

10395

10395

Diagram No. 1284-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey .. Basic

Field No. AHP-10-11-91

Registry No. H-10395

LOCALITY

State Texas

General Locality .. Matagorda Bay

Sublocality North and East of

..... Port O'Connor

..... 19 91

..... CHIEF OF PARTY

..... LT T.R. Waddington

LIBRARY & ARCHIVES

DATE July 1, 1992

☆U.S. GOV. PRINTING OFFICE: 1985-566-054

11319
11317
11316
CP-5

H-10395

HYDROGRAPHIC TITLE SHEET

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.

AHP-10-11-91

State Texas

General locality Matagorda Bay

Locality North and East of Port O'Connor

Scale 1:10,000 Date of survey 14 Aug. 91 to 11 Oct. 91

Instructions dated March 1, 1991 Project No. OPR-K228

Vessel AHP Launch 0518

Chief of party LT Thomas R. Waddington

Surveyed by David Elliott, LTJG Ralph Rogers

Soundings taken by echo sounder, hand lead, ~~rule~~ Dives

Graphic record scaled by DE, RR, DN

Graphic record checked by DE, RR

Verified by: B.A. Olmstead Automated plot by PHS Xynetics Plotter

Evaluated by: B.A. Olmstead

Soundings ~~XX~~ ~~factored~~ ~~used~~ at ~~MLW~~ MLLW in meters and decimeters

REMARKS: Time in UTC. Revisions and marginal notes in black were generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.

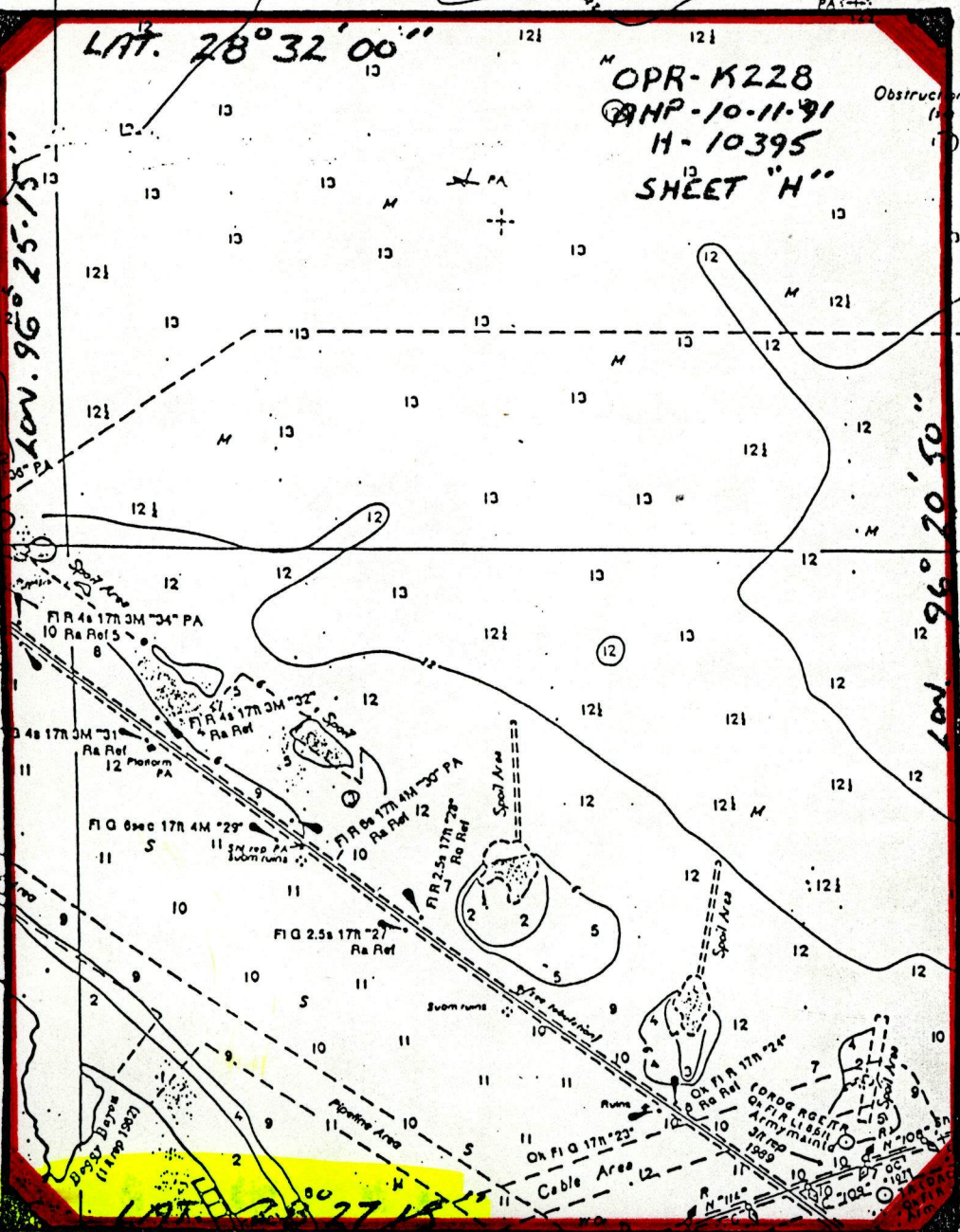
A. W. DAVIS / SURF ✓ 7/8/92, SJV ✓

sc
X.W.W.
29 1997

LAT. 28° 32' 00"

OPR-K228
ANP-10-11-91
H-10395
SHEET "H"

Obstructions Wells and Pipelines
(see note C)

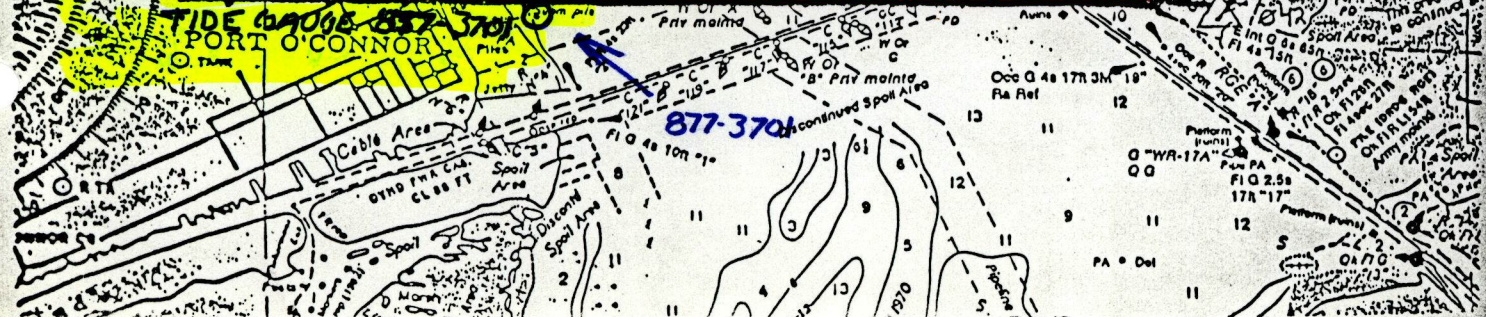


LONG. 96° 25' 13"

LONG. 96° 20' 50"

TIDE GAUGE 857 370
PORT O'CONNOR

877-370



DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10395
(Field No. AHP2-10-11-91)
Scale:1:10,000
1991

Atlantic Hydrographic Party Two
Chief of Party: Lt. Thomas R. Waddington, NOAA

A. PROJECT ✓

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K228-AHP2, Matagorda Bay, Texas dated March 1, 1991, change No. 1 dated June 4, 1991, change No. 2 dated July 11, 1991 and change No. 3 dated August 15, 1991.

The purpose of project OPR-K228-AHP2 is to provide modern hydrographic data to revise the existing nautical charts. Considerable oil development, fishing and oyster industries exist in Matagorda Bay and its main tributaries.

This survey is designated as sheet "H" in the project instructions.

B. AREA SURVEYED - See Eval Report, Section 1

The area surveyed for H-10395 covers the western portion of Matagorda Bay in the locality of Three nautical miles Northeast of Port O'Connor. The survey limits are as follows:

North - Latitude	28°32'00" ⁶ N
South - Latitude	28°27'15"N ✓
East - Longitude	096°20'45"W
West - Longitude	096°25'15"W

Per Section 1.8 of the project instructions, main scheme lines were run to the 0.7-meter depth curve.

This survey was conducted from August 14, 1991 (DN 226) to October 22, 1991 (DN 295). Concur

C. SOUNDING VESSEL ✓

Vessel 0518 (EDP No. 0518), a 21-foot MonArk, was used to collect all data on this survey. No problems were encountered with this vessel.

Sounding lines were run at 100 meter spacing, per Section 4.3 of the hydrographic manual.

D. AUTOMATED DATA ACQUISITION AND PROCESSING ✓

Version 3.6 of the PC-DAS was used for on-line data acquisition. A list of program versions for the HP-DPS is included in Appendix VI, Supplemental Correspondance*.

In addition to the HDAPS, the following non-HDAPS computer programs were used:

VELOCITY (IBM PC) 1.11

3/9/90

MTEN3 with enhancements geodetic 6/88
computations (IBM PC)

E. SONAR EQUIPMENT ✓

Not applicable.

F. SOUNDING EQUIPMENT ✓

The following Innerspace 448 echo sounder was used for this survey:

EDP#	S/N	Days
-----	-----	-----
0518	175	226 - 295

Soundings were recorded in meters, with an assumed speed of sound through water of 1500 m/sec. Depths encountered in the survey area range from 0.5 meter to 13.5 meters.

The digitized soundings from the echosounder were compared closely with the analogue trace to ensure agreement between the two; any necessary adjustments were noted on the fathogram. The only regular manual manipulation of this instrument was in the gain adjustment while operating in a gated setting.

