

# 10365

# 10365

Diagram No. 1286-2

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

Type of Survey ..... Hydrographic  
Field No. .... AHP-10-1-91  
Office No..... H-10365

### LOCALITY

State ..... Texas  
General Locality .. Corpus Christi Bay  
Locality ..... Alongshore of the  
..... Encinal Peninsula

1991

CHIEF OF PARTY  
LCDR V.D. Ross

### LIBRARY & ARCHIVES

DATE ..... February 16, 1993

☆U.S. GOV. PRINTING OFFICE: 1980-766-230

11312  
11309  
11308 A  
11307 N.C.

ECC  
LNM 193  
3/4/93 DB

ECC  
LNM 193

H-10365

**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-10-1-91

State Texas

General locality Corpus Christi Bay

Locality Alongshore of the Encinal Peninsula

Scale 1:10,000 Date of survey January 16 - April 1, 1991

Instructions dated September 14, 1991 Project No. OPR-K229-AHP-2

Vessel NOAA Launches 770 and 520

Chief of party LCDR V. Dale Ross, NOAA

Surveyed by Ms Maria Mangual-Ortiz and Mr. Glen D. Hendrix

Soundings taken by echo sounder, ~~hand held~~ Innerspace, S/N 187, Model 448 and DE-719-C

Graphic record scaled by MMO, GDH, BW, JR

Graphic record checked by MMO and GDH

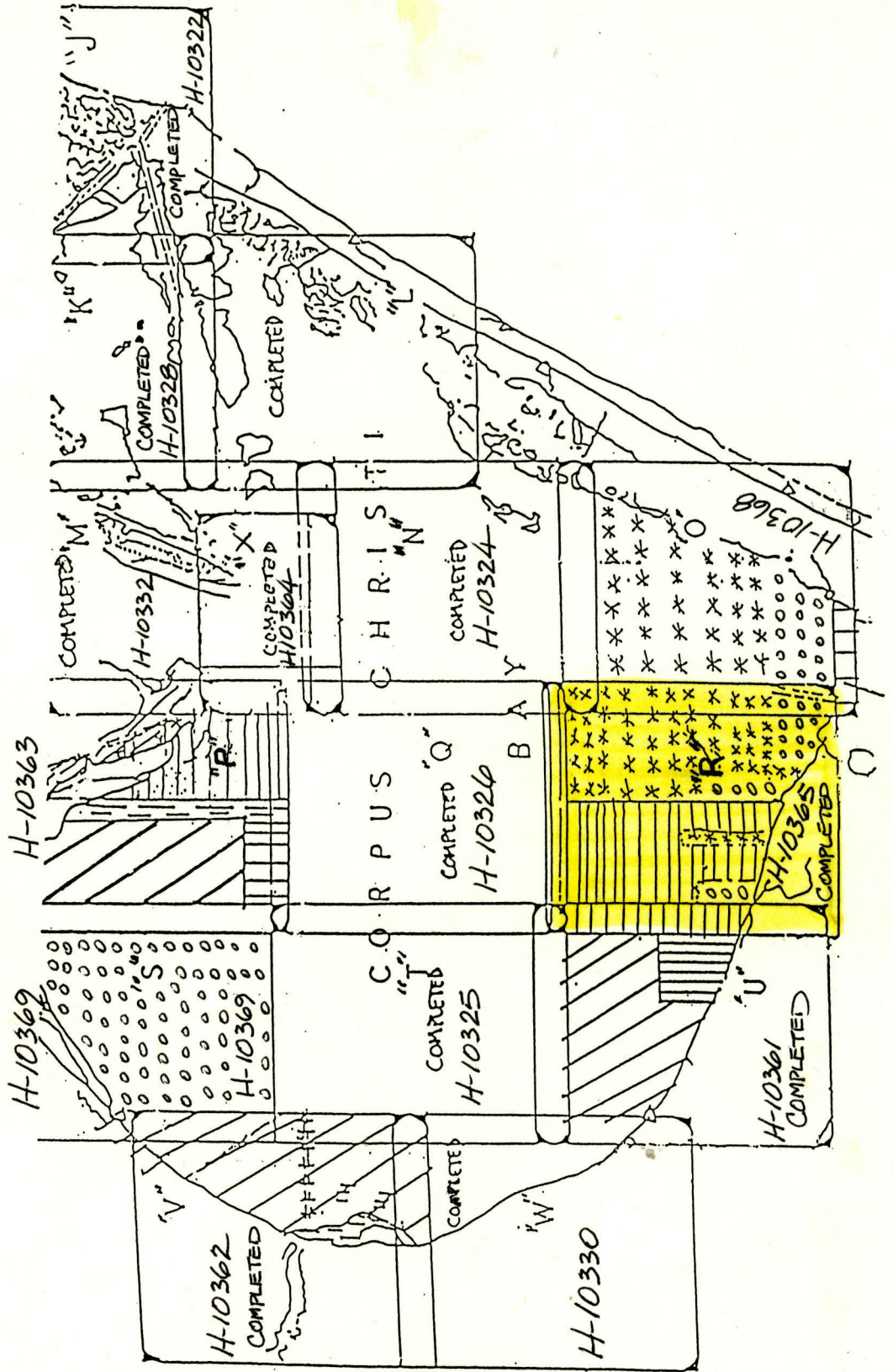
Verification by: G.E. Kay Automated plot by PHS Xynetics Plotter

Evaluation by: G.E. Kay

Soundings in ~~fathoms~~ meters and decimeters at ~~MLLW~~ MLLW

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.

