. R. Edmonston.

Examined and approved:

Thos B Reed
T. B. Reed,
Chief, Section of Field Records.

K.T. Adams
Chief, Division of Charts.

Raymond P. Ingman.
Chief, Section of Field Work.

G Rude
Chief, Division of H. & T.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6399 (1938) FIELD NO. 42

Off Matagorda Peninsula, Gulf of Mexico, Texas.
Surveyed in May - August 1938, Scale 1:40,000
Instructions dated Feb. 17, 1937, and Feb. 23, 1938,
and letter dated October 20, 1938.

Hand Lead and Machine Soundings.
No. 1 Dorsey Fathometer Soundings.

3 Point fixes on shore signals and buoy signals.

Chief of Party - G. C. Mattison.
Surveyed by - L. P. Raynor, G. L. Anderson, P. C. Doran, E. B. Lewey, J. T. Jarman, C. W. Clark, and G. W. Moore.
Protracted by - G. W. Moore.
Soundings plotted by - G. W. Moore.
Verified and inked by - G. C. McGlasson.

1. Shoreline and Signals.

   a. This is an offshore survey and no shoreline is shown.

   b. The control is furnished mainly by buoy signals supplemented by signals from T-6611 (1937), T-6612 (1937), T-6658a and b (1938), T-6659a (1938), and 1933-34 triangulation.

   c. The buoy signals were located by adjusted taut wire-sun azimuth traverse loops fixed at the inshore ends by sextant angles on objects ashore. The data is filed in cahier I and II, "Geographic Positions of Hydrographic Signals", marked HYDROGRAPHER, G. C. Mattison, 1938 - Library No. S1642.

2. Depth Curves.

   The usual depth curves may be satisfactorily drawn.

3. Sounding Line Crossings.

   The agreement of soundings at line crossings is good.

4. Junctions with Contemporary Surveys.

   a. The junctions with the inshore surveys H-6314 (1937) and H-6315 (1937) are satisfactory. The junction with H-6390 (1938) will be considered in the review of that survey.

b. The junctions on the west, south and east with offshore surveys H-6400 (1938), H-6404 (1938) and H-6398a (1938) will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys.

a. H-539 (1856) Scale 1:20,000, and H-1427a (1879), scale 1:40,000.

Portions of each of these surveys taken together cover the present survey out to the ten fathom curve. The agreement of depths is varied; some areas are in fair agreement, some vary one to three feet deeper and others one to four feet shoaler than the depths on the present survey. The present survey contains from four to ten times as much development as these old surveys and should, within the common area, supersede them for charting purposes.

b. H-1350 (1875-77) Scale 1:600,000.

A single line of dead reckoning soundings from this small scale survey crosses the present survey in an east-west direction just north of lat. 28° 25.0'; they vary from one foot shoaler to three feet deeper than the depths obtained on the present work. The present survey adequately covers this area and should supersede the soundings from H-1350 (1875-77) for charting purposes.

6. Comparison with Chart 1283 (New Print dated Apr. 11, 1938)
Chart 1284 (New Print dated Apr. 14, 1939)
Chart 1117 (New Print dated Feb. 7, 1939)

The hydrography shown on the charts, originates with surveys discussed in the preceding paragraphs except for five soundings widely separated in the southeastern portion of the area covered by the present survey. The authority for these soundings cannot be readily ascertained. They probably originate with British Admiralty sources since some of them are shown on British Admiralty Chart 392, edition of 1882, and Chart 1639, edition 1922. These soundings are from four feet deeper to 14 feet shoaler than the present survey depths, and are undoubtedly out of position. The present survey is adequately developed and should supersede these soundings for charting purposes.

7. Condition of Survey.

a. The records are neat, legible and confrom to the requirements of the Hydrographic Manual.

b. The descriptive report satisfactorily covers all items of importance.

c. The field plotting is excellent.

8. Compliance with Instructions for the Project.

This survey satisfies the instructions for the project.