G. CORRECTIONS TO ECHO SOUNDINGS ✓

Corrections for the speed of sound through the water column were computed from data obtained with an Odom Hydrographic Systems Inc., Digibar, Model DB1100 speed of sound probe, serial number 155. This instrument was calibrated by the manufacturer on May 14, 1991; a copy of this calibration may be found in the Separates* Following Survey Data - IV, filed with the hydrographic data. Program "Velocity" was used for determining the speed of sound correctors.

Velocity casts were taken in the survey area and speed of

* Filed with the hydrographic data.

sound correctors were applied to all soundings taken during hydrography, during semi-smooth and final plotting with the HDAPS.

HDAPS Table#	DN	Date	Applied From - To	Cast#	Depth
1	226	8/14/91	226 - 228	1 - 12m	
2	232	8/20/91	232 - 241	2 - 12m	
3	248	9/05/91	252 - 253	3 - 12m	✓
4	255	9/12/91	255 - 256	4 - 12m	
5	269	9/26/91	275 - 276	5 - 12m	
6	282	10/09/91	283 - 288	6 - 11m	
7	290	10/17/91	290 - 295	7 - 12m	

Speed of sound tables and cast data are included in the Separates*Following Survey Data - IV, filed with the Hydrographic Data.

Lead line comparisons were taken daily to determine instrument error and to verify static draft. The lead line was last calibrated on May 14, 1991. The daily lead-line comparison log is included in the Separates*Following Survey Data - IV, filed with the hydrographic data.

The static draft of 0.3 meters was determined by measuring the difference between a punch mark two feet above the transducer down to the water surface. The draft was applied to all soundings acquired with the echosounder through the use of the PC-DAS offset table. The offset table #1 is included with the Separates*Following Survey Data - IV.

Settlement and squat measurements for vessel 0518 were performed last on 08 November, 1990** Settlement and squat correctors are determined and applied to all on-line survey data by means of the PC-DAS offset table; a copy can be found in the Separates*Following Survey Data - IV. In post-processing, settlement and squat correctors are re-applied after all necessary positioning edits have been made. This should eliminate any problems created by speed jumps during data acquisition.** Conducted as part of OPR-K229, Corpus Christi, Texas.

The final field sheet was plotted using predicted tides determined from Port O' Connor, Texas with correctors specified for zone "I" in the project instructions. The values were applied direct in accordance with these instructions.

Approved water levels were requested from the Sea and Lake Levels Branch, N/OMA12, in a letter dated October 30, 1991. A copy is included in Appendix V*following the Descriptive Report.

* Filed with the hydrographic data.

H. CONTROL STATIONS ✓

The horizontal control datum for this project is the North American Datum of 1983. A signal list as well as a copy of the HDAPS Control Station Table* is included in Appendix III following the Descriptive Report.

The Coastal Surveys Unit from Norfolk, Virginia used third order, class I traverse and intersection methods to establish NAD83 horizontal control for this project. The horizontal control report was written and submitted by the Coastal Surveys Unit personnel for OPR-K228-AHP2. See Eval Report, Section 2

I. HYDROGRAPHIC POSITION CONTROL ✓

Survey Methods

Hydrographic position control was accomplished using Motorola Mini-Ranger Falcon 484 system which provided accuracy to meet 1:10,000 scale survey requirements. Range/range positioning with three and four lines of position were used during this project.

The following Falcon Mini-Ranger equipment was used:

<u>VESNO</u>	<u>EQUIPMENT</u>	<u>S/N</u>
0518	RPU	D0017
	R/T	F3411
	R/S	E2911 CD #7
	R/S	F3237 CD #8
	R/S	F3298 CD #9
	R/S	C2067 CD #0
	R/T	F3419

On September 26, 1991 (DN 269) the master R/T serial #F3411 failed and was replaced by master R/T serial #F3419. This unit was baselined to the original reference stations on October 1, 1991 (DN 274). All hydrographic acquisition after this date was corrected by C-O Table #3. The printouts for C-O tables #1 and #3 with baselines for both masters can be found in the Separates* III filed with the hydrographic data.

Fixes which had erratic lines of position indicated by high residuals on the raw listing were "smoothed" during processing. Positions were "smoothed" by dead reckoning between two accurate positions. If more than four consecutive positions had high residuals with an erratic track plot, the data were rejected and later rerun.

* Filed with the hydrographic data.

The point position recomputation program was also used when fix data was erratic and the smoothing process was not adequate to save the data. Positions were recomputed by rejecting an LOP, or reaccepting an LOP that was turned-off manually or automatically while on-line. If acceptable ECR and residual values were indicated, the data were then smoothed and saved on the HDAPS.

Critical System Checks ✓

When using three or four lines of position (LOP), a critical system check is continuously being obtained by observing the error circle radii (ECR) and residual values computed each second by the survey computer. For a 1:10,000 scale survey, the critical residual value is five meters and the critical ECR value is 15 meters.

Mini-Ranger Falcon Calibrations ✓

Baseline calibrations were performed on 6 May, 1991 (DN 126) and May 30, 1991 (DN 150) to the standards of Section 3.1.2.1 of the field procedures manual. After an R/T failure on Sept. 26, 1991 an additional baseline for the replacement R/T was conducted on Oct. 1, 1991. All baseline correctors were incorporated into the Comflex "C-O" tables and applied directly to all on-line data. All records of these calibrations are included in the Separates* Following Survey Data - III. A closing baseline calibration was not performed since the survey was conducted in less than a six month period.* Filed with the hydrographic data.

J. SHORELINE - See Eval Report, Section 2

Shoreline detail shown on the final field sheet was transferred by hand from TP-01648, NAD 1983. The shoreline manuscript was compiled at 1:20,000 scale, and enlarged to 1:10,000 scale for comparison with this survey.

The shoreline was verified by its junction with hydrographic data and by visual inspection when possible. The shoreline agreed well with the shoreline manuscript which should take precedent over the current charted shoreline. Concur

K. CROSSLINES ✓

A total of 66.5 linear nautical miles (16% of main scheme hydrography) of channel and cross-lines were run on H-10395. These soundings agree within 0.5 meter of the main scheme soundings.

L. JUNCTIONS - See Eval Report, Section 5

The hydrography run on this sheet junctions with sheet "G" H-10379 (July 1991) to the west, with sheets "K" H-10380 and "L" H-10397 to the east and sheet "M" to the South (H-10412).

Junction soundings between the present survey and H-5866 agree well and are discussed in detail in section M of this text.

Junction soundings between the present surveys and H-10379, H-10380 and H-10397 (1991) agree well, within 0.4 meters.

M. COMPARISON WITH PRIOR SURVEYS - See Eval Report, Section 6

The present survey was compared to the following prior surveys:

<u>Survey NO.</u>	<u>Scale</u>	<u>Year</u>
H-5857	1:20,000	1934-35 (Falls outside survey limits)
H-5866	1:20,000	1934-35

Due to extensive dredging operations by the U.S. Army Corps of Engineers for the creation of the Matagorda Ship Channel, both H-5866 and H-5857 had little value for sounding comparisons. (According to Mr. Robert Beggs, Area Engineer, of the Corpus Christi U.S. Army Corps of Engineers, additional dredging operations will be conducted from the channel entrance to Point Comfort in 1991.) Shoreline details for the prior surveys were also significantly different from the present. The bottom samples taken during H-10395 were found to be in general agreement with prior surveys. The hydrographer recommends that the prior surveys be superseded in all respects by H-10395. Concur

The following was noted during comparison:

- 1) There are now numerous oil and gas wellheads and platforms located in the surveyed area at present.
- 2) In general soundings acquired during H-10395 were found to agree within 0.5 meters outside of Matagorda ship channel.

There have been significant changes to the spoil islands to the east of, and running parallel to the ship channel. These changes are reflected in the final ^{on} ~~field~~ ^{smooth} sheet.

The present survey was also compared to the following topographic map:

<u>MAP</u>	<u>DATE</u>	<u>SCALE</u>
6740 IV NW	1952-73	1:24,000

In general shoreline depicted on this survey has varied little. There were no other topographic maps made available for comparison during this survey.

N. COMPARISON WITH THE CHART - See Eval Report, Section 7.

Comparisons were made with the following largest scale charts covering the present survey area:

<u>Chart No.</u>	<u>Edition</u>	<u>Edition Date</u>
11317	20th	March 23, 1991
11319 SC	22nd	February 10, 1990

H-10395 soundings and contours agreed well with presently charted soundings and contours, after accounting for the difference in sounding units. In general, H-10395 channel depths are between 0.5 and 1.0 meter deeper than those indicated on the chart tabulations.

A charted three foot sounding^{1.1-1.8} at lat. 28°28'57"N and lon. 096°23'49"W is now surrounded by two meter depths. H-10395 shows a one meter sounding located approximately 150 meters to the north. Distortion in the chart blowup from 1:50,000 may account for this difference. This area has likely changed due to the constant dredging and dumping of spoil along the Matagorda Ship Channel. Chart this area as shown on the smooth sheet.

A charted five foot sounding at lat. 28°28'25"N and lon. 096°22'45"W is now 9.8 feet and a charted five foot sounding at lat. 28°28'10"N and lon. 096°22'55"W is now 10.8 feet. These deeper depths do not appear to be related to current dredging operations. In general, the 6 foot contour of this region compares favorably at the northern limits of the spoil island however, it appears to be ~~three foot~~ ^{approximately} deeper now as the ^{to the southeast} contour has ^{6-foot} moved southeast.

