

8747

Diag. Cht. No. 1282-2.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 742-10-2-63 Office No. H-8747

LOCALITY

State Texas

General locality Galveston Bay

Locality Vicinity of Texas City Dike

1963-65

CHIEF OF PARTY

P. A. Stark & R. E. Alderman

LIBRARY & ARCHIVES

DATE April 1967

2
17
8

HYDROGRAPHIC TITLE SHEET

H-8747

INSTRUCTIONS - 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.

HFP-10-2-63

State TEXAS

General locality GALVESTON BAY

Locality Vicinity of TEXAS CITY DIKE

Scale 1:10,000 Date of survey March 13, 1963 - Aug. 10, 1965

Instructions dated 211-pt, 25 April 1962 Project No. OPR-428
4 June 1964

Vessel Launch CS-1177, CS-183, and Skiff 758

Chief of party LCDR. P.A.STARK, 1963 LCDR. R.E.ALDERMAN, 1965

Surveyed by R.A.LEWIS, G.F.TREFETHEN, AND W.H.PINER

Soundings taken by echo sounder, hand lead, pole _____

Graphic record scaled by PARTY PERSONNEL

Graphic record checked by PARTY PERSONNEL

Protracted by F.R. Gilden

Soundings penciled by F.R. Gilden

Soundings in ~~fathoms~~ feet at MLW MLW

REMARKS: _____

DESCRIPTIVE REPORT
TO ACCOMPANY HYDROGRAPHIC SURVEY H-8747

(Field No. HFP 10-2-63)

SCALE: 1:10,000

PROJECT: OPR-428

OFFICERS IN CHARGE

P.A. STARK, LCDR. 1963

R.E. ALDERMAN, LCDR. 1965

SURVEYED BY:

R.A. LEWIS
G.F. TREFETHEN
W.H. PINER

A. PROJECT

Work on project OPR-428 Galveston Bay, Texas was done in accordance with basic Instructions 211-pt, S-2-ECFP dated 25 April, 1962 and Supplemental Instructions C-211, S-2-HFP-219, dated 4 June 1964. ✓

B. AREA SURVEYED

This survey covers that portion of Galveston Bay in the vicinity of the Texas City Dike. Survey limits are from Lat. $29^{\circ}20.00''$ to Lat. $29^{\circ}24.45''$, Long. $94^{\circ}46.30''$ to Long. $94^{\circ}53.45''$. ✓

This survey makes junction with contemporary survey H-8748 (1962-65) (10-7-62) to the East, H-8745 (20-2-63) to the North and East, H-8746 (05-1-62) to the West, and H-8750 (10-3-63) 1963-66 to the South. (1962-65)

Hydrography began on March 13, 1963 and ended on Aug. 9, 1965. Work was interrupted from May 3, 1963 to March 31, 1965 because of a special project at Lake Mead, Nevada.

C.SOUNDING VESSELS

Launches CS-1177, CS-183 and Skiff 758 were used in this survey.

VESSEL	IDENTIFYING COLOR
Launch CS-183	Violet
Launch CS-1177	Blue
Skiff 758	Red

D.SOUNDING EQUIPMENT

Fathometers Type DE-723 No.544 No. 265 were used on Launch CS-183.

Fathometer Type DE-723 No.265 and No. 263 and Raytheon Type DE723 No. 544 was used on Skiff 758. Fathometer Type DE-723 No. 549 was used on Launch CS-1177.

Corrections to be applied to echo soundings were determined from daily bar checks and tabulated in Appendix B of this report.

A sounding pole was used to obtain soundings in less than 4 feet of water on Launches CS-1177 and CS-183. A sounding pole was used to obtain soundings in less than 3 feet of water on Skiff 758.

An armed lead line was used to obtain bottom samples.

No unusual difficulties were encountered with the sounding equipment.

E.SMOOTH SHEET

The smooth sheet was projected and ruled by the Washington Office. Smooth sheet plotting will be accomplished by Hydrographic Field Party 242.

F.CONTROL

Horizontal control was obtained by standard visual three-point sextant fix methods. Appendix A of this report contains a complete list of control used and the quality and source of control.

G. SHORELINE (See Review Por. 2)

Shoreline detail was taken from blue-line prints of Manuscripts T-12229, T-12230, T-12233, T-12234, and T-9802 and T-12235 (1962-65) (1962) (1962-63) (1962-65) (1962-65) (1960-62)

The shoreline in the area Northwest of the Texas City Dike shown on Manuscript T-9802 has changed due to the construction of the Texas City high water levee. This construction was in progress at the time of the survey, and the levee's shoreline was dashed in on the boat sheet from Chart No. CS 518.

The smooth plotter should check the boat sheet before he inks the shoreline on the smooth sheet.

H. CROSSLINES

Crosslines were run at approximately 10% of the regular system of lines. Soundings are in agreement.

I. JUNCTIONS

Depths at the junction with the survey listed in Section B are in agreement and depth curves can be adequately drawn at all junctions.

J. COMPARISON WITH PRIOR SURVEYS

A comparison was made with prior survey H-5462 1933-34 Scale 1:10,000 as follows:

In the area of Lat. $29^{\circ}20.00$ and Lat. $29^{\circ}21.00$, Long. $94^{\circ}47.00$ to Long. $94^{\circ}49.00$. The soundings have changed due to dredging work done in this area and pumping of spoil on the shoreline.

In some parts of the Texas City Channel the new survey shows deeper depths, which is due to the dredging of the Channel since the last survey of 1933-34.

The most noticeable changes are in the area of the two Channels, to Houston and to Texas City.

Soundings in the remaining area are in fair agreement as shown on this survey.

The soundings on Half Moon shoal are in very good agreement.