9. Additional Field Work Recommended.

This is a well developed survey and no additional field work is necessary.

10. Superseded Prior Surveys.

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

H-539	(1856)	in part
H-1427	(1879)	in part
H-1350	(1875-77)	in part

11. Reviewed by - Leo S. Straw, June 28, 1939.

Inspected by - H. R. Edmonston.

Examined and approved:

Thos. B. Reed
T. B. Reed,
Chief, Section of Field Records.

K. T. Adams
Chief, Division of Charts.

Raymond P. Eyman
Chief, Section of Field Work.

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

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6400 (1938) FIELD NO. 43.

Approaches to Pass Cavallo, Gulf of Mexico, Texas.
Surveyed in July-Aug., 1938, Scale 1:40,000.
Instructions dated Feb. 17, 1937 & Feb. 23, 1938 (HYDROGRAPHER)

Dorsey Fathometer Soundings. 3 Point fixes on shore and buoy signals.

Chief of Party - G. C. Mattison
Surveyed by - L. P. Raynor, G. L. Anderson, P. C. Doran, E. B. Lewey, J. T. Jarman, C. W. Clark and G. W. Moore.
Protracted by - G. W. Moore
Soundings plotted by - G. W. Moore
Verified and inked by - G. H. Everett

1. Shoreline and Signals.

a. This is an offshore survey and no shoreline is shown.

b. Shore signals originate with 1938 topographic sheets: T-6658, T-6659a and b, and T-6660a and b.

The buoy signals were located by adjusted taut wire, sun azimuth traverse loops fixed at the inshore ends by sextant angles on shore objects. The data is filed in cahier I and II "geographic positions of Hydrographic Signals" marked HYDROGRAPHER, G. C. Mattison, 1938 - Library No. S1642.

2. Sounding Line Crossings.

General agreement of sounding line crossings is excellent.

3. Depth Curves.

The usual depth curves may be completely drawn.

4. Junctions with Contemporary Surveys.

a. The junctions on the north and northeast with H-5864 (1934-35), H-6391 (1938), and H-6390 (1938); on the east with H-6399 (1938); and on the south and southeast with H-6404 (1938) are excellent.

b. The junctions on the south and southwest with H-6405 (1938), on the west with H-6401 (1938) and on the north and northwest with H-6392 (1938) will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys.

a. H-635 (1858), 1:20,000.

This survey covers the vicinity of Pass Cavallo. Only a fringe of soundings fall within the present survey limits and these vary 1 to 6 feet shoaler than the present survey depths. The present survey should supersede this survey.

b. H-1350 (1875-77), 1:600,000.

This sparsely covered dead reckoning controlled survey contains sounding lines spaced about 35 miles apart. Only two sounding lines fall within the present survey limits. Agreement of depths is generally good. The present survey should supersede this survey.

c. H-1427a (1879) and H-1427b (1879), 1:80,000.

These old surveys consist of sounding lines spaced 3/4 to 1-1/4 miles apart and run normal to the shoreline. They cover the entire area of the present survey out to depths of about 66 to 75 feet. General agreement of depths is good although a few spots close inshore on the present survey vary 1 to 4 feet deeper. The present survey should supersede this survey.

6. Comparison with charts 1117 (New print dated Feb. 7, 1939).
1284 (New print dated Apr. 4, 1939).
1286 (New print dated Mar. 5, 1939).

a. Hydrography.

Hydrography shown on the charts originate with surveys discussed in previous paragraphs of this review and no further consideration is necessary.

b. Aids to Navigation.

The uncharted buoy in lat. 28°19', long. 96°23' which is also shown on H-6392 (1938) will be considered in relation to the hydrography in the review of that sheet.

7. Condition of Survey.

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

b. The descriptive report satisfactorily covers all items of importance.

c. The field protracting and plotting are excellent.

d. Additional bottom characteristics for charting purposes may be obtained from prior surveys mentioned in paragraph 5 of this review.

8. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project.