A charted twelve foot sounding at lat. 28°28'00"N and lon. 096°22'06"W east of a charted spoil island appears on a 2.5 meter sounding. This shallower depth of 8.2 feet could be due to of dredge spoil. There are no depths in this region that could warrant such a sounding and should be revised by survey H-10395. Depths of 1.8-2.0 meters (6-6.5 feet) exist 200 meters to the east. Chart this area as shown on the smooth sheet. All spoil islands parallel to Matagorda Ship Channel have changed dramatically and Survey H-10395 reflects these changes well since mainscheme hydrography was run near the end of dredging operations. Concur

All AWOIS items (total of 10) were addressed on this survey. These items appear on the overlay sheet and are filed in order of acquisition in the Separates Following Survey Data - VI* filed with the hydrographic data. Some of these items are described in * AWOIS investigation forms are attached to the descriptive report.

this section for further clarification. The hydrographer strongly recommends that the verifier have a plot of the charted features, the AWOIS items, (i.e., the Field Sheet) and the surveyed detached positions on the Overlay for comparison. This will serve as a visual aid and should prove beneficial when interpreting the items mentioned in this section.

AWOIS items 5505 and 5507 were both developed with fifty meter line spacing after dredging operations in September 1991. The AWOIS depth for item # 5505 was unknown and the depth for # 5507 was listed as five foot. The developments show clearly that the areas of shoaling have been dredged and are now clear to the tabulated chart depths. *Concur*

A charted 19-foot shoal reported October 1990 (PA) has likewise been cleared to 28 feet and is supported by an 8.7 meter sounding in the area of the reported shoal.

A daily log entitled (RECORD) is included with the Separates* Following Survey Data containing photographs and descriptions of all detached positions. This daily summary of production is filed with the Hydrographic Data. * *Filed with the hydrographic*

O. ADEQUACY OF SURVEY

This survey is a complete basic hydrographic survey and is adequate to supersede all prior surveys within the common area. *Concur*

P. AIDS TO NAVIGATION

No floating aids to navigation are within the sheet limits. *Do not concur See Eval Report, section 7, for list.*

Eight fixed aids to navigation were located within the survey area. *See Evaluation Report, section 7, for additional Fixed aids.*

<u>Non-Floating Aid</u>	<u>Survey Position</u>	<u>Light List Position</u>
Matagorda Ship Chann. Light #23 Fl Green	28°27' ^{38.00} 37.99" N 96°22'28.73" W	NONE LLN 26205
Matagorda Ship Chann. Light #24 Fl Red	28°27' ^{42.00} 41.99" N 96°22'24.67" W	28°27.7' N 96°22.4' W LLN 26210
Matagorda Ship Chann. Light #27 Fl Green	28°28'25.1 ³ 2" N 96°23'35.42" W	NONE LLN 26215
Matagorda Ship Chann.	28°28'28. ⁹⁰ 88" N	NONE

Light #28 Fl Red	96°23'31.26" W	LLN 26220
Matagorda Ship Chann.	28°28'49. ⁸ 72" N	NONE
Light #29 Fl Green	96°24'10.47" W	LLN 26225
Matagorda Ship Chann.	28°28'54.36" N	NONE
Light #30 Fl Red	96°24'07.45" W	LLN 26230
Matagorda Ship Chann.	28°29'12.00" N	NONE
Light #31 Fl Green	96°24'41.66" W	LLN 26235
Matagorda Ship Chann.	28°29'16.25" N	NONE
Light #32 Fl Red	96°24'38.82" W	LLN 26240

The non-floating aids to navigation are in good agreement with existing charts and U.S. Coast Guard Light List Volume IV, 1990. *Do not concur See Eval Report Section 7.*

Numerous pipelines exist in the survey area. No recommendation is made to chart these pipelines. Per a telephone conversation with Mr. James Daily, in the Mapping and Charting Branch (N/CG2222), the current NOAA policy regarding charting of the pipelines in this survey area is to let the magenta warning of "obstructions, wells, and pipelines" suffice. Concur

Q. STATISTICS ✓

<u>Description</u>	<u>Quantities</u>
Total Positions	2759
Total Nautical Miles of Hydro	402.3
Sq. Nautical Miles of Hydrography	16.0
Days of Production	19
Detached Positions	40
Bottom Samples	62
Tide Stations	0
Velocity casts	7
Duplicate Positions	2

R. MISCELLANEOUS ✓

Bottom samples were taken and submitted to the Smithsonian Institution as directed in Section 6.7 of the project instructions. 62 bottom samples were transmitted on August 19, 1991. Bottom sample positions are plotted on the overlay and are listed on the Oceanographic Log Sheet-M, NOAA Form 75-44, which may be found in the Separates* Following Survey Data, filed with the hydrographic data. *Filed with the hydrographic data.

No anomalous currents were observed in the survey area.

Prevailing winds and high and low pressure weather systems in the Matagorda Bay area have a dramatic effect on the water levels. These winds and weather systems create high or low tides that often negate the typical daily predicted tide curves. This can create sounding error between mainscheme and crossline hydrography. Concur

S. RECOMMENDATIONS ✓

The hydrographer recommends careful monitoring of the Intracoastal Waterway in the vicinity of lat. 28°27'32"N lon. 096°21'09"W This region is subject to silting due to the narrowness of the channel and frequent barge traffic.

T. REFERRAL TO REPORTS ✓

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report to Accompany H-10379	Pacific Marine Center Seattle, Washington, N/CG245
Descriptive Report to Accompany H-10380	Pacific Marine Center Seattle, Washington, N/CG245
Descriptive Report to Accompany H-10397	Pacific Marine Center Seattle, Washington, N/CG245
Horizontal Control Report for OPR-K228-AHP2	Field Photogrammetry Section Norfolk, Virginia, N/CG233
Chart Sales Agent Report	Chart Distribution Branch Rockville, Maryland, N/CG33
User Evaluation Report	Atlantic Hydrographic Section Norfolk, Virginia, N/CG244
Chart Inspection Report	Atlantic Hydrographic Section Norfolk, Virginia, N/CG244
Coast Pilot Report	Coast Pilot Section Mapping and Charting Branch N/CG223 Rockville, MD

Submitted by: Atlantic Hydrographic Party
Port O' Connor Group

CONTROL STATIONS as of 5 Aug 1991

No	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY	Station Name
001	F	028:39:08.751	096:33:48.618	0	250	0.0	0.0		05/08/91	ALCOA 1990
002	F	028:40:17.832	096:38:14.547	0	250	0.0	0.0		05/08/91	BLUF 1990
003	F	028:39:44.602	096:34:56.482	0	250	0.0	0.0		05/08/91	CAUS 1990
004	F	028:34:59.695	096:36:29.911	0	250	0.0	0.0		05/08/91	CHOC 1990
005	F	028:33:23.435	096:31:27.214	0	250	0.0	0.0		05/08/91	INDI 1990
006	F	028:30:25.466	096:28:47.523	0	250	0.0	0.0		05/08/91	IDLA 1990
007	F	028:41:53.224	096:34:34.010	0	250	0.0	0.0		05/08/91	LAVACA RIVER LIGHT 3
008	F	028:34:07.670	096:33:55.900	0	250	0.0	0.0		05/08/91	MAGNOLIA 1934
009	F	028:35:58.915	096:34:14.622	0	250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG C FRT LT
010	F	028:36:35.748	096:35:07.087	0	250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG C R LT
011	F	028:35:46.234	096:34:02.389	0	250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG D FRT LT
012	F	028:35:26.693	096:34:02.933	0	250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG D R LT
013	F	028:38:45.468	096:33:40.338	0	250	0.0	0.0		05/08/91	MITCHELL 2 1956
014	F	028:38:23.410	096:36:38.092	0	250	0.0	0.0		05/08/91	NOLE 1990
015	F	028:39:26.182	096:35:09.367	0	250	0.0	0.0		05/08/91	PIER PK 1990
016	F	028:36:57.750	096:30:48.192	0	250	0.0	0.0		05/08/91	RHOD 1990
017	F	028:34:12.754	096:29:19.106	11	250	0.0	0.0		05/08/91	SAND 1990
018	F	028:43:17.942	096:36:36.067	0	250	0.0	0.0		05/08/91	VEDO 1990
019	F	028:38:37.047	096:33:47.871	0	250	0.0	0.0		05/08/91	ZEPP 1989
020	F	028:26:10.962	096:20:01.576	0	250	0.0	0.0		05/08/91	TEMP 01
021	F	028:27:39.775	096:17:46.171	0	250	0.0	0.0		05/08/91	OSGOOD 2 1906
022	F	028:35:28.458	096:11:22.074	0	250	0.0	0.0		05/08/91	LAKE 2 1906
023	F	028:40:34.424	096:16:14.007	0	250	0.0	0.0		05/08/91	TURT 1991
024	F	028:36:26.854	096:24:20.046	0	250	0.0	0.0		05/08/91	DUNG 1991
025	F	028:35:13.036	096:26:49.243	0	250	0.0	0.0		05/08/91	VACA 1991
026	F	028:23:56.880	096:24:25.771	0	250	0.0	0.0		05/08/91	RUIN 1991
027	F	028:32:20.572	096:18:44.039	0	250	0.0	0.0	0	05/08/91	PLAT PK 1991
028	F	028:41:52.040	096:12:37.980	0	250	0.0	0.0		05/08/91	PALA 1991
029	F	028:38:33.080	096:14:06.707	0	250	0.0	0.0		05/08/91	INDY 1991
030	F	028:35:08.620	096:17:11.588	10	250	0.0	0.0		05/08/91	CHAN PK 1991
031	F	028:34:45.983	096:13:33.884	0	250	0.0	0.0		05/08/91	EROD 1991
032	F	028:36:02.270	096:14:05.710	0	250	0.0	0.0		05/08/91	BULL 1991
033	F	028:26:58.573	096:24:12.880	0	250	0.0	0.0		05/08/91	EARL 1991
034	F	028:27:04.927	096:24:15.672	0	250	0.0	0.0		05/08/91	3701 E 1989
035	F	028:26:44.592	096:23:42.326	0	250	0.0	0.0		05/08/91	IW MB PORT O CONNOR LT 2
036	F	028:27:29.804	096:21:39.302	0	250	0.0	0.0		05/08/91	MATAGORDA SHIP CH N DREDGE LT
037	F	028:27:15.806	096:21:29.032	0	250	0.0	0.0		05/08/91	MATAGORDA SHIP CH S DREDGE LT
038	F	028:26:50.319	096:25:20.875	39	250	0.0	0.0	7	05/08/91	PORT O CONNOR MUN TANK, 1989
039	F	028:28:50.457	096:17:17.626	0	250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE L REAR LT
040	F	028:28:23.778	096:18:36.611	0	250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE L FRONT LT, 1989
041	F	028:27:50.191	096:19:46.085	0	250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE K FRONT LT
042	F	028:27:02.190	096:21:02.812	20	250	0.0	0.0	9	05/08/91	MATAGORDA BAY RANGE K REAR LT, 1989
043	F	028:27:01.247	096:21:11.033	0	250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE A REAR LT
044	F	028:26:33.967	096:20:41.967	0	250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE A FRONT LT
045	F	028:26:27.482	096:26:34.785	0	250	0.0	0.0		05/08/91	PORT O CONNOR CABLE TV MAST
046	F	028:25:18.494	096:19:05.925	0	250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE B REAR LT
047	F	028:25:50.351	096:20:07.986	0	250	0.0	0.0		05/08/91	MATA 1934
048	F	028:25:40.635	096:19:37.260	0	250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE B FRONT LT
049	F	028:29:45.812	096:15:16.339	20	250	0.0	0.0	8	05/08/91	MATAGORDA BAY RANGE H REAR LT, 1989
050	F	028:38:33.045	096:19:19.991	0	250	0.0	0.0		05/08/91	TRULL SAT
051	F	028:43:28.301	096:15:09.749	0	250	0.0	0.0		05/08/91	PALAPORT
052	F	028:28:36.298	096:15:07.070	0	250	0.0	0.0		05/08/91	SMYTH SAT
053	F	028:30:56.831	096:10:21.410	0	250	0.0	0.0		05/08/91	POE 1934
054	F	028:39:16.001	096:13:41.524	0	250	0.0	0.0		05/24/91	COON 1991