J.COMPARISON WITH PRIOR SURVEYS(cont)

OBJECT	POSITION	REMARKS
Pile 2ga (pur)	Lat. 29°22.28 Long. 94°51.02	Bares ⁴ 8' ^H MZW
Pile 3ga (pur)	Lat. 29°22.25 Long. 94°50.84	Bares ³ 8' ^H MZW
Pile 10ja (pur)	Lat. 29°22.12 Long. 94°50.29	Bares ^{10'} 11' ^H MZW
Pile 8ha (pur)	Lat. 29°21.90 Long. 94°49.61	Bares ^H 4' MZW
Pile 29ha (pur)	Lat. 29°21.76 Long. 94°49.28	Bares ⁹ 10' ^H MZW
Pile (leaning) 30ha (pur)	Lat. 29°22.83 Long. 94°49.46	Bares 3' MZW
Pile 31ha (pur)	Lat. 29° ^{21.95} 22.01 Long. 94°49.85 90	Bares ⁴ 8' ^H MZW
Pile 32ha (pur)	Lat. 29°22.17 Long. 94°50.48	Bares ^{4'} 8' ^H MZW
Pile 33ha (pur)	Lat. 29°22.20 Long. 94°50.66	Bares ^{3'} 5' ^H MZW
Pile 34ha (pur)	Lat. 29°22.37 Long. 94°51.39	Bares ^{4'} 8' ^H MZW
Pile 19Ka (pur)	Lat. 29°23.59 Long. 94°48.72	Bares ⁸ 11' ^H MZW
C of E Survey Platform 20Ka (pur)	Lat. 29°23.44 Long. 94°48.67	Bares ^H 12' MZW
Pile 21Ka (pur)	Lat. 29°23.27 Long. 94°48.58	Bares ⁸ 7' ^H MZW
Pile 22Ka (pur)	Lat. 29°23.13 Long. 94°48.50	Bares ⁸ 10' ^H MZW
Pile 23Ka (pur)	Lat. 29°22.98 Long. 94°48.43	Bares ⁸ 10' ^H MZW

J.COMPARISON WITH PRIOR SURVEYS(cont)

OBJECT	POSITION	REMARKS
Pile	Lat. 29°22.84' Long. 94°48.28'	Bares 9' MLW
C of E Survey Platform 27Ka (pur)	Lat. 29°22.68' Long. 94°48.28'	Bares 12' MLW
Pile 29 Ka (pur)	Lat. 29°22.38' Long. 94°48.11'	Bares 7' H 9' MLW
Pile 30Ka (pur)	Lat. 29°22.22' Long. 94°48.04'	Bares 8' H 10' MLW
Pile 3M (pur)	Lat. 29°21.28' Long. 94°48.26'	Bares 12' MLW
Pile 52C (red)	Lat. 29°21.43' Long. 94°48.89'	Bares 7' H 8' MLW
Pile 56C (red)	Lat. 29°21.29' Long. 94°48.90'	Bares 5' H 7' MLW
Pile 127C (red)	Lat. 29°20.44' Long. 94°49.96'	Bares 9' H 10' MLW
Pile 131C (red)	Lat. 29°20.65' Long. 94°49.67'	Bares 9' H 10' MLW
Pile 136C (red)	Lat. 29°20.85' Long. 94°49.38'	Bares 8' H 9' MLW
Pile (leaning) 137C (red)	Lat. 29°20.75' Long. 94°49.53'	Bares 4' H 5' MLW
Pile 41d (red)	Lat. 29°20.13' Long. 94°50.42'	Bares 9' H 10' MLW
Piles (3) 37f (red)	Lat. 29°22.42' Long. 94°46.71'	Bares 8' H 7' MLW
Pile 37h (red)	Lat. 29°21.66' Long. 94°49.04'	Bares 9' H 10' MLW
Pile 5m (pur)	Lat 29°21.22' Long 94°48.10'	
Pile 26ka	Lat 29°22.83' Long 94°48.35'	Bares 7' MHW

J. COMPARISON WITH PRIOR SURVEYS (cont)


Objects were located as follows on this survey:

OBJECT	POSITION	REMARKS
* Pile 1b (pur)	Lat. 29°21.62 ^{3 2} Long. 94°48.94 ^{5 4}	C of E Pile ^{ok}
Pile 141C (pur)	Lat. 29°22.65 Long. 94°52.47	C of E Pile
Pile 68d (pur)	Lat. 29°22.46 Long. 94°51.75	C of E Pile
Pile 69d (pur)	Lat. 29°22.33 Long. 94°51.20	C of E Pile
Pile (leaning) 38h (red)	Lat. 29°21.55 Long. 94°48.95	Bares ^{2' MLW} 1-foot
* Pile	Lat. 29°21.62 Long. 94°48.94	C of E Pile Same as No. 1
Pile 6m (pur)	Lat. 29°21.14 Long. 94°47.93	C of E Pile
Pile 1r (pur)	Lat. 29°20.87 Long. 94°47.67	Bares ^{9 H} 10' MLW
Pile 1s (pur)	Lat. 29°20.79 Long. 94°47.50	Bares ^{4 H} 5' MLW
Pile 2s (pur)	Lat. 29°20.73 Long. 94°47.33	Bares ^{7 H} 8' MLW
Pile 3s (pur)	Lat. 29°20.71 Long. 94°47.41	Bares ^{8 H} 9' MLW
Pile 18ka (pur)	Lat. 29°23.88 Long. 94°48.88	Bares ^{9 H} 12' MLW
Pile 1da (pur)	Lat. 29°22.5 ⁰ Long. 94°51.92	Bares ^{5 H} 6' MLW
Pile 1ga (pur)	Lat. 29°22.59 Long. 94°52.30	Bares ^{4 H} 5' MLW

J. COMPARISON WITH PRIOR SURVEYS(cont)

OBJECT	POSITION	REMARKS
Pile (broken) 38h (red)	Lat. 29°21.57 Long. 94°48.96	Bares 2' MLW
Piles (3) 85K (red) Dol	Lat. 29°22. ³ 81 Long. 94°52.30	Bares 10' MLW
Piles (4) 84K (red) Dol	Lat. 29°22. ³ 8 ³⁸ Long. 94°52.29	Bares 10' ^{8' H} MLW
Pile 1m (red)	Lat. 29°22.68 Long. 94°52.67	Bares 6' ^{4' H} MLW
Pile (submerged) 1 meter West of above pile		Awash at MLW
Piece of Steel 3"x6" 1n (red) Iron stake	Lat. 29°22.51 Long. 94°52.5 ⁷	Bares 2' MLW
C of E Survey Platform 22g (red)	Lat. 29°24.19 Long. 94°49.02	Bares 12' MLW
Steel Pipe 15" 150g (pur)	Lat. 29°23.99 Long. 94°50.99	Bares 2' MLW
Fishing Pier in area of	Lat. 29°22.01 Long. 94°48.62	
Metal Object (Obstr) 91d - (pur)	Lat. 29°22.23 Long. 94°50. ¹⁰ ₀₉	1' off bottom in 15' of water Covers 14' at MLW
Iron Pipe (subm) 75e (pur)	Lat. 29°22.25 Long. 94°52.34	1' off bottom Covers 3' at MLW
Obstruction (subm) 84e (pur)	Lat. 29°22.42 Long. 94°51.43	2' off bottom Covers 8' ₃ at MLW
Pile (subm) 87e (pur)	Lat. 29°22.40 Long. 94°51.26	1' off bottom Covers 7' ₅ at MLW
Pile (subm) 15f (pur)	Lat. 29°22. ⁶ 42 Long. 94°52.36	2' off bottom Covers 8' ₄ MLW
Pile (subm) 21f (pur)	Lat. 29°22.53 Long. 94°51.86	2' off bottom Covers 4' at MLW
Pile (subm) 26f (pur)	Lat. 29°22.38 Long. 94°51.42	3' off Bottom Covers 3' ₂ at MLW