*AWOK/SUPP ✓ 2/22/93 STV*



DESCRIPTIVE REPORT TO ACCOMPANY  
HYDROGRAPHIC SURVEY H-10365  
(Field No. AHP-10-1-91)  
Scale:1:10,000  
1991

Atlantic Hydrographic Party Two  
Chief of Party: Lt. Cdr. V. Dale Ross, NOAA

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K229-AHP2, Corpus Christi and Aransas bays, Texas, dated September 14, 1990, and Change No. 1 dated February 12, 1991. ✓

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

The purpose of this project is to provide contemporary hydrography for the maintenance of existing nautical charts of the Corpus Christi Bay and the construction of a new nautical chart for the new naval base at Ingleside, Texas. ✓

B. AREA SURVEYED

The area surveyed for H-10365 is in the south portion of Corpus Christi Bay, Texas, bounded by the following limits:

North - 27° 45' 07" N  
South - 27° 40' 48" N  
East - 097° 17' 58" W  
West - 097° 18' 58" W

This survey was conducted from January 16, 1991 (day 016) to April 1, 1991 (day 091). ✓

The bottom is composed of mostly gray mud with broken shell. ✓

Depths of this survey range from 0.<sup>3</sup>/<sub>7</sub> to 5.<sup>5</sup>/<sub>8</sub> meters. ✓

C. SOUNDING VESSELS

Vessels 520 (EDP No. 520) and 770 (EDP No. 770), 21-foot MonArks, were the sounding vessels used to collect all survey data. There were no unusual vessel configurations nor problems encountered. ✓

D. AUTOMATED DATA ACQUISITION AND PROCESSING

Hewlett-Packard HDAPS Programs:

Program	Version	Date
Survey	4.33	5/26/90
Constat	2.02	3/9/90
Postsur	4.14	7/20/90
Printout	2.23	7/12/90
Baseline	1.01	6/15/90
Backup	1.02	3/9/90
Quick	1.01	7/27/90
Conplot	1.02	6/25/90
Diagnostics	2.50	3/9/90
Compute	2.02	3/9/90
Point	1.20	3/9/90
Install	1.20	3/26/90
Plotall	1.74	8/10/90
Oldconvert	2.33	3/12/90
Loadnew	1.00	7/27/90
Convert	2.34	6/20/90
Filesys	4.55	5/26/90
Inverse	1.21	7/27/90
Abst	3.05	5/26/90

PC-DAS program, NOAAEXE directory, Version 3.6 was used for on line data acquisition on the survey vessel. ✓

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

	<u>Version</u>	<u>Date</u>
VELOCITY - Velocity Computations (IBM PC)	1.01	1/90
MTEN3 with enhancements Geodetic Computations (IBM PC)		6/88
WORDPERFECT - Descriptive Report (IBM PC)	5.0	6/88

E. SONAR EQUIPMENT

No sonar equipment was used during this survey. ✓

#### F. SOUNDING EQUIPMENT

The following Innerspace (Model 448) depth sounder and Raytheon Fathometers (Model DE-719-C) with Odom Hydrographic Systems, Inc. Digitraces, were used on vessel 520 and 770. ✓

<u>Vessel</u>		<u>S/N</u>	<u>Day</u>	
520	Innerspace 448	187	016 - 091	✓
770	Raytheon DE-719-C	3947 5881-42B	016 - 037 042 - 081	

No major problems were encountered with the depth sounder used on vessel 520, except that it will not digitize less than 0.5 meter. Due to the recurring sand bars from approximately 300 meters offshore into shore, pole soundings were taken in areas less than 0.5 meter deep to verify the shoreline expeditiously. Also, a problem was experienced when changing the sounding interval on-line. The Innerspace 448 depth sounder and the Comflex 1030 NX insert selected soundings differently. The Innerspace 448 depth sounder counts the selected sounding as one of the in-betweens and the Comflex 1030 NX does not. This causes the position numbers to be on a different selected sounding throughout the remainder of the line. The selected soundings and position numbers were corrected while scanning the echograms. ✓

No major problems were encountered with the DE-719-C fathometer, S/N 5881-42B, used on vessel 770. The DE-719-C fathometer, S/N 3947, used on vessel 770 was replaced on day 042 due to a consistent difference of 0.2 meter between the digitrace and the lead line comparisons. This difference was also observed in the comparison of overlapping depths between vessel 770 and 520 which were run on the same day. These data are considered acceptable since the error of 0.2 meter is a documented systematic error, is shallower, and is within the allowable scanning tolerance. ✓ *See Evaluation Report Section 1*

#### G. CORRECTIONS TO SOUNDINGS

The Innerspace 448 depth sounder is semi-automated and does not need adjustments of the tide and draft, and speed of sound. Any required adjustments of the gain and chart speed were made and noted on the echogram. The digitized soundings matched the Innerspace 448 echo sounder's trace to plus or minus 0.1 meter. Any necessary corrections were made during scanning of the echogram. ✓

When using the Raytheon Model DE-719-C Fathometers, calibration checks were made frequently on each day of hydrography. The Digitrace readings were closely monitored for agreement with the fathogram trace. The digitized soundings matched the fathometer's trace to plus or minus 0.1 meter, except with S/N 3947, which matched the fathometer's trace to plus or minus 0.2 meter. Any necessary corrections were made during scanning of the fathograms. Any required adjustments of the tide and draft, speed of sound, and sensitivity were made and noted on the fathogram. Any departures from the initial zero were corrected during scanning of the fathogram. ✓

To expedite the plotting of all pole soundings with the HDAPS, negative draft corrections (0.4 meter for vessel 520 and 0.3 meter for vessel 770) were applied to all pole soundings during scanning of the echograms to negate the correctors which are automatically applied by the plotting routine. These depths were plotted as digitized soundings along with the data logged by the HDAPS. The hydrographer did not foresee any problems with this action since the speed of sound through water correction is zero at these depths. Moreover, the settlement and squat correction for the boat speed when the pole soundings were taken does not change the rounded draft corrections. On vessel 770, the settlement and squat correction when the pole soundings were taken always rounds the draft correction to 0.3 meter. On vessel 520, the settlement and squat correction when the pole soundings were taken always rounds the draft correction to 0.4 meter. ✓

Soundings were recorded in meters. The Innerspace 448 depth sounder and the Raytheon DE-719-C fathometer are adjusted for an assumed speed of sound through water of 1500 meters/second. Corrections for the speed of sound through water were computed from data obtained with an Applied Microsystems Laboratory, Inc. (AML) speed of sound profiler (S/N 03003). Program "Velocity" was used for the speed of sound correction computations. Copies of casts forms can be found in the separates of this report, *filed with the Survey Records.* ✓

The following speed of sound casts were taken during the survey.