CONTROL STATIONS as of 5 Aug 1991

No	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY	Station Name
----	------	----------	-----------	---	------	------	-----	------	----------	--------------

AWOIS NO: 5381

Item Description: New platform reported at approx. position.

Source: CL1592/81--USPS

AWOIS Position: Lat - 028/29/10.00N Lon - 096/24/40.90W

Required Investigation: VS, BD, DI, SD - 50 meter radius

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 923 - 924

Launch Number: 0518

Investigation Used: DIVE

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A buoy was deployed at the scaled position for item No. 5381 on which a 60 meter radius diver circle search was performed. During the course of this search an 18 inch diameter wooden pile was discovered lying flat on the bottom. The pile is 30 feet long and of no danger to navigation. An additional search in this area revealed no other piles or debris. A buoy was attached to the pile and positioned by fix No. 924. A lead line least depth was taken at the DP point and then corrected for predicted tides. Position No. 923 was rejected during processing.

CHARTING RECOMMENDATION

The hydrographer recommends revising the charted platform PA to submerged platform ruins at the following position. Do not concur
Chart this feature as a 11 Obstr. (3.3 meters) ^g
Recommended Position: Lat - 028/29/09.98^gN Lon - 096/24/39.89^gW

Recommended Least Depth: 3.³/₈ m

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 5382

Item Description: Platform reported missing, subm. ruins

Source: BP66136--4/64, COE; CL1592/81--USPS

AWOIS Position: Lat - 028/28/41.00N Lon - 096/24/01.90W

Required Investigation: VS,BD,DI,SD - 50 meter radius

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 925

Launch Number: 0518

Investigation Used: DIVE

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A buoy was deployed at the scaled position for item No. 5382 on which a 60 meter radius diver circle search was performed. During the course of this search no contacts were encountered. This location revealed no signs of piles or debris. *Concur*

CHARTING RECOMMENDATION

The hydrographer recommends removing the charted submerged ruins. *Concur*

Recommended Position: Lat - / / . Lon - / / .

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 5438

Item Description: Small T-shape pier.

Source: Unknown, scaled from chart 11319.

AWOIS Position: Lat - 028/27/21.00N Lon - 096/24/23.90W

Required Investigation: VS,DI,SD - 25 meter radius

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 929

Launch Number: 0518

Investigation Used: Visual

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A visual search revealed three wooden piles exposed 1.0 meter approximately 50 meters from the scaled location. The feature was positioned in the center by fix No. 929 and a photograph was taken for verification. This photo can be found in the daily record log filed with the hydrographic data.

CHARTING RECOMMENDATION

The hydrographer recommends revising the charted pier ruins ^{to} at the following position. Concur

Recommended Position: Lat - 028/27/19.7³2N Lon - 096/24/24.75W

Recommended Least Depth: N/A

COMPILATION NOTES

Chart

Applied As

11319- Applied 7-20-92

AWOIS NO: 5439

Item Description: T-Head Public Pier.

Source: CL116/80--COE

AWOIS Position: Lat - 028/27/14.00N Lon - 096/24/13.90W

Required Investigation: VS,DI,SD,## - 25 meters each side

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 930

Launch Number: 0518

Investigation Used: Visual

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A visual search revealed a large wooden T shaped pier approximately 700 feet long and 30 feet wide at "T", exposed 4.0 meters. The feature was positioned at the offshore center by fix No. 930 and a photograph was taken for verification. This photo can be found in the daily record log filed with the hydrographic data.

CHARTING RECOMMENDATION

The hydrographer recommends revising the charted pier ^{to} at the following position ^{as shown on the smooth sheet.}

Recommended Position: Lat - 028/27/15.7⁴3N Lon - 096/24/11.84W

Recommended Least Depth: N/A

COMPILATION NOTES

Chart

Applied As

11319-Applied 7-20-92

AWOIS NO: 5440

Item Description: L-Shaped Wharf.

Source: Unknown, CL1938--USPS

AWOIS Position: Lat - 028/27/13.00N Lon - 096/24/10.90W

Required Investigation: VS,DI,BD,SD,## - 50 meters each side

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 931

Launch Number: 0518

Investigation Used: Visual

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A visual search revealed a row of 12 wooden piles extending from the bulkhead exposed 1.0 meters. The feature was positioned at the offshore end by fix No. 931 and a photograph was taken for verification. This photo can be found in the daily record log filed with the hydrographic data. The offshore position of these pier ruins (MHW) extends an additional 100 meters offshore from that shown on shoreline manuscript TP-0164B.

CHARTING RECOMMENDATION

The hydrographer recommends revising the charted ruins at the following position. Chart the pier ruins (MHW) as shown on the smooth sheet.

Recommended Position: Lat - 028/27/10.9⁶₅N Lon - 096/24/12.6⁶₅W

Recommended Least Depth: N/A

COMPILATION NOTES

Chart

Applied As

11319 - Applied 7-20-92

AWOIS NO: 5441

Item Description: Pier ruins.

Source: Unknown, NM37/62--Wharf

AWOIS Position: Lat - 028/27/11.00N Lon - 096/24/02.90W

Required Investigation: VS,DI,SD,## - 50 meters each side

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 932

Launch Number: 0518

Investigation Used: Visual and Fatho

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A visual search and echo sounder reduced line spacing search revealed nothing at the charted position. However a single pile exposed 0.5 meters was located approximately 150 meters away in the general vicinity. The feature was positioned at the offshore end by fix No. 932 and a photograph was taken for verification. This photo can be found in the daily record log filed with the hydrographic data. In 1961 hurricane Carla brought 130 mile per hour winds to Port O' Connor and according to locals living on the waterfront the storm destroyed the wharf as described on the AWOIS listing prior to 1962. No piles or ruins exist seaward of fix No. 932.

CHARTING RECOMMENDATION

The hydrographer recommends revising the charted ruins at the following position. Delete charted ruins and chart pile at the following position.

Recommended Position: Lat - 028/27/07.8⁹N Lon - 096/24/10.0⁴W

Recommended Least Depth: N/A

COMPILATION NOTES

Chart

Applied As

Applied chrt 11319 7-10-92

AWOIS NO: 5457

Item Description: Platform ruins visible above water.

Source: CL1592/81--USPS

AWOIS Position: Lat - 028/27/40.00N Lon - 096/22/32.90W

Required Investigation: VS,BD,DI,SD - 50 meter radius

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 926

Launch Number: 0518

Investigation Used: DIVE

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A buoy was deployed at the scaled position for item No. 5457 on which a 60 meter radius diver circle search was performed. During the course of this search no contacts were encountered. This location revealed no signs of piles or debris. *Concur*

CHARTING RECOMMENDATION

The hydrographer recommends removing the charted submerged ruins. *Concur*

Recommended Position: Lat - / / . Lon - / / .

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

11319 *Applied 7-20-92*

AWOIS NO: 5458

Item Description: Platform ruins charted as submerged.

Source: CL1592/81--USPS

AWOIS Position: Lat - 028/28/06.00N Lon - 096/23/10.90W

Required Investigation: BD,DI,SD - 50 meter radius

INVESTIGATION

Date(s)/DN(s): 8-29-91 / 241

Position Numbers: 926 - 927

Launch Number: 0518

Investigation Used: DIVE

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A buoy was deployed at the scaled position for item No. 5458 on which a 60 meter radius diver circle search was performed. During the course of this search two 18 inch diameter wooden piles were discovered lying on the bottom. The longest pile was 28 feet long and projected off the bottom 1 foot. These piles are of no danger to navigation. An additional search in this area revealed no other piles or debris. A buoy was attached to the pile at the highest point and positioned by fix No. 927. A lead line least depth was taken at the DP point and then corrected for predicted tides. Position No. 926 was rejected during processing.