J. COMPARISON WITH PRIOR SURVEYS (cont)

OBJECT	POSITION	REMARKS
Pile (subm) 1k (pur)	Lat. 29°21.27 ⁸ Long. 94°48.17 ⁰⁸	2' off bottom Covers 16' at MLW
Pile (subm) 59k (pur)	Lat. 29°23.67 ² Long. 94°50.99	1' off bottom Covers 2' at MLW
Object (subm) 128J (pur) 10 meters in diameter	Lat. 29°21.39 Long. 94°48.32	2' off bottom Covers 7' at MLW
Object (subm) 9n (pur)	Lat. 29°22.46 Long. 94°50.36	2' off bottom Covers 4' at MLW 3
Pile (slanting-11ga (pur) subm)	Lat. 29°22.12 Long. 94°50.29	3' off bottom Covers 2' at MLW 2
Object (subm) 18ha (pur)	Lat. 29°22.38 Long. 94°51.12	10' least depth obtained Covers 9' at MLW 8
Object (subm) 17ha (pur)	Lat. 29°22.28 Long. 94°50.85	2' off bottom Covers 8' at MLW
Object (subm) 23ha (pur)	Lat. 29°22.22 Long. 94°50.93	3' off bottom Covers 2' at MLW 6
Object (subm) 28ha (pur) 10 meters in diameter	Lat. 29°22.10 Long. 94°50.40	2' off bottom Covers 3' at MLW 4
Object (subm) 5ja (pur)	Lat. 29°22.62 Long. 94°51.07	1' off bottom Covers 6' at MLW
Object (subm) 12ja (pur)	Lat. 29°22.55 Long. 94°50.67	5' shoalest depth obtained Covers 5' at MLW 6
Object (subm) 17Ja (pur) (Obstr)	Lat. 29°22.26 Long. 94°50.12	Covers 7' at MLW
Object subm (Obstr) 25ha (pur)	Lat 29°22.10' Long 94°50.70	Covered 6' 
Stake (subm) 12ka	Lat 29°22.56' Long 94°52.14'	Covered 4'
Pipe (Subm) 13ka	Lat 29°22.60' Long. 94°52.16'	Covered 4'a

J.COMPARISON WITH PRIOR SURVEYS(cont)

OBJECT	POSITION	REMARKS
Charted Pile 34 _{ja} (pur)	Lat. 29°21.78 Long. 94°47.17	Was dragged for on da day CS-183, from pos-30-34. Drag hung up on object, was unable to set sounding due to strong current and depth of water. This object was investigated by Wainwright and Hilgard on AUG. 14, 1965 by using a 900 ft. wire drag set at 25 ft., cleared the area of the charted piling. No deeper drag was feasible because of the sloping bottom. Not charted

WRECKS AND PSI

Wreck 82ba (pur) 20 meters in length	Lat. 29°20.65 Long. 94°50.00	Wreck lies North and South Bares 3.5 MHW Bares 2.0' MHW
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PRE-SURVEY REVIEW ITEMS
PRIOR SURVEY OBJECTS SEARCHED FOR AND NOT FOUND

PSI 14 (Pile) L-57, (1952)	Lat. 29°24.00 Long. 94°47.52	Wire dragged for on sheet 20-2-63. Vol.1 pg.44 (183) Negative Results.(not on chart)
PSI 15 (Pile) NM 15, (1952)	Lat. 29°24.13 Long. 94°47.37	Wire dragged for on sheet 20-2-63. Vol.1 pg.44 (183) Negative Results.(not on chart)
PSI 25 (wreck) NM 27 (1961) (24 ft Cabin cruiser)	Lat. 29°20.87 Long. 94°47.97	Did not find by visual inspection. Not adequately disproved - Unimportant in spoil area recommend wreck be deleted from chart.
PSI 26 (wreck) NM 34, 1961 (30 ft fishing vessel)	Lat. 29°20.18 Long. 94°49.74	Investigated on n day Skiff 758, Negative Results. It is recommend this wreck be deleted from chart.
Pontoon PSI H H-5462	Lat. 29°20.57 Long. 94°47.65	Did not find by visual inspection. It is recommended this pontoon be deleted. A 1/2 ft sdg was found at this position on the smooth sheet.

J.COMPARISON WITH PRIOR SURVEYS(cont)

OBJECT	POSITION	REMARKS
Wreck PS1 H H-5462 (bars) 61 at HHW	Lat. 29°20.96 Long. 94°47.87	Disregard - Did not find by visual inspection. Bottom changes in area - depth now 1 ft.

K.COMPARISON WITH CHART (Boat sheet Comparison see review)

This survey was compared with Chart 518 1st. edition May 17, 1965, Scale 1:25,000.

Soundings are in good agreement except in the areas listed below.

5' and 6' soundings shown on Chart 518 in the area of Lat. 29°20.00 Lat. 29°22.00, Long. 94°50.00 Long. 94°52.00. The new survey shows soundings from 1' to 2' deeper.

A charted sounding of 2' Lat. 29°23.17 Long. 94°48.57. Shows a depth of 4' on this survey.

A charted sounding of 3' Lat. 29°22.28 Long. 94°48.08. Shows a depth of 5' on this survey.

~~A charted sounding of 1' Lat. 29°23.42 Long. 94°49.22. Shows a 2' sounding on this survey.~~ *W. H. Oliver*

A charted sounding of 2' Lat. 29°22.89 Long. 94°48.70. Shows a 3' sounding on the new survey.

In the area ^{north} ~~South~~ of Texas City Dike Lat. 29°23.50 Long. 94° 52.25 West to the new construction of the storm levee. Hydro was impracticable due to the dredging and spoiling for the new storm levee. The new shoreline is shown as same as Chart 518. *1963 5dps omitted from survey*

A 5' channel into Pier shown on Chart 518 at Lat. 29°23.02 Long. 94°51.80. The new survey shows that this channel no longer exists. This was also confirmed by local inquiry. Recommend that this channel be deleted from the chart.

A new dry storage yacht basin at the end of the Texas City Dike has been recently constructed. Changes in shoreline around the marina are recorded in Vol. No. 23, pages 31,32,33.