<u>Table Applied</u>	<u>Day</u>	<u>Cast Depth Meters</u>	<u>Location NAD 1983</u>	<u>Days Used</u>	
15	017	3.9	27°45'00"N 097°17'50"W	016	✓
16	023	3.8	27°45'00"N 097°17'50"W	025	✓
17	029	3.8	27°45'00"N 097°17'50"W	028-029	✓

<u>Table Applied</u>	<u>Day</u>	<u>Cast Depth Meters</u>	<u>Location NAD 1983</u>	<u>Days Used</u>	
18	038	4.0	27°45'00"N 097°17'50"W	037-039	✓
19	043	3.9	27°44'00"N 097°17'30"W	042-043	✓
20	058	4.0	27°44'00"N 097°17'00"W	058-065	✓
21	071	3.7	27°45'15"N 097°18'00"W	070-072	✓
22	081	4.5	27°44'00"N 097°17'00"W	077-091	✓

A data quality assurance test (DQA) was performed prior to each speed of sound cast to assure proper working condition of the probe. Speed of sound tables are included in the separates of this report *filed with the survey records.* ✓

Weather permitting, lead line comparisons were conducted on each day of hydrography to determine an instrument corrector and check the static draft. Instrument corrections are applied via the velocity table. Lead line comparison forms can be found in the separates of this report, *filed with the survey records.* ✓

Settlement and squat measurements for vessels 520 and 770 were performed on October 11, 1990 (DN 283), for vessel 520 at the Lawrence street T-head, Corpus Christi; and on November 5, 1990 (day 309), for vessel 770 at the Coopers Alley L-head, Corpus Christi, using the NOS prescribed level rod method (Zeiss Level S/N 08765). Settlement and squat correctors and the static draft correctors (0.36 meter for vessel 520 and 0.24 meter for vessel 770) were applied on-line through the offset tables. Copies of the field data, the graphs of the settlement and squat correctors vs. RPM, and the offset tables are included in the separates *filed with the survey records.* ✓

A problem was encountered with the speed of the boat monitored by the Comflex 1030 NX on vessel 520 and the Texas Microsystems on vessel 770. The listings show unrealistic speeds made good varying from 0 m/sec to 10 m/sec in some sections of this survey. This problem is usually created by positional data interference. The corrector applied through the offset table due to the wrong speed creates a maximum error of 0.09 meter shoaler or 0.08 meter deeper for vessel 520; and 0.21 meter shoaler or 0.13 meter deeper for vessel 770. This problem has been reported to Hydrographic Surveys Branch, Rockville, Maryland. These data are considered acceptable. *For Abbie processing correctors applied by RAM* ✓



The final field sheets and rough sheets were plotted with predicted tides using the reference station designated in the project instructions and correctors obtained from Sea and Lake Levels Branch. Approved tides were requested from the Sea and Lake Levels Branch, N/OMA1212, in a letter dated April 2, 1991. Copies of the field tide level note, request for approved tides, and HDAPS tide tables are included with the separates *x filed with the survey records.*

Survey records were scanned by AHP-2 employees. Significant peaks and deeps which occurred between selected soundings, missed depths, incorrectly digitized soundings, and the effects of sea and swell action were corrected while scanning the echograms.

#### H. CONTROL STATIONS

The horizontal control datum for this project is the North American Datum of 1983.

Five monumented control stations (stations 034, 036, 038, 040, and 065), four fixed aids to navigation (stations 045, 046, 049, and 063), and four landmarks (stations 037, 066, 067, and 068) were used to control this survey. The station list is included in the separates of this report.

Station number 063 was assigned to two different stations within the area of this project --station "Warehouse 1989" at latitude 27°52'23.387"N, longitude 097°09'34.837"W, not used by this survey, and station "C C Bay Spoil Bank Lt A 1990" at latitude 27°44'01.556"N, longitude 097°16'32.909"W, which was used by this survey.

The name of station "C C Bay Spoil Bank Lt A 1990"\* was charted incorrectly, and consequently the name submitted with our third-order, class I position was also incorrect. It is listed in the Light List, Volume IV, 1990, Light List No. 27730, as "Corpus Christi Bay Spoil Bank Light". Telephone conversations with Chief Hernandez, U. S. Coast Guard, Corpus Christi Aids to Navigation Team, confirmed the name of this light as listed in the light list. Seaward inspection was performed by this hydrographer when setting-up station 063. A white diamond-shaped dayboard with an orange reflective border labeled "DANGER SPOIL BANK", and a white light were observed.

All control stations used on this survey were either existing stations or stations set by the Coastal Surveys Unit except for control station 063 which was located by AHP-2 members. A copy of the NOAA Form 76-40 submitted to N/CG245, is

*\* This Name is used on the Smooth Sheet.*

included in <sup>s attached.</sup> ~~the separates of this report.~~ All stations were established using third order, class I traverse and intersection methods. The horizontal control report was written within the Coastal Surveys Unit and was forwarded to the Atlantic Hydrographic section in Norfolk, Virginia.

#### I. HYDROGRAPHIC POSITION CONTROL

Hydrographic position control was accomplished using the Mini-Ranger Motorola Falcon 484 system which provided accuracy to meet 1:10,000 scale survey requirements. Range/range positioning using two, three or four stations simultaneously was used during this project, except for day 082 positions 7315-7318, where a sextant, S/N T-2964, was used to obtain four 3-point fixes with checks during shoreline verification. A survey network was set up to allow four reference stations to be accessed simultaneously by the HDAPS.