CHARTING RECOMMENDATION

The hydrographer recommends revising the charted submerged ruins at the following position. *Chart this feature as a 9 obstn. (2.7 meters)*

Recommended Position: Lat - 028/28/05.⁵2⁵N Lon - 096/23/09.³6³W

Recommended Least Depth: ⁷2.⁹m

COMPILATION NOTES

Chart

Applied As

Applied Chart 11379 7-20 92

AWOIS NO: 5505

Item Description: Shoaling (depth unknown)

Source: LNM46/87--8TH CGD

AWOIS Position: Lat - 028/28/46.00N Lon - 096/24/00.90W

Required Investigation: ES

INVESTIGATION

Date(s)/DN(s): 10-22-91/ 295

Position Numbers: 2744-2759

Launch Number: 0518

Investigation Used: Echo Sounder

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A sounding development was conducted at 50 meter line spacing to determine if any shoal existed after the termination of dredging of September 1991. The final field sheet shows no evidence of shoaling at the prescribed region. The eastern edge of the channel is cleared to 12 to 14 feet and the charted 6 foot curve has moved east approximately 100 meters.

CHARTING RECOMMENDATION

The hydrographer recommends removing the shoal report and charting additional soundings along the edge of the channel. *Concur*

Recommended Position: Lat -

Lon -

Recommended Least Depth: N/A

COMPILATION NOTES

Chart

Applied As

11317

deleted shoal rppa

AWOIS NO: 5507

Item Description: Shoal Reported (depth 5 feet)

Source: LNM44/87--8TH CGD

AWOIS Position: Lat - 028/27/32.00N Lon - 096/21/08.90 W

Required Investigation: ES

INVESTIGATION

Date(s)/DN(s): 10-22-91/ 295

Position Numbers: 2734-2743

Launch Number: 0518

Investigation Used: Echo Sounder

Water Visibility: 1.5 m

Position Determined By: Falcon Multiple Range

Investigation Summary: A sounding development was conducted at 50 meter line spacing to determine if any shoal existed after the termination of dredging of September 1991. The final field sheet shows no evidence of shoaling at the prescribed region.

CHARTING RECOMMENDATION

The hydrographer recommends removing the shoal report. Concur

Recommended Position: Lat -

Lon -

Recommended Least Depth: N/A

COMPILATION NOTES

Chart

11317

11319

Applied As

deleted shoal rep

Applied 7-20-92



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

Atlantic Hydrographic Party
439 West York St.
Norfolk, VA 23510-1114

September 19, 1991

TO: Commander, Eight U. S. Coast Guard District
Hale Boggs Federal Building
501 Magazine Street
New Orleans, LA 70130-3396

FROM: *Thomas R. Waddington*
LT Thomas R. Waddington, NOAA
Chief, Atlantic Hydrographic Party

SUBJECT: Danger to Navigation Notice for inclusion in the Local
Notice to Mariners.

**ADVANCE
INFORMATION**

While conducting a basic hydrographic survey of Matagorda Bay, Texas (Registry No. H-10395), the Atlantic Hydrographic Party recently located an unlit 0.8 meter diameter wellhead, baring 2 meters, at latitude 28° 31' 41.2" N, longitude 096° 23' 54.5" W (NAD 1983 Datum). This position is approximately 2 nautical miles northeast of Matagorda Ship Channel light "36".

This obstruction constitutes an addition to information shown on Chart 11317, 20th Ed., Mar 23/91 and Chart 11316, 32th Ed., Jan 14/89, and should be included in the Local Notice to Mariners.

This item was located by four lines of position from Motorola Falcon Mini-Ranger electronic positioning system units set up on third order, class 1, ground control stations. The position of the item is North American Datum of 1983. A section from Chart 11317 is included, showing the location of this danger.

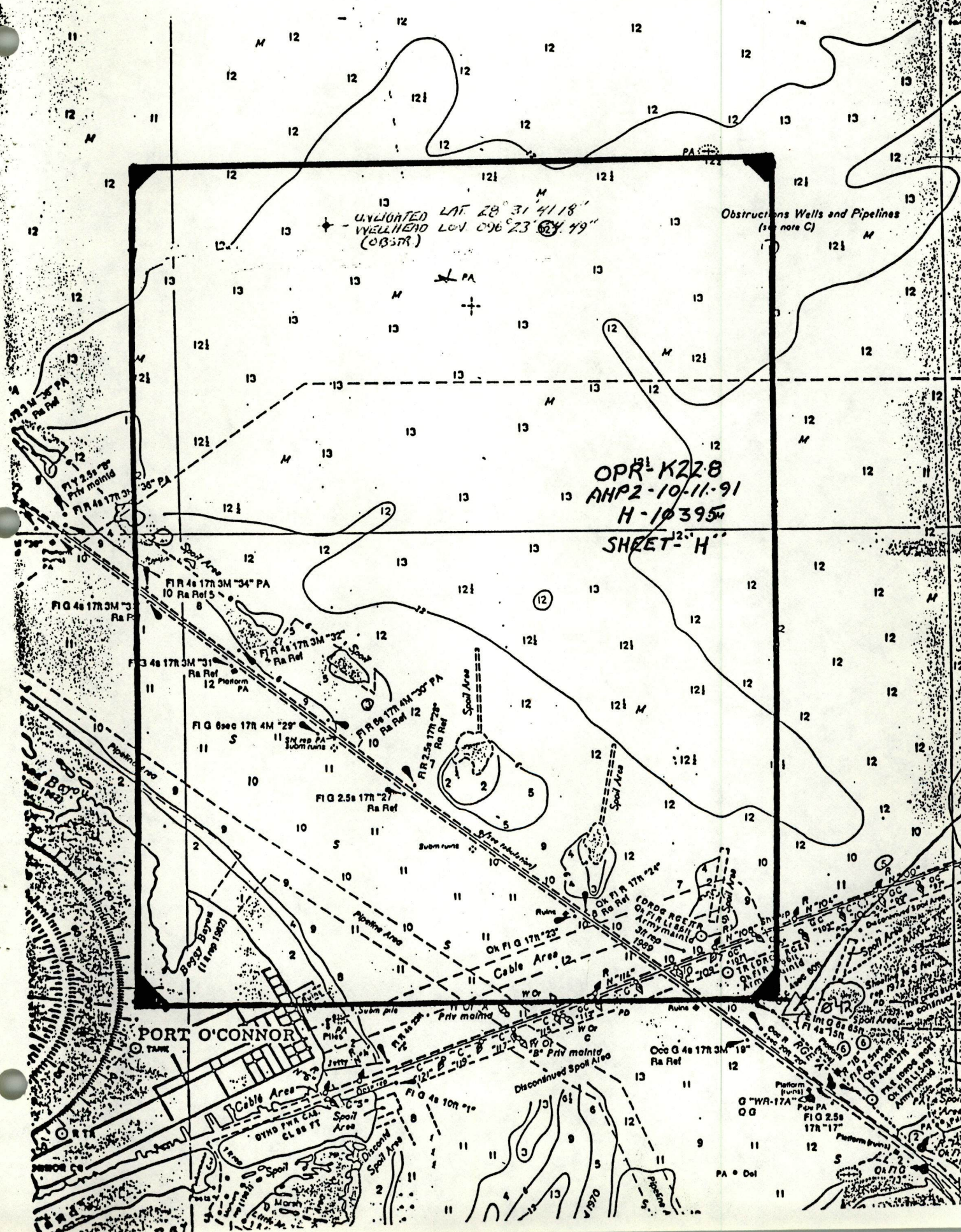
Questions concerning this report should be directed to NOAA's Pacific Hydrographic Section, at (206) 526-6853.

N/CG241
N/CG245X1
N/CG221

THIS IS ADVANCE FIELD INFORMATION
SUBJECT TO OFFICE VERIFICATION



**ADVANCE
INFORMATION**



UNLIGHTED WELLHEAD (OBSTR)
LAT 28° 31' 41.18"
LONG 096° 23' 02.49"

OPR-K228
AHP2-10-11-91
H-10395
SHEET-H

PORT O'CONNOR

Cable Area

Discontinued Spot Area

Platform PA

FILE COPY



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Seattle, Washington 98115-0070

November 22, 1991

**ADVANCE
INFORMATION**

Commander (OAN)
Eighth Coast Guard District
Hale Boggs Federal Building
501 Magazine Street
New Orleans, LA 70130-3396

Dear Sir:

During office review of hydrographic survey H-10395, Texas, Matagorda Bay, 3 NM NE of Port O'Connor and H-10366, Texas, Aransas Bay, Vicinity of Allyns Bight, nine dangers to navigation affecting the following charts were found.

<u>Chart</u>	<u>Edition/date</u>	<u>Datum</u>
11314	16th ED., 1/20/1990	NAD 83
11316	33rd ED., 1/19/1991	NAD 83
11317	20th ED., 3/23/1991	NAD 83
11319	22nd ED., 2/10/1990	NAD 83

It is recommended that the enclosed Report of Dangers to Navigation be included in the Local Notice to Mariners.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

Sincerely,

A handwritten signature in cursive script that reads "Douglas G. Hennick".

Douglas G. Hennick
Commander, NOAA
Chief, Pacific Hydrographic Section

Enclosure

cc: DMA/TC
N/CG221



REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H-10395
Survey Title: State: Texas
Locality: Matagorda Bay
Sublocality: 3 NM NE of Port O'Connor

**ADVANCE
INFORMATION**

Project Number: OPR-K228-AHP2, Atlantic Hydrographic Field Party 2

All soundings reduced to Mean Lower Low Water using predicted tides.