K.COMPARISON WITH CHART(cont)

The shoreline in the area of Lat. 29°22.00 Long. 94°53.15 shows the low water line moved approximatly 650 meters to the East.

Filling of levee

L.ADEQUACY OF SURVEY

This survey is considered complete and adequate to supercede prior surveys for charting purposes.

M.AIDS TO NAVIGATION

There are 18 fixed aids to navigation and 45 floating aids maintained by the U.S.Coast Guard.

There are 2 fixed aids - Dredging range maintained by the Corps of Engineers

A compairson with light list and Chart 518 indicates these aids adequately serve the purpose for which they were established.

N.STATISTICS

<u>Vessel</u>	<u>Number of Pos.</u>	<u>Nautical Miles of Soundings</u>
Launch CS-1177	267	36.5
Launch CS-183	2824	366.8
Skiff 758	<u>1307</u>	<u>136.5</u>
	4398	539.8

Total area surveyed 22.0 square nautical miles.

There were three Tide stations used on this survey see Appendix C Tidal Notes, for additional information on these stations.

O.MISCELLANEOUS

On Launches CS*1177, CS-183, and Skiff 758 a modified sweep was utilized to search for submerged objects.

O. MISCELLANEOUS

The sweep consisted of two trawl boards, identical to those used by shrimp trawlers, with a 300 ft. length of small chain between them. The trawl boards were bridled and towed in such a manner as to drag along the bottom. The chain between the boards dragged along the bottom approximately 200 ft. behind the vessel upon snagging an object the tow lines to the trawl boards would come together slowly allowing the coxswain sufficient time to stop the launch.

The sweep was then pulled aboard until the snagged object was close aboard the stern. A leadline or sounding pole could then be eased down the tightly drawn chain to obtain a depth on the object. In some cases the chain and tow lines were shortened to work in tight areas.

A Mylar overlay was used to plot DPs of bouys, piles and submerged objects due to the number of objects located on this survey.

Respectfully submitted,

W. H. Piner

W.H.Piner, Surveying Tech.

APPENDIX D

Field work on this sheet was performed under the supervision of LCDR. P.A.STARK, in 1963.

Corrections to soundings and the record volumes were also under supervision of the above.

I supervised the completion of this survey, the final field records and will overlook the smooth sheet preparation.

This survey is complete and accurate to the extent of my knowledge.

Approved and forwarded,


R.E. ALDERMAN, LCDR. USC&GS

APPENDIX A

List of Signals

Triangulation

ABE	CITY 2,1963
AMP	TEXAS CITY CHANNEL CUT "A" INNER RANGE REAR LIGHT, 1960
AMY	M (USE), 1900
BIG	TEXAS CITY CHANNEL CUT "A" INNER RANGE FRONT LIGHT, 1963
COO	TEXAS CITY CHANNEL CUT "B" INNER RANGE FRONT LIGHT, 1961
CUT	TEXAS CITY CHANNEL CUT "C" RANGE REAR LIGHT, 1963
DIM	U.S. QUARANTINE STATION, CUPOLA, 1933
EEL	TEXAS CITY TERMINAL RAILROAD CO. EAST WATER TANK, 1933
ENT	BOLIVAR PENINSULA LIGHT 26
FAR	HOUSTON SHIP CHANNEL ENTRANCE RANGE FRONT LIGHT, 1963
FIX	BOLIVAR ROADS INNER RANGE FRONT LIGHT, 1963
GAL	GALVESTON BAY LOWER RANGE FRONT LIGHT, 1963
* HUB	TEXAS CITY CHANNEL CUT "B" OUTER RANGE FRONT LIGHT, 1960
ICE	HOUSTON SHIP CHANNEL LIGHT 35, 1963
JIM	TEXAS CITY CHANNEL CUT "A" INNER RANGE REAR LIGHT, 1963
LEO	HOUSTON SHIP CHANNEL LIGHT 35, 1962
LIT	GALVESTON-FREEPORT CUT OFF CHANNEL LIGHT 11, 1963
MON	TEXAS CITY, MONSANTO CHEMICAL CO. TANK, 1960
MUG	TEXAS CITY CHANNEL CUT "B" OUTER RANGE FRONT LIGHT, 1963
NIC	GALVESTON BAY PELICAN ISLAND WEST CHANNEL DAY BEACON 6,
NIG	BOLIVAR ROADS INNER RANGE REAR LIGHT, 1963 1966
OIL	TEXAS CITY CHANNEL CUT "B" OUTER RANGE REAR LIGHT, 1963
POT	BOLIVAR POINT LIGHTHOUSE (USE), 1900
RIP	HOUSTON SHIP CHANNEL LIGHT 30, 1962

* THIS SIGNAL AS SIGNAL MUG

APPENDIX A (cont)

Triangulation(cont)

TAN	TEXAS CITY MUNICIPAL WATER TANK, 1933
USE	o(USE) 1900
VEX	HOUSTON SHIP CHANNEL LIGHT 31, 1962
WAT	TEXAS CITY, MUNICIPAL TANK, (9th Ave. and 14th St. North) 1960
WAX	GALVESTON-FREEPORT CUT OFF CHANNEL LIGHT 7A, 1963
WIT	HOUSTON SHIP CHANNEL ENTRANCE RANGE REAR LIGHT, 1963
WES	TEXAS CITY TERMINAL RAILROAD CO. WEST WATER TANK, 1933

Photo-Hydro Signals

ACE	T-12235	EAR	T-9802
BAG	T-9802	GAD	T-12233
BAP	T-12235	GUS	T-12229
BLU	T-12235	HEM	T-12229
BOW	T-12235	KEY	T-12233
BUT	T-9802	LIG	T-12233
CAT	T-9802	LOW	T-12233
CAW	T-9802	POD	T-12233
DIC	T-12235	TAX	T-12235
DOG	T-12234	TOM	T-12235

Hydrographic Signals

NIC	T-12234	KEY & SIG 758
OLE	T-12234	-DID NOT USE

APPENDIX B

ABSTRACT OF CORRECTIONS OF FATHOMETER

Launch CS-183

Recorder No. 549 Type DE-723

Day Letters- a,b,c

Curve No.1

3.0 to 5.0	-1.0
5.1 to 7.0	-0.8
7.1 to 10.0	-0.6
10.1 to 12.0	-0.4
12.1 to 18.0	-0.2
18.1 to 23.0	0.0
23.1 to 26.0	+0.2
26.1 to 29.0	+0.4
29.1 to 32.0	+0.6
32.1 to 35.0	+0.8
35.1 to 38.0	+1.0
38.1 to 40.0	+1.2
40.1 to 42.0	+1.4
42.1 to Deeper	+1.6