The following Falcon Mini-Ranger equipment was used:

	<u>Equipment</u>	<u>S/N</u>
(520)	RPU	E0164
	R/T	E2960
(770)	RPU	E0146
	R/T	E2957
	R/S	D2128
	R/S	E2890
	R/S	E2913
	R/S	E2922
	R/S	E2962
	R/S	E2963 (520 only)

Positions which had erratic lines of position, indicated by high residuals (over 5 meters), high error circle radii (over 15 meters), and angles of intersection higher than 150 degrees or lower than 30 degrees on the "raw" listing were "smoothed" or recomputed by using the point computation routine during data processing. Positions were "smoothed" by dead reckoning between two accurate positions. Positions were recomputed with the point computation program by turning-off the station with an erratic range or by turning-on a station with a good range.

If more than six consecutive selected soundings had high residuals, high error circle radii, or angles of intersection outside the 30 to 150 degree margin with an erratic track plot, the data were rejected and later rerun. Occasionally, the

residual values were greater than 5 meters or error circle radius values were greater than 15 meters, yet the trackline plot showed that the position of the survey vessel was realistic. In those instances, the data were considered adequate and were plotted without smoothing on the final field sheet. ✓

An occasional problem was encountered when good residuals with a good error circle radius appeared on the "raw" listing, but the easting or northing of the position was in error by thousands of meters. These positions were rejected, smoothed, or recomputed using the point computation routine following the standards mentioned above. This problem is attributed to the excessive amount of microwave interference encountered from the large steel gas platforms in the Corpus Christi Bay area. ✓

Critical system checks were performed by visually observing the error circle radii and residual values on the Comflex 1030 NX or Texas Microsystems screen in the survey vessels. The "DUMP ALPHA" and "DUMP GRAPHICS" functions are not available with the Comflex 1030 NX or Texas Microsystems so no listings of these checks are possible. However, the data identification listing serves as the record of the quality of the positional data. ✓

Fixed-point system checks were performed after Mini-Ranger reference stations were established on shore stations or after relocating Mini-Ranger reference stations. A fixed point system check was performed at the beginning and ending of day 070 as required when hydrography is run with only two stations all day. All fixed point checks values were less than 5 meters, which is within the required limits specified in the field procedures manual. Results of these fixed-point checks are included in the separates of this report, *x filed with the survey records.* ✓

Baseline calibrations were performed as specified in the field procedures manual. The baseline values were incorporated into the Comflex 1030 NX and Texas Microsystems "C-O" table and applied directly to all "on-line" data. Baseline calibration forms and the "C-O" tables are included in the separates of this report, *x filed with the survey records.* ✓

A closing baseline calibration was not performed since the survey was conducted in less than a six month period. ✓

#### J. SHORELINE

Shoreline details shown on the final field sheet were manually transferred from TP-01616 and TP-01199. The shoreline manuscripts were compiled at a 1:20,000 scale and photographically enlarged to a 1:10,000 scale. ✓

Shoreline verification was accomplished by comparison of the main scheme hydrography where it junctions with the shore, and by visual inspections. The shoreline in this survey area agrees very well with TP-01616 and TP-01199, except in the vicinity of latitude  $27^{\circ}41'11''N$ , longitude  $097^{\circ}14'00''W$  where no shoreline was portrayed on either of the shoreline manuscripts. The hydrographer walked and visually checked the area. The water is too shallow for a survey launch to get in close and verify the shoreline. Four 3-point fixes with checks were taken with a sextant on day 082, positions 7315-7318, to delineate the shoreline. These positions were hand plotted with a 3-arm protractor. See the sounding volume included with this survey for information about these detached positions. The shoreline around this area is shown in red ink on the final field sheet. Verified shoreline is shown in black ink on the final field sheet. *Shoreline in red ink has been transferred to the Smooth Sheet.*

All shoreline details on the manuscript were verified visually. These features were transferred to the final field sheet in black ink at the position shown on the shoreline manuscript. Uncharted pier ruins, ramp ruins, foul areas, and changes to existing features were portrayed in red ink on the final field sheet. Additional features not related to the shoreline (well heads, piles and piles in ruin) are shown in black ink on the final field sheet.

A large percentage of the seawalls and natural shoreline is protected with concrete rubble or riprap, which in most cases extends offshore approximately 3-6 meters. The hydrographer described these findings on the echogram at the ending and beginning of the appropriate main scheme lines.

Visual shoreline verification of the Laguna Madre south of  $27^{\circ}40'48''N$  ~~and the Oso Creek~~, which does not fall within the limits of this project, was performed to complete the Notes to Hydrographer of TP-01616. The shoreline agrees well with TP-01616. See the Notes to Hydrographer included with this survey for the findings. *Oso Creek located south of the survey area.*

#### K. CROSSLINES

A total of 33 linear nautical miles of crosslines were run on H-10365 which equals 10% of the linear nautical miles of main scheme hydrography. Crossline soundings agree well, except in some areas where they agreed to within 0.6 meter of the main scheme soundings. These differences were partially caused by predicted tide anomalies and by a fathometer quirk on vessel 770. See the comments made in section R, "Miscellaneous", and section F, "Sounding Equipment", of this report about these predicted tide anomalies and the fathometer problem. These differences occur in areas that were run with two different vessels. *See Evaluation Report Section I*

## L. JUNCTIONS

This sheet junctions with H-10326, sheet "Q" (1989-1990) to the north; with H-10361, sheet "U" (1990-1991) to the west; with H-10368, sheet "O" (1991) to the east; and with H-10324, sheet "N" (1989-1990) at the northeast corner. ✓

Junction soundings between the present survey and H-10324, and H-10326 agree to within 0.3 meter. H-10361 and H-10368 agree well except for a few soundings which agree to within 0.7 meter. These differences could be attributed to the use of different vessels, the predicted tide anomalies in this area, and different years when the work was performed. See the comments made in section R, "Miscellaneous", of this report about these predicted tide anomalies. *Also See Evaluation Report sections 1 and 5.* ✓

## M. COMPARISON WITH PRIOR SURVEYS

This survey was compared with the following prior surveys:

H-5694	(1934-35)	1:20,000	
T-9187	(1951)	1:20,000	✓
T-9188	(1948)	1:20,000	

Sounding comparisons were done with H-5694. Generally, depths within the survey area have remained within 0.75 meter since 1934. ✓

The shoreline on T-9187 agrees well with the present survey. The only changes are a breakwater in the vicinity of latitude 27°42'19"N, longitude 097°16'59"W, which now connects with the shoreline, and a jetty at latitude 27°42'00"N, longitude 097°15'11"W, which now is a pier extending from the seawall. These changes have been updated on TP-01616 and agree well with the present survey. *Chart area as shown on the SHROTA sheet.* ✓

The shoreline on T-9188 agrees well with the present survey, except for the islands east of Demit Island, where the shoreline and surrounding area has changed due to natural causes. This area is subject to constant change due to the currents created by strong winds that prevail in the Corpus Christi Bay throughout the year redistributing the sand. These changes have been updated on TP-01616 and TP-01199 and agree well with the present survey, except in the vicinity of latitude 27°41'11"N, longitude 097°14'00". See section J, "Shoreline", for a discussion about this area. *Chart area as shown on SHROTA sheet.* ✓

The following list of piles portrayed on T-9188, which are presently charted as submerged stakes, no longer exist. A visual search was performed and nothing was found. The bottom was clearly seen. Areas too deep to clearly see the bottom were chain dragged on day 081, positions 7267-7314, and nothing was found. These submerged stakes should be removed from Chart 11309. *CONCUR* ✓

<u>Description</u>	<u>Latitude</u>	<u>Longitude</u>
1 submerged stake	27°41'31"N	097°14'29"W
3 submerged stakes	27°41'23"N	097°14'31"W
2 submerged stakes	27°41'23"N	097°14'26"W
1 submerged stake	27°41'19"N	097°14'23"W
1 submerged stake	27°41'17"N	097°14'27"W
1 submerged stake	27°41'15"N	097°14'30"W
1 submerged stake	27°41'14"N	097°14'31"W
1 submerged stake	27°41'12"N	097°14'31"W
1 submerged stake	27°41'10"N	097°14'29"W

The following list of piles portrayed on T-9188 which are presently charted as submerged stakes were found at the positions charted but they are not submerged. These piles ~~bare 19.8~~ meter (corrected for ~~predicted~~ tides), on day 081, at 200000 UTC. These piles should remain as charted but the description should be changed to "piles." They were apparently marking deep water but this area can not be reached since the surrounding areas are too shallow. No hydrography was run in this area due to the shallow water.

© Actual tide = 1.0 foot (0.3 meters) at 200000 hours on D.N. 081

<u>Description</u>	<u>Latitude</u>	<u>Longitude</u>
Row of <sup>3</sup> / <sub>4</sub> piles from	27°41'08"N	097°14'24"W
to	27°41'02"N	097°14'11"W
Row of 6 piles from	27°41'08"N	097°14'35"W
to	27°40'56"N	097°14'12"W
Row of 4 piles from	27°41'02"N	097°14'46"W
to	27°40'50"N	097°14'48"W

See Evaluation Report

Section 6

1 pile is NOT shown, it is located on the other side of high water line.

These piles have been transferred from prior Survey T-9188 onto Survey H-10365 in brown ink. With the transfer of these piles

the present survey is adequate to supersede the prior surveys within the common areas.

#### N. COMPARISON WITH THE CHART see Evaluation Report Section 7

Comparisons were made with the following largest scale chart of the area:

<u>Chart No.</u>	<u>Edition</u>	<u>Edition Date</u>
11308 SC	16th	August 25, 1990
11309	30th	December 2, 1989
11309	31st	August 31, 1991

There are eight AWOIS items within the limits of the present survey. See the AWOIS reports ~~included with the separates of~~ this report for findings on these AWOIS items.

In general, the soundings from this survey compared to within 0.7 meter of the charted depths.

The following discrepancies were noted:

Sounding lines within a <sup>section of</sup> charted discontinued spoil area at latitude 27°44'30"N, 097°16'30"W were split to 50 meters. The soundings agree well with the soundings outside of the limits of the discontinued spoil area. The hydrographer recommends that the present survey soundings be charted and the discontinued spoil area limits and label be removed from the chart.

A charted discontinued spoil area at latitude 27°41'15"N, longitude 097°13'12"W is incorrectly charted. This spoil area is active. Mr. Frank Garcia of the Corps of Engineers, telephone (512)884-3385, informed the hydrographer that this spoil area, which is approximately 100 meters east of the Laguna Madre Intracoastal Waterway, is presently being used during a dredging project which started on March 25, 1991. The dredging extends from approximately 600 meters north of light "17" to approximately 600 meters north of light "1". The hydrographer recommends that the label "discont'd" be removed from this charted spoil area. The hydrographer also recommends that the northern limit of this spoil area be extended from latitude 27°42'00"N to latitude 27°42'27"N, to cover the shoaling found in this area. The hydrographer attributes this shoaling to dumping dredged spoil during previous dredging projects. The hydrographer further recommends that the charted active spoil area adjacent to this charted discontinued spoil area be consolidated into one active spoil area.

A charted seaplane ramp at latitude 27°41'52"N, longitude 097°15'21.7"W is now in ruins. A detached position was taken on day 072, position 6887. The hydrographer recommends that this ramp be recharted as "ramp ruins."

A charted seaplane restricted area is no longer used for seaplanes. Some of the seaplane ramps are in ruins and the rest are not safe. The hydrographer spoke to an employee at the Corpus Christi Naval Air Station and this area is still a restricted area. This area should be relabeled as "restricted navigational area." \*

A charted overhead power cable submerged at the main channel which extends from Demit Island to Mustang Island no longer exists. A visual search of the area for the overhead power cable and piles was performed and nothing was found. The area of two charted piles supporting this overhead cable at latitude 27°41'30"N, longitude 097°14'29"W and latitude 27°41'27"N, longitude 097°14'21"W was chain dragged on day 081, positions 7267-7314, and nothing was found. Mr.