Affected nautical charts:

<u>Chart</u>	<u>Edition/date</u>	<u>Datum</u>
11316	33rd Ed., 1/19/91	NAD 83
11317	20th Ed., 3/23/91	NAD 83
11319	22nd Ed., 2/10/90	NAD 83

<u>Danger to Navigation</u>	<u>LATITUDE(N)</u>	<u>LONGITUDE(W)</u>
7 ft shoal	28/28/43.0	96/23/43.0
5 ft shoal	28/28/36.0	96/23/26.0
8 ft shoal	28/28/00.0	96/22/08.0
6 ft soundings in the vicinity of	28/27/57.0	96/21/57.0
3 ft soundings in the vicinity of	28/27/25.0	96/21/42.0
4 ft to 6 ft soundings in the vicinity of	28/27/54.0	96/22/37.0
Matagorda Ship Chan Light "29"(new position)	28/28/49.77	96/24/10.47
Matagorda Ship Chan Light "30"(new position)	28/28/54.36	96/24/07.45

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206)526-6853.

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H-10366
Survey Title: State: Texas
Locality: Aransas Bay
Sublocality: Vicinity of Allys Bight

**ADVANCE
INFORMATION**

Project Number: OPR-K229-AHP2, Atlantic Hydrographic Field Party 2

Affected nautical chart:
Chart Edition/date Datum
11314 16th Ed., 1/20/90 NAD 83

<u>Danger to Navigation</u>	<u>LATITUDE(N)</u>	<u>LONGITUDE(W)</u>
Revised position for Aransas Bay Light 43 (LL35695)	28/01/03.34	97/00/44.13

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206)526-6853.

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY

OPR-K228/91-3

AHP2-10-11-91

H-10395

1991

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-K228/91-3, the hydrographic manual, the hydrographic survey guidelines, and the field procedures manual. The survey data and reports were completed under frequent supervision. All boat sheets and final field sheets were reviewed in their entirety and all supporting records were also checked.

This survey is a complete basic hydrographic survey for the area described in Section B of this report.

Thomas R. Waddington

Thomas R. Waddington

Lieutenant, NOAA

Chief, Atlantic Hydrographic Party Two



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Rockville, Maryland 20852

ORIGINAL

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: December 17, 1991

MARINE CENTER: Pacific

OPR: K228

HYDROGRAPHIC SHEET: H-10395

LOCALITY: Three nautical miles northeast of Port O'Connor, TX

TIME PERIOD: August 14 - October 22, 1991

TIDE STATIONS USED: 877 3701 Port O'Connor, TX
Lat. $28^{\circ} 27.2'N$ Lon. $96^{\circ} 24.3'W$

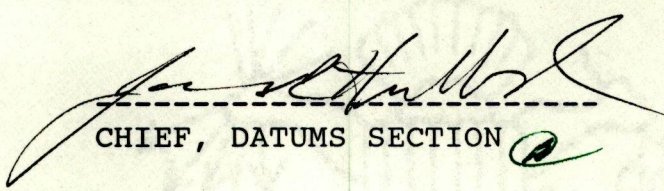
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.14 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.9 foot

REMARKS: RECOMMENDED ZONING

Times and heights are direct on Port O'Connor, TX.

NOTE: Hourly heights are tabulated on Central Standard Time.



CHIEF, DATUMS SECTION





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Rockville, Maryland 20852

ORIGINAL

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: February 5, 1992

MARINE CENTER: Pacific

OPR: K228

HYDROGRAPHIC SHEET: H-10395

LOCALITY: Three nautical miles northeast of Port O'Connor, TX

TIME PERIOD: December 6, 1991

TIDE STATIONS USED: 877 3701 Port O'Connor, TX
Lat. $28^{\circ} 27.2'N$ Lon. $96^{\circ} 24.3'W$

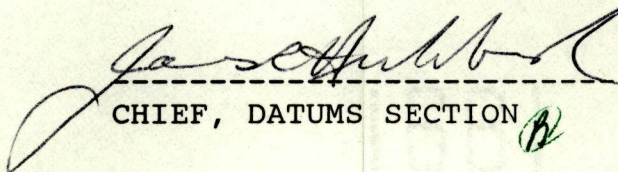
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.14 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.9 foot

REMARKS: RECOMMENDED ZONING

Times and heights are direct on Port O'Connor, TX.

NOTE: Hourly heights are tabulated on Central Standard Time.


CHIEF, DATUMS SECTION *B*



GEOGRAPHIC NAMES

H-10395

Name on Survey

A ON CHART NO. 11319
B ON PREVIOUS SURVEY NO. 11317
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
ITP 01648

Name on Survey	A	B	C	D	E	F	G	H	ITP
BOGGY BAYOU	X							X	1
INTRACOASTAL WATERWAY	X							X	2
MATAGORDA BAY	X							X	3
MATAGORDA SHIP CHANNEL	X								4
PORT O'CONNOR	X							X	5
TEXAS (title)	X								6
									7
									8
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Approved:

Charles B. Harrington
Chief Geographer - NCGZ/33

DEC - 4 1991

NOAA FORM 77-27(H) (9-83)		U.S. DEPARTMENT OF COMMERCE		REGISTRY NUMBER	
HYDROGRAPHIC SURVEY STATISTICS				H-10395	
RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.					
RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION	
SMOOTH SHEET		1		SMOOTH OVERLAYS: POS., ARC, EXCESS	
DESCRIPTIVE REPORT		1		FIELD SHEETS AND OTHER OVERLAYS	
DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	1				
ENVELOPES					
VOLUMES					1
CAHIERS					
BOXES					
SHORELINE DATA					
SHORELINE MAPS (List):					
PHOTOBATHYMETRIC MAPS (List):					
NOTES TO THE HYDROGRAPHER (List):					
SPECIAL REPORTS (List):					
NAUTICAL CHARTS (List):					
OFFICE PROCESSING ACTIVITIES					
<i>The following statistics will be submitted with the cartographer's report on the survey</i>					
PROCESSING ACTIVITY			AMOUNTS		
			VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET					2741
POSITIONS REVISED					
SOUNDINGS REVISED			136		136
CONTROL STATIONS REVISED					
			TIME-HOURS		
			VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION					
VERIFICATION OF CONTROL					
VERIFICATION OF POSITIONS			100		100
VERIFICATION OF SOUNDINGS			85		85
VERIFICATION OF JUNCTIONS					
APPLICATION OF PHOTOBATHYMETRY					
SHORELINE APPLICATION/VERIFICATION					
COMPILATION OF SMOOTH SHEET				51	51
COMPARISON WITH PRIOR SURVEYS AND CHARTS				10	10
EVALUATION OF SIDE SCAN SONAR RECORDS					
EVALUATION OF WIRE DRAGS AND SWEEPS					
EVALUATION REPORT				24	24
GEOGRAPHIC NAMES					
OTHER* Digitization					
*USE OTHER SIDE OF FORM FOR REMARKS			TOTALS	185	85
Pre-processing Examination by D. Hill			Beginning Date 11/13/91	Ending Date 12/19/91	
Verification of Field Data by B.A. Olmstead			Time (Hours) 185	Ending Date 4/23/92	
Verification Check by R. Davies			Time (Hours) 17	Ending Date 4/6/92	
Evaluation and Analysis by B.A. Olmstead			Time (Hours) 85	Ending Date 4/23/92	
Inspection by D. Hill			Time (Hours) 4	Ending Date 6/3/92	

EVALUATION REPORT

H-10395

1. INTRODUCTION

Survey H-10395 is a basic hydrographic survey accomplished by the Atlantic Hydrographic Party 2 under the following Project Instructions.

OPR-K228-AHP2, dated March 1, 1991
CHANGE NO. 1, dated June 4, 1991
CHANGE NO. 2, dated July 11, 1991
CHANGE NO. 3, dated August 15, 1991

The purpose of this survey was to provide contemporary hydrographic data in Matagorda Bay, Texas, which supports considerable oil development, fishing and oyster industries. This survey occurred in Texas and covers an area encompassing the central portion of Matagorda Bay. Specifically, this survey area includes an area north and east of Port O'Connor to include portions of the Matagorda Ship Channel and the Intracoastal Waterway. The surveyed limits extend from latitude 28/27/15N to latitude 28/32/06N and from longitude 96/20/45W to longitude 96/25/15W. The survey area is characterized by several active spoil areas which include spoil islands created through contemporary dredging activities, two maintained waterways, Matagorda Ship Channel and the ICW (Intracoastal Waterway), and numerous oil well platforms. The bottom consists primarily of brown mud and sand. Generally, depths range from 0.5 to 4 meters. However, the Matagorda Ship Channel and the Intracoastal Waterway (federally maintained channels), contain significantly deeper depths. Of significant climatic note, prevailing winds together with rapidly developing high and low pressure weather systems have a dramatic effect on the water levels within Matagorda Bay. Specifically, during strong northers, water levels may be depressed by as much as 0.6 meter (2 feet). Additionally, currents within the Matagorda Ship Channel have been measured at over three knots.

Predicted tides for Port O'Connor, Texas were used for the reduction of soundings during field processing. Approved hourly heights zoned from Port O'Connor, Texas, gage number 877-3701, were used during office processing.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The TRA, sound velocity and electronic control correctors are adequate. An accompanying computer printout contains the parameters and the correctors.

A digital file has been generated for this survey as required by Hydrographic Survey Guideline No. 52, Standard Digital Data Exchange Format, April 15, 1986. Certain descriptive information, however, may not be in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

2. CONTROL AND SHORELINE

Sections H and I of the hydrographer's report contain adequate discussions of horizontal control and hydrographic positioning. Additional detailed information on horizontal control is located in the following.