9. Additional Field Work Recommended.

This is an excellently developed survey and no additional field work is necessary.

10. Reviewed by - Harold. W. Murray, December 8, 1939.

11. Inspected by - H. R. Edmonston.

Examined & Approved:

Thos B Reed
T. B. Reed,
Chief, Section of Field Records.

K.T. Adams
Chief, Division of Charts.

Raymond P. Eyman.
Chief, Section of Field Work.

G Rude
Chief, Division of H. & T.

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6401 (1938) FIELD NO. 44.

Texas, Gulf of Mexico, Off Matagorda Island.
Surveyed in Aug.-Sept., 1938, Scale 1:40,000.
Instructions dated Feb. 17, 1937; Feb. 23, 1938 (HYDROGRAPHER).

Soundings: Dorsey Fathometer.

Control: 3 Point fixes on shore signals and buoys.

Chief of Party - G. C. Mattison
Surveyed by - Officers of Ship HYDROGRAPHER
Protracted by - C. W. Clark
Soundings plotted by - E. B. Lewey
Verified and inked by - H. F. Stegman
Reviewed by - J. A. McCormick, January 13, 1940.
Inspected by - H. R. Edmonston

1. Shoreline and Signals.

As this is an offshore survey, no shoreline is shown. Topographic signals are from graphic control surveys T-6660b, T-6661 a&b and T-6662a of 1938. Buoy signals were located by taut wire, sun azimuth traverse, computations for which are filed in the library under Accession No. S-1642, Shelf No. 877-SHS-6404-1938-M.

2. Depth Curves.

Satisfactory.

3. Sounding Line Crossings.

Satisfactory.

4. Junctions with Contemporary Surveys.

Junctions with H-6392, H-6393 and H-6394 of 1938 on the north, H-6400 (1938) on the east; H-6405 (1938) on the south and H-6402 (1938) on the west are satisfactory.

5. Comparison with Prior Surveys.

a. H-1350 (1875-77), 1:400,000.

The above survey includes the total area covered by the present survey but its soundings are so widely spaced that only about 15 fall within that area. The old soundings average about 6 feet deeper than those on the pre-

sent survey, which is probably due mostly to the dead reckoning, astronomic fix control which must have been used on the old survey. The present survey supersedes H-1350 in the common area.

b. H-1427b (1879), 1:40,000; H-1464 (1880), 1:40,000; H-1465 (1880), 1:40,000.

These surveys do not extend quite as far offshore as the present survey but their combined area covers most of that included on the latter. Inshore, the old surveys are in fair to good agreement with the present survey except in the vicinity of Pass Cavallo on the northeast where natural changes are apparently responsible for the old soundings averaging about 4 feet shoaler than the new. At the offshore limits of the old surveys similar differences, both shoal and deep, are probably due to weakening of the old control. The present survey supersedes the old surveys in the common area.

6. Comparison with Chart 1117 (New Print of February 7, 1939).
Chart 1284 (New Print of April 14, 1939).
Chart 1285 (New Print of February 17, 1938).

Hydrography charted in the area covered by the present survey is from surveys discussed in the foregoing paragraphs.

7. Condition of Survey.

Satisfactory.

8. Compliance with Instructions for the Project.

Satisfactory.

9. Additional Field Work Recommended.

None.

Examined and Approved:

T. B. Reed,
Chief, Section of Field Records.

K. T. Adams
Chief, Division of Charts.

Raymond R. Eyman
Chief, Section of Field Work.

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

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6402 (1938) FIELD NO. 45.

Approaches to Aransas Pass, Gulf of Mexico, Texas.
Surveyed in Sept.-Nov., 1938, Scale 1:40,000.
Instructions dated Feb. 17, 1937; Feb. 23, 1938 (HYDROGRAPHER)

Dorsey Fathometer Soundings. 3 Point fixes on shore signals and buoys.