ⓐ located off the sheet limits.

\* This area is covered by charted Note A, which references Coast Pilot Code 334.80 as restricted navigational. This note should remain as charted.

ⓑ These two piles should be removed from the chart.

Curtis Proske, Design Engineer with the Central Power and Light Company, Central Region, telephone (512)289-8645, informed the hydrographer that their current policy when removing overhead power cable piles is to cut the concrete or wood pile below the mud line or to remove them completely. The hydrographer recommends that the charted overhead power cable and piles within the survey area be removed from the chart. *Do NOT CONCUR See Evaluation Report 7A*

A visual and fathometer search of three charted gas wells at latitude 27°40'57"N, longitude 097°15'29"W, latitude 27°40'56"N, longitude 097°15'13"W, and latitude 27°40'48"N, longitude 097°15'26"W was performed and nothing was found. The hydrographer was able to see the bottom clearly. The hydrographer recommends these <sup>A</sup>gas wells *CONCUR three* be removed from the chart.

A charted "subm pile rep" at latitude 27°41'04"N, longitude 097°13'46"W was not seen. The hydrographer was not able to get close <sup>See Evaluation Report section 7C</sup> to this area due the surrounding shallow water. Consequently, this submerged pile was not verified nor disproved. The submerged pile *CONCUR* should remain as charted. *See Evaluation Report section 7A*

A charted "(shl rep 1984)" in the vicinity of latitude 27°41'18"N, longitude 097°14'53"W was found during hydrography. Fifty meter splits of the main scheme was run to delineate this shoal area. The charted depths should be revised using the present survey depths. The charted "(shl rep 1984)" should be removed from the *CONCUR* chart.

A charted "8 ft rep 1973" in the vicinity of latitude 27°41'09"N, longitude 097°15'12"W was found during hydrography. <sup>See Evaluation Report section 7C</sup> Fifty meter splits of the main scheme was run to delineate this area. The charted depths should be revised using the present survey depths. <sup>page 11</sup> The charted "8 ft rep 1973" should be removed from the chart.

See section M, "Comparison with Prior Surveys", <sup>A</sup> for *✓* discrepancies found with charted submerged stakes, not covered by the AWOIS item listing, which apparently originated with prior survey T-9188.

Other new features and changes to existing features found during *✓* shoreline verification are discussed in section J, "Shoreline."

Many two to three meter symmetric shoals were found during main scheme hydrography for this survey. All of these shoals were developed by running 25-meter splits of the main scheme and 25-meter lines perpendicular to the main scheme to better delineate the extent of the shoals. The hydrographer believes that most of these *✓* symmetric shoals probably were created by the drilling companies dumping shell to provide a solid foundation for drilling rigs. This technique is used on soft mud bottoms found in most of the Corpus Christi Bay. Three bottom samples were taken around three of the shoals, on day 079 at position 7147 and on day 080 at positions 7186



and 7210. One sample was taken directly on a shoal and was composed of shells. The other two bottom samples were taken approximately 100 meters from the center of two other shoals. These samples were composed of gray mud and broken shells. The bottom samples elsewhere were in the survey area were composed of gray mud. The charted depths should be revised using the present survey depths. *CONCUR*

The hydrographer suspects that other shoals like these may exist in this survey area and throughout the Corpus Christi Bay. The hydrographer recommends that a note of caution be added to chart 11309 stating that other 2-meter shoals which are not charted may be encountered outside of the channel areas. *Existing Warning Note on Obstructions sufficient.*

A dangers to navigation report on eighteen 2- to 3-meter shoals, dated 1 April 1991, was submitted to the Commander, U. S. Coast Guard District, New Orleans, Louisiana, a copy to the Commanding Officer, USCG Detachment, Corpus Christi, Texas, and other government offices as described in the Hydrographic Survey Guideline No. 66. A copy is ~~included in the appendices of this report.~~ *attached to*

A dive investigation was performed at latitude 27°45'00"N, longitude 097°13'16"W, to investigate a suspicious fathogram trace. A pipe near a well head was found with a lead line least depth of 2.00 meters, corrected for predicted tides. See dive report number 6 on day 078, position #1728, included in the separates of this report\*. The hydrographer recommends a ~~submerged pipe symbol~~ be charted on chart 11309 at the surveyed position. *CONCUR*  
*2.0 meters = 9.2 feet* *9 ft Obstrn*

A buoy line and a center line were run in the intracoastal <sup>see</sup> waterway at Laguna Madre. Main scheme lines crossing the channel <sup>Evaluation</sup> were also run. The channel is presently being dredged. See the <sup>Report</sup> previous discussion in this same section for more information on the <sup>Section 7C</sup> dredging operations. There are no controlling depths charted for this channel. *Do NOT CONCUR*®

The present soundings are adequate to supersede the charted soundings within the common areas. *CONCUR*  
*See Evaluation Report 7.*

#### O. ADEQUACY OF SURVEY

This survey is a complete basic hydrographic survey and is adequate to supersede all prior surveys within the common areas. *see Evaluation Report section 6.*

#### P. AIDS TO NAVIGATION

There are four non-floating aids to navigation located in this survey area. These aids were compared to the U. S. Coast Guard Light List, Volume IV, 1990. The aids with light list positions agree well with the surveyed and charted positions. The aids without light list positions agreed well with the charted positions, except for light

\* filed with the survey records.

© the Project depth for the Intracoastal Waterway is 12 feet from New Orleans, LA to Port Isabel, Tx. as listed in NOTE C on chart 11309 31<sup>st</sup> Ed. 8/31/91.