GPS and Terrestrial Survey, San Antonio and Lavaca Bays, Texas, October 1990.

Field Report, Matagorda Bay, Texas and vicinity, January 23, 1989 to March 13, 1989.

Fixed Aids to Navigation and Landmark Features, Photogrammetric Survey CM-8715, Matagorda Bay and vicinity.

Positions of horizontal control stations used during hydrography are 1989 and 1990 field values based on NAD 83. These values were used during office processing for the computation of positions. The smooth sheet and accompanying overlays are annotated with NAD 27 adjustment ticks based on values determined with the NGS program NADCON. Geographic positions based on NAD 27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: 1.006 seconds (30.979 meters)
Longitude: 0.907 seconds (24.663 meters)

The year of establishment of control stations shown on the smooth sheet originates with the previously mentioned horizontal control reports.

The quality of several positions exceeds limits in terms of error circle radius and residual or have angles of intersection less than 30 degrees or more than 150 degrees. A review of the data, however, indicates that none of these fixes are used to position dangers to navigation. The features or soundings located by these fixes are consistent with the surrounding data. These fixes are considered acceptable.

The following shoreline map was compiled on NAD 83 and applies to this survey.

<u>Photo</u>	<u>Date</u>	<u>Class</u>
TP-01648	Feb., Mar. 1989	III

The pier ruins located on the shoreline manuscript at latitude 28/27/11N, longitude 96/24/13W, were investigated by the hydrographer and found to extend an additional 100 meters further offshore. The smooth sheet has been compiled to reflect this change.

The following shoreline changes are depicted in dashed red without supporting positional information. Delineation of these areas has been accomplished during office processing using the positional information supplemented by the hydrographer's notes from the echogram. These revisions are considered adequate to supersede the shoreline map within the common areas. Refer to the smooth sheet for an accurate depiction.

<u>Latitude(N)</u>	<u>Longitude(W)</u>
28/27/46	96/21/35
28/28/05	96/22/19
28/28/38	96/23/05

3. HYDROGRAPHY

With the exceptions noted in this report, hydrography is adequate to:

- a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;
- b. reveal there are no significant discrepancies or anomalies requiring further investigation; and
- c. show the survey was properly controlled and soundings are correctly plotted.

In addition, the following items are noted: (1) Boggy Bayou could not be sounded due to depths less than one meter. The smooth sheet has been annotated to reflect this situation. (2) The hydrographer was unable to define the zero curve due to shallowness which prevented an approach by boat. (3) Several isolated shoal soundings which differ from the surrounding soundings as much as .5 meters were not investigated for least depths. These features are likely submerged wellheads or pipelines which exist throughout Matagorda Bay. (4) A visible pile at latitude 28/28/57N, longitude 96/23/05W has been transferred to the smooth sheet without supporting positional information. Further information concerning this pile is discussed in Section 4, Condition of Survey.

4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, and the Field Procedures Manual, March 1991 Edition, except as follows.

A wooden pile was noted to exist on DN 284, position 219506, as stated on the echogram while conducting survey operations. However, this feature was not positioned and has been plotted on the smooth sheet using the hydrographer's supplemental information as noted on the echogram. New features must be accurately positioned and described with a height or depth of the feature with respect to the water surface and the date/time of observation. Reference the Field Procedures Manual, section 7.1.4.

Matagorda Ship Channel Lights 29, 30 and nun buoys "104" and "108A", marking the Intracoastal Waterway, plot from 75 to 130 meters from their respective charted positions. This information together with the difference in survey versus charted positions produces a situation in which a notice to mariners is warranted. Reference the Hydrographic Manual, section 4.5.13.1, Non-floating Aids and Landmarks and the Field Procedures Manual, Figure 6.1, Descriptive Report Checkoff List, Section P, Aids to Navigation.

Features depicted on the final field sheet were not adequately described with notes. The hydrographer should be aware that field sheets may be used directly to revise nautical charts and notes may be critical. While the use of overlays is authorized to display supporting information, The Field Procedures Manual, section 6.1.2, prescribes that a note with specific format and wording be included on the main field sheet to notify users of additional information. No such note was used on this survey's field sheets.

Section J, Shoreline, states that the shoreline was verified by hydrographic and visual inspection. However, in the area of Boggy Bayou, hydrography approaches no closer than approximately 1100 meters of the inshore extent of this feature. There are no other

records to support the hydrographer's claim that shoreline in this area was adequately verified. Reference Hydrographic Survey Guideline No 57, 4.5.8, Verification of Alongshore and Offshore Detail.

The project instructions specify survey H-5866 as a prior survey. An evaluation of the agreement of depths and non-sounding features should have been exclusively addressed in the hydrographer's report as a prior survey. The hydrographer should not have discussed prior survey H-5866 as a junction survey.

Section N, Comparison with the Chart, does not contain a discussion pertaining to the verification or disproval of a charted note, "1 foot rep 1982", in the vicinity of latitude 28/27/40N, longitude 96/25/05W. The final field sheet does not indicate that hydrography extended into the area referenced by this note. Further, the hydrographer does not provide written documentation as to why Boggy Bayou could not be sounded. The note will be retained on the chart.

A review of the field records during office processing indicated that there are three mean high water line revisions (approximate shoreline) to shoreline manuscript TP-01648 that are not depicted on the final field sheet. This was based on evaluating the raw records and hydrographer's notes which indicated the existence of spoil islands. Chapter 7 of the Field Procedures Manual states that shoreline changes shall be shown in red ink on the final field sheet. Refer to Control and Shoreline, Section 2, for locations and graphic portrayal.

A comparison with the prior survey should discuss trends such as shoaling or deepening that has occurred in the survey area. Give conclusions or opinions as to the reasons for significant differences. In addition, significant changes in the shoreline should be accounted for in a like quantifiable manner, discussing degree of accretion or erosion. Reference the FPM Figure 6.1, Section M, Comparison with Prior Surveys.

AWOIS item 7912, a charted visible PA wreck, charted at latitude 28/31/30, longitude 96/23/12, was revised to an informational item by N/CG 241, Operations Section. However, there is no discussion or correspondence in the descriptive report to document this change. This change was verified per telephone conversation with N/CG 241, Mr. Steve Verry, during office processing.

5. JUNCTIONS

Survey H-10395 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10379	1991	10,000	West
H-10380	1991	10,000	East
H-10397	1991	10,000	East
H-10412	1991-92	10,000	South
H-10415	1991-92	10,000	North

The junctions with surveys H-10379, H-10380 and H-10397 have been completed.

The junctions with surveys H-10412 and H-10415 could not be accomplished as these surveys are in a preliminary stage of office processing. The junctions with H-10395 will be addressed in the Evaluation Reports for surveys H-10412 and H-10415. A comparison with this survey and the charted depths reveals good agreement.

6. COMPARISON WITH PRIOR SURVEYS

H-5866 (1934-35) 1:20,000

Survey H-5866 covers the entire area of the present survey. Changes within the central portion of Matagorda Bay can best be described as follows. From approximately one nautical mile east and north of the Matagorda Ship Channel, depths have generally remained unchanged, although .1 to .3 meter (0.5 to 1.0 foot) differences are noted with no discernible pattern of either shoaling or deepening. However, much larger differences are seen directly along the eastern side of the Matagorda Ship Channel and along both the northern and southern sides of the Intracoastal Waterway. In these areas, present survey soundings reveal shoaling from .5 to 2.0 meters (1.5 to 6.5 feet) primarily due to constant dredging activity and creation of active spoil areas. Directly west of the Matagorda Ship Channel to Port O'Connor and vicinity, present depths are generally deeper by .2 to .3 meter (1 foot). The Matagorda Ship Channel and the Intracoastal Waterway were not in existence during the last prior survey. Generally, where depths of 11 to 12 feet existed in 1934, a federally maintained channel (34 foot project depth) now resides. Similarly, the Intracoastal Waterway is currently maintained to a project depth of twelve feet. Here, present survey depths generally run 14-18 feet (4.5 to 5.5 meters) whereas the prior survey depicts 12 to 13 feet (3.7 to 4.0 meters).

The shoreline on the western side of the Matagorda Ship Channel near Port O'Connor has eroded shoreward from 60 to 150 meters, likely due to heavy storm activity that has frequented this area since 1934. However, the mean high water line around Boggy Bayou has remained fairly stable.

There are no AWOIS items originating from survey H-5866 applicable to the present survey.

Survey H-10395 is adequate to supersede the prior survey within the common area.

7. COMPARISON WITH CHART

Chart 11317, 20th edition, dated March 23, 1991; scale 1:50,000
Chart 11319, 22th edition, dated Feb. 10, 1990; scale 1:40,000

a. Hydrography

Charted hydrography originates with prior survey H-5866 (1934-35), discussed in section 6 of this report and miscellaneous sources and requires no further discussion, except for the following. Charted soundings shown along the eastern side of the Matagorda Ship Channel and in the vicinity of the active spoil areas, originate from miscellaneous sources. In these areas, present survey soundings are generally deeper from 0.5 to 1.5 meters primarily due to contemporary dredging activities and spoil dumping creating constant changes of depth.

Survey H-10395 is adequate to supersede charted hydrography within the common area with the following exceptions.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>	<u>AWOIS</u>
visible wreck PA	28/31/30	96/23/12	7912
"1 foot rep 1982"	28/27/40	96/25/05	

Except for those features previously listed, survey H-10395 is adequate to supersede charted hydrography within the common area.

b. AWOIS

The disposition of all AWOIS items originating from miscellaneous sources is adequately discussed by the hydrographer in section N and in the item investigation forms attached to the descriptive report. AWOIS item 7912, a charted visible PA wreck, charted at latitude 28/31/30N, longitude 96/23/12W, was revised to an informational item and visually investigated during hydrographic operations. This wreck was not found and should be charted as submerged.

c. Controlling Depths

Matagorda Ship Channel and the Intracoastal Waterway are federally maintained channels that reside within the area of this survey. The depths found during this survey are consistent with or deeper than the charted controlling depths and or reported channel depths. However, the hydrographer has specifically recommended in the descriptive report, section S, Recommendations, that the area of the Intracoastal Waterway at latitude 28/27/32N, longitude 96/21/09W, should be carefully monitored due to silting. In addition, there are three other shoal areas encroaching along the south side of the Intracoastal Waterway as listed below.