Chief of Party - G. C. Mattison
Surveyed by - Officers of Ship HYDROGRAPHER
Protracted by - J. W. Stirni
Soundings plotted by - J. W. Stirni
Verified and inked by - W. A. Bruder and J. W. Vonasek.

1. Shoreline and Signals.

As this is an offshore survey, shoreline is not shown. Topographic signals are from T-6662 (1938), T-6663 (1938) and from control sheet for H-6396 (1938). Topographic locations from H-6396 were subsequently checked by 1939 triangulation. Buoy signals were located by taut wire and sun azimuth traverse, the computations for which are filed on the library shelves with the sounding volumes for this series of surveys.

2. Depth Curves.

Satisfactory.

3. Sounding Line Crossings.

Satisfactory.

4. Junctions with Contemporary Surveys.

Junctions with inshore surveys H-6396 (1938), H-6395 (1938), H-5613 (1934) and H-6394 (1938) are satisfactory. Junctions with H-6401 (1938) on the northeast, H-6405 (1938) on the southeast and H-6403 (1938) on the southwest will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys.

a. H-1350 (1875-77), scale 1:600,000.

The few soundings shown in the overlapping portion of the old survey are in fair agreement with those on the present survey. The latter supersedes H-1350 in the common area.

b. H-1465 (1880), scale 1:40,000.

This survey covers most of the area of the present survey with sounding lines spaced approximately two miles apart. Agreement of depths with those on the present survey is

fair to good, differences rarely exceeding 2 to 3 feet. The present survey supersedes H-1465 in the common area.

c. H-2054 (1891), 1:10,000; H-2374 (1899), 1:10,000.

These surveys of Aransas Pass overlap small portions of the present survey. Agreement of depths with those on the present survey is fair considering the frequent dredging operations in the vicinity. The present survey supersedes the old surveys in the common area.

6. Comparison with Chart 1117 (New Print of Feb. 7, 1939).
Chart 1285 (New Print of Feb. 17, 1938).
Chart 1286 (New Print of Mar. 3, 1938).

a. Hydrography.

Hydrography charted in the area covered by the present survey is from surveys discussed in the foregoing paragraphs. Bottom characteristics charted from the old surveys should be retained where necessary to amplify such information on the present survey.

b. Aids to Navigation.

The position obtained on the present survey for the sea buoy off Aransas Pass is 0.7 mile 285° true from the charted position. Either position adequately marks the approaches to the Pass.

7. Condition of Survey.

Satisfactory.

8. Compliance with Instructions for the Project.

Satisfactory.

9. Additional Field Work Recommended.

None.

10. Reviewed by - J. A. McCormick, December 11, 1939.

11. Inspected by - H. R. Edmonston.

Examined & Approved:

Thos B Reed
T. B. Reed,
Chief, Section of Field Records.

K. T. Adams
Chief, Division of Charts.

Raymond P. Ervin
Chief, Section of Field Work.

G Rude
Chief, Division of H. & T.

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6403 (1938) FIELD NO. 46

Texas, Gulf of Mexico, Off Padre Island
Surveyed in Sept.-Nov., 1938, Scale 1:40,000
Instructions dated Feb. 17, 1937; Feb. 23, 1938 (HYDROGRAPHER)

Soundings:
Dorsey Fathometer

Control:
Three-point fixes on shore signals and buoys

Chief of Party-G. C. Mattison
Surveyed by - Officers of Ship HYDROGRAPHER
Protracted by E. B. Lewey; G. B. Littlepage
Soundings plotted by - G. B. Littlepage
Verified and inked by - R. H. Carstens
Reviewed by - J. A. McCormick, Feb. 15, 1940
Inspected by - H. R. Edmonston

1. Shoreline and Signals

As this is an offshore survey, no shoreline is shown. Topographic signals are from control sheets for H-6396 and H-6397 of 1938. Buoy signals were located by taut wire, sun azimuth traverse, the computations for which are filed in the library under Accession No. S-1642, Shelf No. 877-SHS-6404-1938-M.