"1". This aid is located 100 meters south of the charted position. Chief Hernandez of the U. S. Coast Guard Aids to Navigation Team, Corpus Christi, Texas was informed, by telephone conversation, of the discrepancy of the position of this light. Chief Hernandez informed the hydrographer that this light has been relocated. Detached positions were taken on these aids on day 072, positions 6899-6900, and 6904; and on day 078, position 1737. These aids serve their intended purposes. The hydrographer recommends that these aids be charted at the surveyed positions. *See Evaluation Report section 7.d.* **CONCUR**

There are six floating aids to navigation located in this survey area. These aids were compared to the U. S. Coast Guard Light List, Volume IV, 1990. There were no positions for these floating aids in the light list. Detached positions were taken for these aids on day 072, positions 6901-6903, and 6905-6907. These positions agree well with the charted positions, except for buoy "5" and buoy "11". Buoy "5" is located 100 meters south of its charted position, and Buoy "11" is located 80 meters south of its charted position. These buoys are serving their intended purposes. The hydrographer recommends that these aids be charted at the surveyed positions. **CONCUR**  
*Buoy 12 is also moved see Evaluation Report section 7.d.*

No submarine cables, submarine pipelines, overhead cables, overhead pipelines, bridges, nor ferry routes are within the survey area. See section N, "Comparison with the Chart", for information on the charted "overhead power cable submerged at main channel."

No new landmarks were located within the survey area. Landmarks portrayed on the manuscript were verified by visual inspection. No discrepancies were found concerning the landmarks portrayed on shoreline manuscript T-01616.

#### Q. STATISTICS

Description	520	770	Total
Total Number of Positions	<del>2371</del>	<del>1769</del>	<del>4140</del>
Total Linear Nautical Miles of Hydrography	242	203	445
Square Nautical Miles of Hydrography	9	9	18
Days of Production	21	14	35
Bottom Samples	34	27	61
Tide Stations			3
Speed of Sound Casts			8
Detached Positions	17	33	50

* Position Number	Latitude North	Longitude West	A10	Light List Number
6901	27°42'06.81	97°13'15.61	G "3"	36270
6902	27°41'49.00	97°13'20.04	G "5"	36275
6903	27°41'36.43	97°13'23.29	G "7"	36280
6905	27°41'04.56	97°13'31.27	G "11"	36290
6906	27°40'55.19	97°13'35.44	R "12"	36291
6907	27°40'50.23	97°13'34.89	G "13"	36295

R. MISCELLANEOUS

All positions listed in this report are based on the North American Datum of 1983 (NAD 83). ✓

The hydrographer obtained loran-C positions of the different snags in the Corpus Christi Bay area from local shrimpers. These positions were converted and plotted by the Pacific Hydrographic Section, N/CG 245. This plot was used as only a reference since shrimpers snag on almost anything, even on wellheads that were cut flush with the bottom. The hydrographer believes that no further action should be taken regarding this information. A copy of the list can be found in the appendices\* of this report. The 1:40,000 plot of these snags and the 1:10,000 enlargement was submitted with this survey. Many 2- to 3-meter shoals were found during hydrography near the area of the reported snags. See section N, "Comparison with the Chart", for discussions and recommendations on these shoals. ✓

There were predicted tide anomalies observed during this survey causing depths on adjacent sounding lines to differ by up to 0.6 meter. There were high winds during this survey which caused extremely low or high water from day to day. The hydrographer believes that when smooth tides are applied these differences will be partially, if not fully, resolved. The use of two different vessels using two very different echo sounders to run this survey can account for part of the differences between adjacent and overlapping soundings. See the comments made under section F, "Sounding Equipment", for another problem which contributed to the differences between soundings. *See Evaluation Report section 1*

Three dive investigations were performed to investigate suspicious fathogram traces but nothing was found. See dive report numbers 3 and 4 of day 065, positions 6454 and 6455, respectively; and dive report number 7 of day 078. These position numbers were rejected since nothing was found.

Position numbers were duplicated throughout this survey. They are listed in the Abstract of Positions found in the separates of this report. While on-line, the data acquiring program loses count of the position numbers creating duplicated position numbers. Position numbers will not update while the "F10" position control screen is in use. In addition to that problem, changing the sounding interval on-line also causes duplicated positions. See the comments made under section F, "Sounding Equipment."

The wrong corrector was used to run hydrography on vessel 520, day 091, positions 7319-7370. A 4.7 meter corrector was used in lieu of a -0.2 meter corrector. The residual values were within the 5 meters allowed and the error circle radii values were also good. Only 3.6 nautical miles of splits of the main scheme were run this day. The hydrographer believes these data are acceptable. *Data have been accepted.*

*\* filed with the Survey records*

All chain drag data was trackplotted on a separate sheet to show the area covered by the chain drag. All chain drag data has been edited and labeled "NOT FOR SMOOTH PLOT." *Cancel This data not plotted on smooth sheet.* ✓

The ASSIGN FIX program was used to assign a position number to the beginning or ending of a line where the position number was rejected. ✓

Sixty one bottom samples were taken and submitted to the Smithsonian Institution on March 25, 1991, as directed in section 6.7 of the project instructions. 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 of this report *x filed with the survey records.* ✓

No anomalous currents were observed in the survey area.

S. RECOMMENDATIONS

None.

T. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report to Accompany Survey H-10324	Pacific Hydrographic Section N/CG245 Seattle, WA, (1990)
Descriptive Report to Accompany Survey H-10326	Pacific Hydrographic Section N/CG245 Seattle, WA, (1990)
Descriptive Report to Accompany Survey H-10361	Pacific Hydrographic Section N/CG245 Seattle, WA, (1991)
Descriptive Report to Accompany Survey H-10368	Pacific Hydrographic Section N/CG245 Seattle, WA, (1991)
* <del>Horizontal Control Report for OPR K229 AHP2</del>	Field Photogrammetry Section N/CG23322 Norfolk, VA, (1990)
Chart Sales Agent Report	Chart Distribution Branch N/CG33 Rockville, MD, (1990)
* <i>Geodetic Control Report CA-8716 Corpus Christi, Texas</i> <i>Geodetic Control Survey Job #HC-9901 Corpus Christi and Aransas Bays, Texas</i>	