Day Letters- d,e,f,g,h,j,k,l,m,n,p

Curve No.2

3.0 to 6.0	-0.8
6.1 to 11.0	-0.6
11.1 to 21.0	-0.4
21.1 to 27.0	-0.2
27.1 to 36.0	0.0
36.1 to Deeper	+0.2

Day Letters- q,r,s

Recorder No. 265

0.0 to 5.2	-0.8
5.3 to 17.0	-0.6
7.1 to 9.9	-0.4
10.0 to 14.6	-0.2
14.7 to 21.4	0.0
21.5 to 26.6	+0.2
26.7 to 31.0	+0.4
31.1 to 34.7	+0.6
34.8 to 38.2	+0.8
38.3 to 42.0	+1.0
42.1 to Deeper	+1.2

APPENDIX B (cont)

ABSTRACT OF CORRECTIONS OF FATHOMETER

Launch CS-183

Recorder No. 265

Type DE-723 /

*5dgs to 7 ft. may be
about 0.1 too shoal -
see bar check*

Day Letters- t,u,v,w,x,y,z, aa,ba,ca,da,ea,fa

0.0 to 7.4	-0.4
7.5 to 11.5	-0.2
11.6 to 16.5	0.0
16.6 to 21.0	+0.2
21.1 to 25.2	+0.4
25.3 to 29.5	+0.6
29.6 to 33.9	+0.8
34.0 to 38.6	+1.0
38.7 to 44.0	+1.2
44.1 to Deeper	+1.4

Recorder No. 265

Day Letters- ma,na

3.0 to 6.5	0.0
6.6 to 13.2	+0.2
13.3 to 17.5	+0.4
17.6 to 21.2	+0.6
21.3 to 26.3	+0.8
26.4 to 36.0	+1.0
36.1 to Deeper	+1.2

Launch CS-1177

Fathometer No. 549

Day Letters- a,b

6.0 to 8.7	+0.2
8.8 to 11.5	+0.4
11.6 to 14.5	+0.6
14.6 to 18.0	+0.8
18.1 to 21.0	+1.0
21.1 to 24.0	+1.2
24.1 to 27.0	+1.4
27.1 to 30.0	+1.6
30.1 to 34.7	+1.8
34.8 to 38.0	+2.0
38.1 to 40.6	+2.2
40.7 to 44.5	+2.4
44.6 to 48.0	+2.6

APPENDIX B (cont)

Launch CS-1177
Fathometer No. 549
Day Letter- c

6.0 to 6.5	+0.2
6.6 to 8.0	+0.4
8.1 to 9.7	+0.6
9.8 to 12.0	+0.8
12.1 to 15.0	+1.0
15.1 to 18.0	+1.2
18.1 to 20.7	+1.4
20.8 to 23.0	+1.6
23.1 to 25.5	+1.8
25.6 to 28.5	+2.0
28.6 to 31.0	+2.2
31.1 to 33.5	+2.4
33.6 to 35.5	+2.6
35.6 to Deeper	+2.8

Skiff 758
Fathometer No. 544 Group I
Day Letters- a,d,e

3.0 to 4.0	0.0
4.1 to 8.0	+0.2
8.1 to 18.0	+0.4
18.1 to 21.0	+0.6
21.1 to 24.0	+0.8
24.1 to 27.0	+1.0
27.1 to Deeper	+1.2

Fathometer No. 544
Day Letters- b,c Group II

3.0 to 4.0	0.0
4.1 to 5.0	+0.2
5.1 to 12.0	+0.4
12.1 to 18.0	+0.6
18.1 to 22.0	+0.8
22.1 to 26.0	+1.0
26.1 to Deeper	+1.2

APPENDIX B (cont)

Skiff 758

Fathometer No. 263

Day Letters- f,g,h,j,k

0.0 to 3.2	-0.2
3.3 to 9.4	0.0
9.5 to 36.2	+0.2
36.3 to Deeper	+0.4

Fathometer No. 265

Day Letters- m,n,p,q,r

0.0 to 5.6	0.0
5.7 to 10.6	+0.2
10.7 to 15.0	+0.4
15.1 to 19.4	+0.6
19.5 to 23.4	+0.8
23.5 to 27.2	+1.0
27.3 to 31.0	+1.2
31.1 to 34.5	+1.4
34.6 to 38.0	+1.6
38.1 to Deeper	+1.8

Day Letter- s

3.0 to 6.5	0.0
6.6 to 13.2	+0.2
13.3 to 17.5	+0.4
17.6 to 21.2	+0.6
21.3 to 26.3	+0.8
26.4 to 36.0	+1.0
36.1 to Deeper	+1.2

APPENDIX C

TIDAL NOTES

GAGE LOCATION	Bolivar Point, Texas Lat. 29°21.76' Long. 94°46.76'
	Pier 21, Galveston, Texas Lat. 29°18.00 Long. 94°47.00
	Eagle Point, Texas Lat. 29°32.11' Long. 94°46.93'
GAGE TYPE	<u>Bolivar Point</u> Portable Automatic 1962-63 Pressure Recording 1964-65
	<u>Pier 21</u> Standard Automatic
	<u>Eagle Point</u> Portable Automatic 1962-63 Pressure Recording 1964-65
PLANE OF REFERENCE	Bolivar Point (1962-63) MLW Corresponds to 2.2ft. on staff
	Bolivar Point (1964-65) MLW Corresponds to 5.0 ft. on staff
	Eagle Point (1962-63-65) MLW Corresponds to 2.2 ft. on staff
	Pier 21 MLW Corresponds to 2.7 Ft. on staff
	Pier 21, Galveston Texas and Bolivar Point tides are interchangeable.
TIME MERIDIAN	90th

APPENDIX C (cont)

Correction for 1962 East of Longitude $94^{\circ}50'$ use Bolivar Point. West of Longitude $94^{\circ}50'$ use Bolivar Point + 30 min. in time and no correction in range. In reply refer to : 2221/417/13b4 dated December 20, 1962.

Correction for 1965 North of Texas City Dike to West of Longitude $94^{\circ}50'$ used Eagle Point -2 hours time correction with 1.2 ratio all ranges. East of Longitude $94^{\circ}50'$ use Port Bolivar..

South of Texas City Dike to $94^{\circ}48.50'$ use Bolivar Point + $\frac{1}{2}$ hour time correction no height correction ., East of Longitude $94^{\circ}48.50'$ use Bolivar Point tides in reply to: 232w-78-001-2 dated April 2, 1965.