2. Depth Curves

Satisfactory.

3. Sounding Line Crossings

Satisfactory.

4. Junctions with Contemporary Surveys

Junctions with H-6396 and H-6397 of 1938 on the west, H-6402 (1938) on the north and H-6405 (1938) on the northeast are satisfactory. Surveys on the east and south were not completed during the 1938 field season.

5. Comparison with Prior Surveys

a. H-1350 (1875-77), 1:600,000

The few soundings on H-1350 which fall in the area covered by the present survey are in poor agreement with depths on the latter. They appear to be about one mile out of position, indicating that the control on the old survey (presumed to be dead reckoning) was inaccurate. The present survey supersedes H-1350 in the common area.

b. H-1465 (1880), 1:40,000; H-1484a & b (1881), 1:40,000

Sounding lines on the above surveys are mostly normal to the beach and are spaced approximately 5 miles apart. Depths seldom differ from those on the present survey by more than 3 feet even at the outer limits of the common area where depths are around 120 feet. This is unusually good agreement considering the lapse of 57 years between surveys of a mud bottom and the greater accuracy of the Dorsey fathometer as compared with the type of leadline in use in 1881. The present survey supersedes the old surveys in the common area.

6. Comparison with Chart 1117 (new print of Feb. 7, 1939)
Chart 1286 (new print of Mar. 3, 1938)
Chart 1287 (new print of Feb. 4, 1936)

Hydrography charted in the area covered by the present survey is entirely from surveys discussed in the foregoing paragraphs.

7. Condition of Survey

Satisfactory. Most of the plotting and all of the penciling of soundings were done in the Washington Office.

8. Compliance with Instructions for the Project

Satisfactory.

9. Additional Field Work Recommended

None.

10. Superseded Surveys

H-1350 in part
H-1465 "
H-1484a & b "

Examined and approved:

Thos B Reed
T. B. Reed
Chief, Section of Field Records

K. T. Adams
Chief, Division of Charts

Raymond P. Ryman
Chief, Section of Field Work

G Rude
Chief, Division of H. & T.

GDC

DEPARTMENT OF COMMERCE

OFFICE OF THE DIRECTOR — U. S. COAST AND GEODETIC SURVEY

21-RS — WASHINGTON

1995 HY 4

March 11, 1939.

C
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Y

To: Commanding Officer,
U.S.C. & G.S.S. HYDROGRAPHER
Box 565,
Galveston, Texas.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Office work.

Referring to the third paragraph of your letter of March 1, 1939, you are informed that the Chart Division can plot sheet No. 46 if it is fixed position work on buoys and your party plots the buoy positions.

The probability of assigning two deck officers to the HYDROGRAPHER in the near future is small. The Civil Service Commission was requested some time ago to furnish information regarding the physical qualifications of several eligibles on the Junior Engineer (Civil and Electrical) list, but to date this information has not been received. Lists of eligibles for deck officer positions fully meeting our requirements are not now supplied by the Commission. The results of recent examinations for Junior Engineer have not been made known to this office.

Assignments to the HYDROGRAPHER will be made as promptly as possible.

(S) Paul C. Whitney,
Acting Director.

Small portion of H-6398 applied to Ch 593 (S.E. corner) Aug. 1939 J.T.G. before reprint

H-6398 2nd " applied to Ch 1283 - Aug. 1939 - G.H.S. "

H 6399 applied to Ch 1283 Sept 8, 1939 by H.S.G. & J.T.W.

H 6400 " " 1284 " G.H.S.

H 6399 " " " "

H-6402 - 6403 applied to chart 1286 5/2/40 g.H.S.

H-6403 applied to chart 1287 5/7/40 g.H.S.

H-6400, 6401, 6402, 6403 applied to chart 1117 5/10/40 g.H.S.

H-6402 APP'd Chart 523 3-21-66HR

H-6400 " " " 889-SC Aug 1967 J.O'C.

H-6400 " " 522 Dec 29, 1969 gmall