<u>Latitude(N)</u>	<u>Longitude(W)</u>	<u>Depth (Meters)</u>
28/27/29	96/21/18	1.9
28/27/25	96/21/25	1.9
28/27/18	96/21/45	2.9

d. Aids to Navigation

There are ten fixed and eight floating aids within the area of this survey. With the exception of control station 042, Matagorda Bay Range K Rear Light, these aids were located by hydrographic methods and serve their intended purpose. Matagorda Ship Channel Light "34" has been manually transferred from junction survey H-10379. Matagorda Ship Channel Lights 29, 30 and Nun buoys "104" and "108A", plot from 75 to 130 meters from their respective charted positions. Refer to the hydrographer's report, section P and the list below for revised positions. No form 76-40's were supplied by the hydrographer to report these new positions.

<u>Light List Name</u>	<u>Survey Position</u>	
	<u>Latitude(N)</u>	<u>Longitude(W)</u>
Matagorda Bay Buoy 101	28/27/38.90	96/20/45.04
Matagorda Bay Buoy 103	28/27/33.31	96/21/01.63
Matagorda Bay Buoy 104	28/27/36.81	96/21/05.74
Matagorda Bay Buoy 105	28/27/27.87	96/21/18.03
Matagorda Bay Buoy 107	28/27/22.82	96/21/33.19
Matagorda Bay Buoy 108	28/27/25.19	96/21/34.93
Matagorda Bay Buoy 108A	28/27/22.64	96/21/42.57
Matagorda Bay Buoy 109	28/27/17.98	96/21/46.61

Two landmarks, Matagorda Ship Channel Entrance North Side Dredging Range Rear Light and Matagorda Ship Channel Entrance South Side Dredging Range Rear Light are large towers which were located to Class I Third Order positioning standards.

<u>Landmark</u>	<u>Survey Position</u>	
	<u>Latitude(N)</u>	<u>Longitude(W)</u>
Matagorda Ship Channel North Dredge Light, 1989 (Tower)	28/27/29.804	96/21/39.302
Matagorda Ship Channel South Dredge Light, 1989 (Tower)	28/27/15.806	96/21/29.032

e. Geographic Names

Names appearing on the smooth sheet and in the survey title have been approved by the Chief Geographer.

f. Dangers to Navigation

A total of nine dangers to navigation were generated during the survey and subsequent office processing. These dangers consist of shoal depths and changes to aids to navigation positions. Copies of both reports are attached.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10395 adequately complies with the Project Instructions except as noted in section 4 of this report.

9. ADDITIONAL FIELD WORK

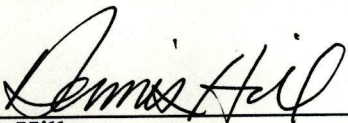
This is an adequate hydrographic survey. Additional field work is recommended on a low priority basis to locate the features not found or disproven during this survey, as noted in section 7 of this report.

Bruce A. Olmstead
Bruce A. Olmstead
Senior Cartographer

APPROVAL SHEET
H-10395

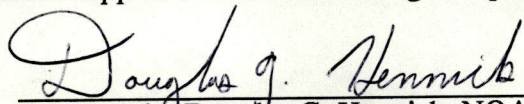
Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproof of charted data. The digital data have been completed and all revisions and processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts have been made and are included with the survey records. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.



Dennis J. Hill
Chief, Hydrographic Processing Unit
Pacific Hydrographic Section
Date: 6-3-92

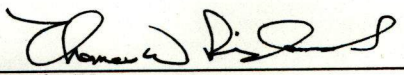
I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.



Commander Douglas G. Hennick, NOAA
Chief, Pacific Hydrographic Section
Date: 6/5/92

Final Approval

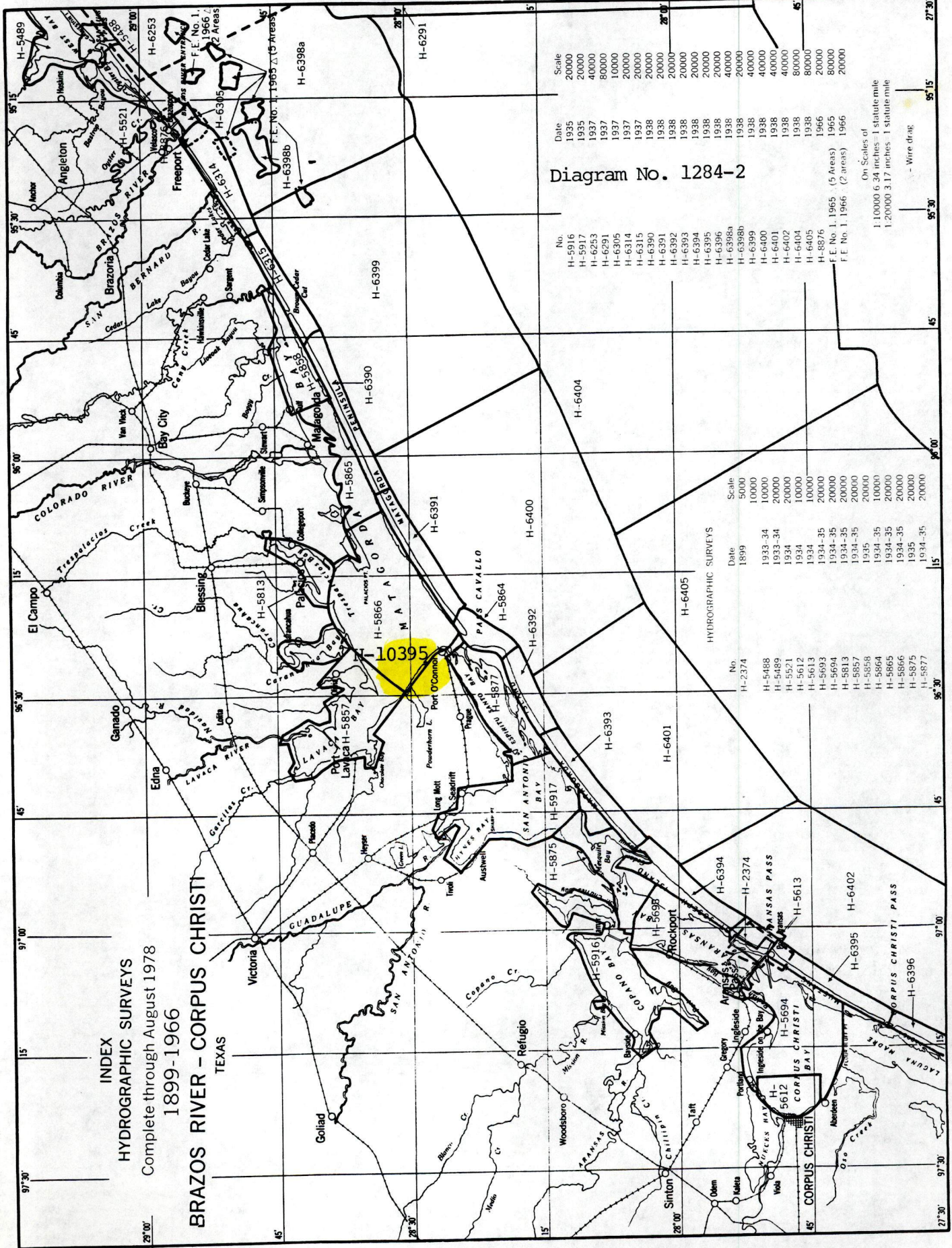
Approved:



for J. Austin Yeager
Rear Admiral, NOAA
Director, Coast and Geodetic Survey
Date: 12-7-94

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 90 C



INDEX
HYDROGRAPHIC SURVEYS
Complete through August 1978
1899-1966
BRAZOS RIVER - CORPUS CHRISTI
TEXAS

Diagram No. 1284-2

No.	Date	Scale
H-5916	1935	20000
H-5917	1935	20000
H-6253	1937	40000
H-6291	1937	80000
H-6305	1937	10000
H-6314	1937	20000
H-6315	1937	20000
H-6390	1938	20000
H-6391	1938	20000
H-6392	1938	20000
H-6393	1938	20000
H-6394	1938	20000
H-6395	1938	20000
H-6396	1938	20000
H-6398a	1938	40000
H-6398b	1938	20000
H-6399	1938	20000
H-6400	1938	40000
H-6401	1938	40000
H-6402	1938	40000
H-6404	1938	80000
H-6405	1938	80000
H-8876	1966	20000
F. E. No. 1, 1965 (5 Areas)	1965	80000
F. E. No. 1, 1966 (2 Areas)	1966	20000

HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-2374	1899	5000
H-5488	1933-34	10000
H-5489	1933-34	10000
H-5521	1934	20000
H-5612	1934	10000
H-5613	1934	10000
H-5693	1934-35	20000
H-5694	1934-35	20000
H-5813	1934-35	20000
H-5857	1935-35	20000
H-5858	1935-35	10000
H-5864	1934-35	20000
H-5865	1934-35	20000
H-5866	1934-35	20000
H-5875	1935	20000
H-5877	1934-35	20000

On Scale of
1:10000 6.34 inches 1 statute mile
1:20000 3.17 inches 1 statute mile

- Wire drag