ADDENDUM TO DESCRIPTIVE REPORT
by
Smooth Plotter ✓

A large number of soundings from the 1963 hydro, immediately north of the Texas City Dike, were not penciled on the smooth sheet because resumption of hydro in 1965 showed this area to have changed due to dredging and fill operations.

Soundings not plotted

CS-1177	a-day	31 to 37
		44 to 47
		56 to 62
		71 to 93
g-day	6 to 16	
	31 to 47	
	75 to 91	
	121 to 146	
h-day	44 to 78	
Skiff CS-758	b-day	103 to 111

No soundings were penciled on the smooth sheet in the area north of the Texas City Dike - lat. $29^{\circ} - 23.5'$; long. $94^{\circ} - 52.25'$ - due to the construction of the Texas City Storm Levee.

Soundings on the smooth sheet indicate a small channel has been dredged from lat. $29^{\circ} - 23.00'$; long. $94^{\circ} - 50.30'$ to lat. $29^{\circ} - 24.2'$; long. $94^{\circ} - 52.30'$.

Respectfully submitted,

F.R. Gilden
F.R. Gilden
Surveying Tech.

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 4, 1966

~~Harbor Office~~ Atlantic Marine Center

Plane of reference approved in
23 volumes of sounding records for

HYDROGRAPHIC SHEET 8747

Locality: Galveston Bay, Texas

Chief of Party: P. A. Stark }
R. E. Alderman } 1963-65

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Galveston (Pier 21)
Bolivar Point
Eagle Point

Height of Mean High Water above Plane of Reference is as follows:

Galveston	1.4 feet
Bolivar Point	1.4 "
*Eagle Point	1.2 "

Remarks

*Corrected for the working grounds


Chief, Tides and Currents Branch

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8747...

Records accompanying survey: Smooth sheets ...1.;
 boat sheets ¹.....; sounding vols. ...²³.; wire drag vols. ⁰.....;
 Descriptive Reports ...1.; ~~graphical~~ ^{Cahier} ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ ...².....;
 special reports, etc. 1-Smooth sheet overlay and 1-Boat.....
 sheet overlay.....

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

Number of positions on sheet	.....	.4398.
Number of positions checked	.....	¹⁶⁸
Number of positions revised	.....	³⁵
Number of positions revised (refers to depth only)	.....	.....
Number of soundings/erroneously spaced	.....	.....
Number of signals erroneously plotted or transferred	.....	.....
Topographic details	Time	.....
Junctions	Time	.....
Verification of soundings from graphic record	Time	^{12 hrs}
Special adjustments	Time	.....

Verification by *Monty Schydel* Total time ^{30 hrs} Date ^{9 March 1961}

Reviewed by *Fannie B. Powers* Time ²²⁹ ~~213~~ Date ⁹⁻¹²⁻⁷³
Cartoon ⁷¹ ^{H/15/73}

H-8747

Items for Future Pre-Survey Reviews

The bottom is considered adequately developed on the present survey. Some changes were noted in the bottom and shoreline since the prior surveys. These changes are attributed to channel dredging, spoiling, and borrowing.

Position index.....	lat. 292, long. 0945
Bottom change.....	6
Use index.....	9
Resurvey cycle.....	10 yrs.

Position index.....	lat. 292, long. 0950
Bottom change.....	3
Use index.....	9
Resurvey cycle.....	25 yrs.

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8747

FIELD NO. HEP-10-2-63

Texas, Galveston Bay, Vicinity of Texas City Dike

SURVEYED: March 13, 1963 through August 10, 1965

SCALE: 1:10,000

PROJECT NO.: OPR-428

SOUNDINGS: DE-723 Depth
Recorders, Sounding
Pole, Leadline

CONTROL: Sextant fixes on
shore signals

Chief of Party.....	P. A. Stark
.....	R. E. Alderman
Surveyd by:.....	R. A. Lewis
.....	G. E. Trefethen
.....	W. H. Piner
Protracted by.....	F. R. Gilden
Soundings plotted by.....	F. R. Gilden
Verified and inked by.....	A. K. Schugeld
Reviewed by.....	F. B. Powers
.....	Date: September 12, 1973
Inspected by.....	R. H. Carstens

1. Description of the Area

This inshore survey covers a portion of Galveston Bay in the vicinity of Texas City Dike.

Federal Channel Projects (Texas City Channel, Bolivar Roads Channel and portions of Houston Ship Channel and Galveston Freeport Cutoff Channel) are within the survey limits. Texas City Dike extends approximately four miles into the bay area and is a distinctive feature.

Except in the channels, the bottom is generally flat or slopes gently and is broken up by several shoals.

The predominate bottom characteristics are mud, sand and shells.

2. Control and Shoreline

The origin of control is adequately covered in Part F of the Descriptive Report.

The shoreline originates with reviewed photogrammetric manuscripts T-12230 (1962-63), T-12233 (1962-65), T-12234 (1962-65), and T-9802 (19660-62) and advanced photogrammetric manuscripts T-12229 (1962) and T-12235 (1962-65). The spoil islets in lat. $29^{\circ}23.2'$, long. $94^{\circ}47.9'$ on T-12235 had eroded at the time of the soundings in 1965 and were not carried forward. A similar situation occurs with respect to islets on T-12229 in lat. $29^{\circ}24.2'$, long. $94^{\circ}49.6'$.

3. Hydrography

A. Depths at some crossings are not in good agreement. In cases where the 1963 and 1965 work crosses, there are discrepancies of 1-2 feet. It is believed these differences are caused by natural changes and dredging over the three year period where conflicts occurred, the 1965 soundings were retained.

B. The usual depth curves are adequately delineated except in the area northwest of Texas City Dike where fill and spoil were placed between 1963 and 1965 and the area was not resurveyed.

C. The development of the bottom configuration and the investigation of least depths are considered adequate.

4. Condition of the Survey

The sounding records, smooth plotting and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except that an adequate plot of the chain drag was not available to the reviewer for evaluation of the investigations.

5. Junctions

Adequate junctions were effected with H-8745 (1963-65) on the north, with H-8748 (1962-65) on the southeast, with H-8750 (1963-66) on the south and with H-8746 (1962-65) on the west at Texas City.

6. Comparison with Prior Surveys

A.	H-247	(1850)	1:20,000	H-906b	(1867)	1:20,000
	H-264	(1851)	1:20,000	H-918a	(1867)	1:20,000
	H-323	(1852)	1:20,000	H-918b	(1867)	1:20,000
	H-471	(1855)	1:20,000	H-919	(1867)	1:10,000

These early surveys have been compared with and were superseded by the surveys discussed below. Further consideration is not necessary in the present review.

B.	H-5394	(1933-34)	1:20,000
	<u>H-5462</u>	<u>(1933-34)</u>	<u>1:10,000</u>

A comparison between the present and prior surveys reveals variable differences of $\frac{1}{2}$ to 2 feet except in areas effected by borrowing, dredging and deposition of spoil, where the changes are greater. The Intracoastal Waterway (Galveston-Freeport Cutoff Channel) was dredged subsequent to H-5462.

The major shoreline changes have occurred in the vicinity of Pelican and Snake Islands. The present shore of Pelican Island along the eastern side is spoil bank, where depths of 2-5 feet were shown on H-5462.

The following items on H-5462 were not verified or disproved by the Hydrographer and have been carried forward:

- (1) Iron pipes in lat. 29°21.60', long. 94°53.12'.
- (2) A piling in lat. 29°22.73', long. 94°52.65' as a submerged piling.
- (3) Three boards in the vicinity of lat. 29°23.95', long. 94°52.0' as submerged boards.
- (4) Scrap iron in lat. 29°22.67', long. 94°51.07'.
- (5) A piling in lat. 29°22.6', long. 94°52.11' as a submerged piling.
- (6) A piling in lat. 29°22.64', long. 94°52.28' as a submerged piling.
- (7) A 4½ ft sounding in lat. 29°21.73', long. 94°51.37'.

With the additions noted, this survey is adequate to supersede the prior surveys within the common area.

C. F.E. No. 1, 1966, 1:40,000

One detached area on this wire drag investigation falls within the limits of the present survey. There is no conflict between the effective wire-drag depths and depths on the present survey.

7. Comparison with Chart 518, 10th Ed., September 30, 1972A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration and with prior and subsequent Corps of Engineers surveys, supplemented by the partial application of depths from the boat sheet and verified smooth sheet of the present survey. Only minor differences are noted between the present survey and charted depths.

Attention is directed to the following:

1. Items indicated on BP-86849 by the reviewer as having been charted subsequent to the date of the present survey, supersede the survey information and should be retained on the chart.
2. The following items were charted from erroneous positions on the present survey boat sheet and should be deleted from the chart:
 - (a) A submerged pile in lat. 29°22.42', long. 94°52.37'.
 - (b) A pile in lat. 29°23.38', long. 94°52.39'.
3. The following items were charted from the present survey boat sheet and should be revised in accordance with the present survey smooth sheet:
 - (a) Two piles in the vicinity of lat. 29°23.35', long. 94°52.30' should be relabeled dolphins.
 - (b) A pipe in lat. 29°22.59', long. 94°52.15' should be relabeled submerged pipe. 33
 - (c) A submerged stake in lat. 29°22.55', long. 94°52.14' should be revised in position.
 - (d) A steel plate in lat. 29°22.52', long. 94°52.58' should be relabeled Iron stake.

(e) A pile in lat. $29^{\circ}22.42'$, long. $94^{\circ}46.71'$ should be relabeled piles.

4. The spoil areas charted within the limits of the present survey originates with Corps of Engineers surveys BP-67403 (1964), BP-67245 (1964), BP-63100 (1962), BP-63556 (1960), BP-64300 (1963), and BP-58533 (1958). These spoil areas should be retained on the chart.

5. The following items charted from sources dated prior to the date of the present survey were not verified or disproved by the hydrographer and should be retained on the chart:

(a) Three piles and a platform along the eastern side of Houston Ship Channel from Corps of Engineers BP-63100 (1962) as noted on BP-86849.

(b) Three piles along the western side of Intracoastal Waterway-Freeport Cutoff Channel from Corps of Engineers survey BP-64706 (1963) as noted on BP-86849.

(c) A piling in lat. $29^{\circ}21.09'$, long. $94^{\circ}50.72'$ from N. M. 48 of 1963 as noted on BP-86849.

(d) A piling in lat. $29^{\circ}21.07'$, long. $94^{\circ}47.76'$ from Corps of Engineers BP-63333 of 1962 as noted on BP-86849.

(e) A pile in lat. $29^{\circ}21.35'$, long. $94^{\circ}48.25'$ from Corps of Engineers BP-52966 of 1955 as noted on BP-86849.

6. A submerged pile charted in lat. $29^{\circ}23.99'$, long. $94^{\circ}50.99'$ from T-10784 (1960) should be revised to a pipe in accordance with the present survey smooth sheet.

7. The following items charted in 1965 from sources not readily ascertainable were not verified or disproved by the present survey and should be retained on the chart:

(a) A pipe in lat. $29^{\circ}22.30'$, long. $94^{\circ}52.57'$.

(b) A pipe in lat. $29^{\circ}21.97'$, long. $94^{\circ}52.78'$.

8. The submerged pipe charted in lat. $29^{\circ}23.97'$, long. $94^{\circ}50.99'$ should be revised to a pipe 2 feet above M.L.W. in accordance with the present survey.

9. The 3 ft obstr charted in lat. $29^{\circ}22.43'$, long. $94^{\circ}50.62'$ from the present survey before review has been revised in position. It should be charted in accordance with the revised position.

10. The following items charted from sources indicated were adequately investigated by chain drag or intense development, and are disproved. They should be deleted from the chart.

<u>Items</u>	<u>Location</u>	<u>Source</u>
(a) Stake	lat. $29^{\circ}20.37'$, long. $94^{\circ}52.85'$	H-5462
(b) Pipe	lat. $29^{\circ}21.95'$, long. $94^{\circ}52.53'$	H-5462
(c) Pipe	lat. $29^{\circ}22.31'$, long. $94^{\circ}52.33'$	H-5462
(d) (Not used)		
(e) Piling	lat. $29^{\circ}22.27'$, long. $94^{\circ}50.15'$	H-5462
(f) Pile	lat. $29^{\circ}22.27'$, long. $94^{\circ}50.13'$	H-5462
(g) Pipe	lat. $29^{\circ}22.15'$, long. $94^{\circ}49.51'$	H-5462
(h) Steel cable	lat. $29^{\circ}22.11'$, long. $94^{\circ}49.43'$	H-5462
(i) Post	lat. $29^{\circ}22.05'$, long. $94^{\circ}49.32'$	H-5462
(j) Piling	lat. $29^{\circ}21.69'$, long. $94^{\circ}49.10'$	H-5462
(k) Piling	lat. $29^{\circ}21.57'$, long. $94^{\circ}48.75'$	H-5462
(l) Piling	lat. $29^{\circ}20.73'$, long. $94^{\circ}50.04'$	H-5462
(m) Sunken Wreck PA	lat. $29^{\circ}20.2'$, long. $94^{\circ}49.70'$	NM 34(1961)
(n) Old wire cable	lat. $29^{\circ}21.35'$, long. $94^{\circ}48.70'$	H-5462
(o) Sunken Wreck	lat. $29^{\circ}20.95'$, long. $94^{\circ}47.75'$	H-5462
(p) Sunken Wreck	lat. $29^{\circ}20.88'$, long. $94^{\circ}47.98'$	NM 27(1961)
(q) Pontoon	lat. $29^{\circ}20.57'$, long. $94^{\circ}47.65'$	H-5462

	<u>Items</u>	<u>Location</u>	<u>Source</u>
(r)	Stakes	lat. 29°22.47', long. 94°50.47'	H-5462
(s)	Pipe	lat. 29°22.52', long. 94°50.6'	H-5462
(t)	Pile	lat. 29°23.37', long. 94°52.75'	H-5462
(u)	Pipe	lat. 29°22.63', long. 94°52.19'	H-5462
(v)	Pipe	lat. 29°22.69', long. 94°52.65'	H-5462
(w)	Pipe	lat. 29°21.59', long. 94°53.29'	H-5462

11. The piling charted in lat. 29°21.88', long. 94°46.97' represents a Corps of Engineers tide gage from BP-63333 and should be deleted from the chart as indicated on BP-86849. The piling 25 meters northeast represent the same tide gage.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

B. Controlling Depths

The charted controlling depths for Houston Ship Channel and Texas City Channel are based on Corps of Engineers Chart Letter No. 1405 of 1972 subsequent to the present survey and supersede present survey information.

C. Aids to Navigation

Several aids to navigation have been established or relocated subsequent to the date of the present survey.

The aids presently charted adequately mark the features intended.


8. Compliance with Instructions

This survey adequately complies with the Project Instructions except, that several presurvey review items were not verified or disproved by the field party.


9. Additional Field Work

This survey is considered to be a good basic survey and no additional hydrography is recommended.

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys
and Maps

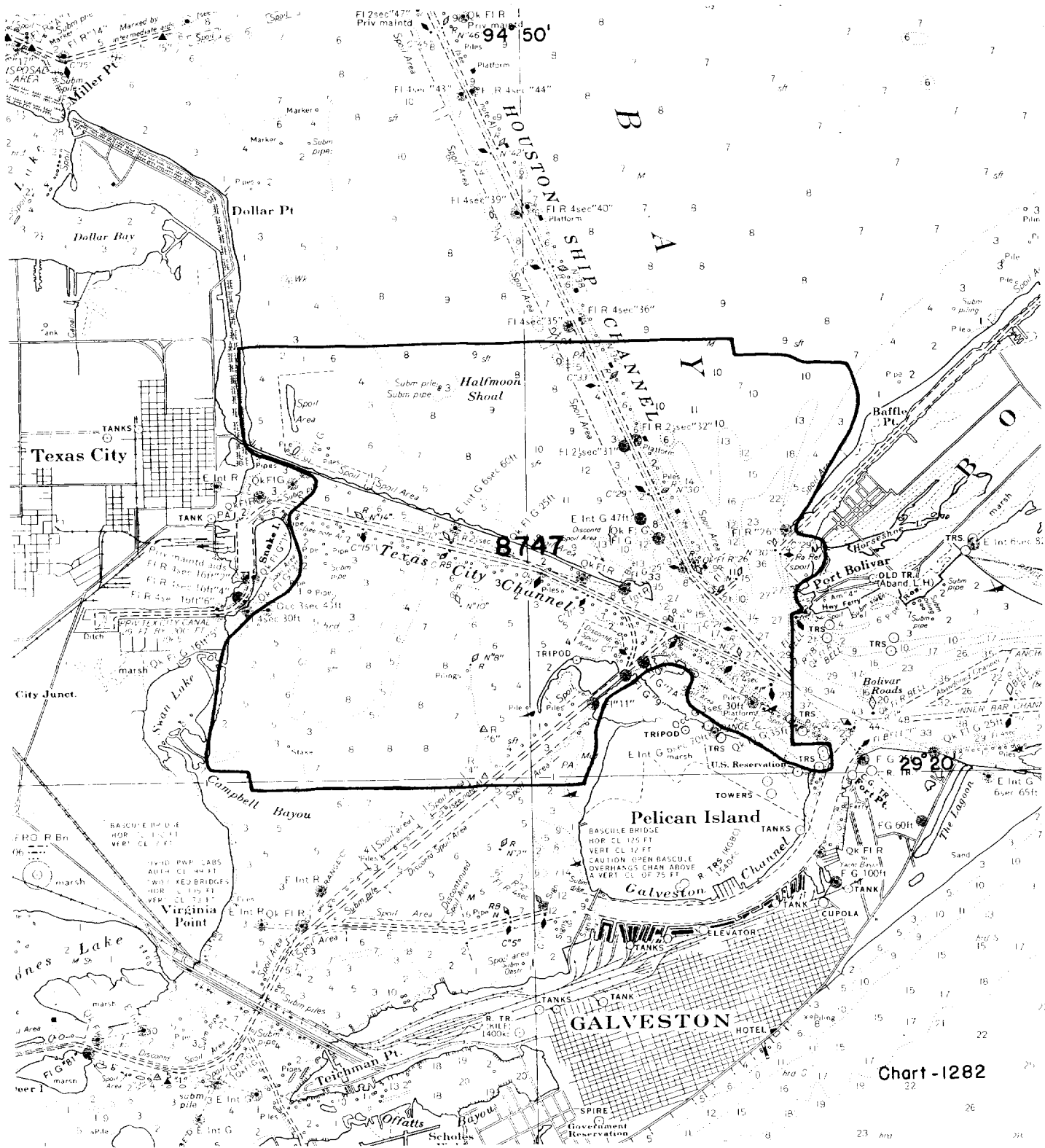


Chart -1282

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8747

INSTRUCTIONS

- A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
 2. In "Remarks" column cross out words that do not apply.
 3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

11324

CHART	DATE	CARTOGRAPHER	REMARKS
885	11/21/70	Charles Forbes	Full Part ^{before} Before After Verification Review Inspection Signed Via Drawing No. 13
11324	5/11/81	John Pierce	Full Part ^{Adequate} Before After Verification Review Inspection Signed Via Drawing No. 25 ^{partly superseded by}
11326	6/27/91	Dan Black	Full Part ^{Adequate} Before After Verification Review Inspection Signed Via Drawing No. 25 THRU 11324
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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