<u>Title</u>	<u>Transmittal Information</u>
User Evaluation Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA, (1990)
Chart Inspection Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA, (1990)
Coast Pilot Report	Pacific Hydrographic Section N/CG245 Seattle, WA, (1990)

Submitted by:

*Maria Mangual Ortiz*

Maria Mangual Ortiz  
Surveying Technician, Atlantic Hydrographic Party Two

CHART NO.: 11309

AWOIS ITEM NO.: 4805

ITEM DESCRIPTION: ruins, 2 subm piles

SOURCE: unknown

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: March 19, 1991 DAY NO.: 078 TIME: 171132-210028  
March 22, 1991 081 151822-171011

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT: <sup>1.7</sup>~~1.9~~ meters *at MLLW*  
*COVERED*

POSITION: 7040-7110  
7212-7258

CORRECTORS APPLIED: *ACTUAL*  
~~Predicted~~ Tides  Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETTIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°44'03.110"	097°16'32.960"
OBSERVED: <i>Position 1736</i>	NAD83	27°44'04.23 <i>1</i> "	097°16'33.68 <i>9</i> "

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers   
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: A chain drag was performed at 15 meter line spacing over the area and parts of a well platform was found. Nothing else was found.

*Delete the charted ruins and two piles.*  
CHARTING RECOMMENDATIONS: *A* chart ruins at the observed position, *and*  
~~remove the submerged piles.~~

---

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.: 11309

AWOIS ITEM NO.: 4806

ITEM DESCRIPTION: visible pile ✓

SOURCE: unknown

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: March 19, 1991 DAY NO.: 078 TIME: 184336

REFERENCE: OPR-K229

VESSEL: 0770

HEIGHT: <sup>COVERED</sup> 2.3 meters <sup>at MLLW</sup>

POSITION: 1734 ✓

CORRECTORS APPLIED: <sup>Actual</sup> ~~Predicted Tides~~ X Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETTIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°42'17.110" ✓	097°16'53.960" ✓
OBSERVED:	NAD83	27°42'17.32 <sup>8</sup> / <sub>16</sub> "	097°16'52.9 <sup>8</sup> / <sub>16</sub> "

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers X  
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: A visual search was performed over the area and nothing was found. A dive investigation was performed in the area and a submerged pile was found. *The smooth sheet shows a 2.3 meter obstruction (pile). 2.3 meters = 7.5 feet*

CHARTING RECOMMENDATIONS: <sup>Delete the charted pile</sup> Chart ~~submerged pile~~ *7.5 foot abstr.*

---

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.: 11309

AWOIS ITEM: 4807

ITEM DESCRIPTION: visible wreck *Pa.*

SOURCE: LNM46/86 (11/19/86)--8th CGD

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: March 6, 1991 DAY NO.: 065 TIME: 202105

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT: *Covered* 1.3 meters *at MLLW*

POSITION: 6449 ✓

CORRECTORS APPLIED: *Actual* ~~Predicted~~ Tides \_\_\_ Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°42'01.12 <i>0</i> "	097°14'50.96 <i>0</i> "
OBSERVED:	NAD83	27°42'00.43 <i>0</i> "	097°15'06.7 <i>0</i> "

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers X  
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: A wire drag was performed on day 058 (positions 6057-6092) and the wreck was snagged on position 6092. A dive investigation was performed on day 065. The diver found a wreck 10.5 meters in length with a 3.1 meter beam. The wreck was lying in a north-south direction with the bow facing north. *The smooth sheet shows a 1.3 meter wreck (covered). 1.3 meters = 4.2 feet*

*Wreck is not charted on chart 11309, 31st Edition, dated August 31, 1991; scale 1:40,000.  
Wreck also is not charted on chart 11308, 16th Edition, dated August 25, 1990; scale 1:40,000.*

CHARTING RECOMMENDATIONS: ~~submerged wreck, dangerous to navigation~~  
*Chart 45T WK.*

COMPILATION USE

CHART:

APPLIED AS:



CHART NO.: 11309

AWOIS ITEM NO.: 4808

ITEM DESCRIPTION: visible pile

SOURCE: unknown

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: March 04, 1991 DAY NO.: 063 TIME: 172809-200505  
March 19, 1991 078 152011-154816

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT: N\A

POSITION: 6378-6444  
7021-7037

CORRECTORS APPLIED: Predicted Tides \_\_\_ Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETTIC POSITION: DATUM LATITUDE N LONGITUDE W  
CHARTED: NAD83 27°41'50.62~~0~~" 097°14'03.96~~0~~"

OBSERVED: NAD83

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers X  
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: A chain drag was performed at 15  
meter line spacing over the area and nothing was found.

CHARTING RECOMMENDATIONS: Remove from chart. *Concur*

---

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.: 11309

AWOIS ITEM NO.: 4809

ITEM DESCRIPTION: visible pile, revised to subm pile

SOURCE: unknown

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: March 04, 1991 DAY NO.: 063 TIME: 172809-200505  
March 19, 1991 078 152011-154816

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT: N\A

POSITION: 6378-6446  
7021-7037

CORRECTORS APPLIED: Predicted Tides \_\_\_ Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETTIC POSITION: DATUM LATITUDE N LONGITUDE W  
CHARTED: NAD83 27°41'44.12~~0~~" 097°14'02.96~~0~~"

OBSERVED: NAD83

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers X  
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: A chain drag was performed at 15  
meter line spacing over the area and nothing was found.

CHARTING RECOMMENDATIONS: Remove from chart. *Concur*

---

COMPILATION USE

CHART:

APPLIED AS:

---

CHART NO.: 11309

AWOIS ITEM NO.: 4810

ITEM DESCRIPTION: visible pile

SOURCE: unknown

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: March 04, 1991 DAY NO.: 063 TIME: 172809-200505  
March 19, 1991 078 152011-154816

REFERENCE: OPR-K229 VESSEL: 0520

HEIGHT: 2.7<sup>4</sup> meters (submerged obstruction) POSITION: 6378-6446  
*at H/LW* 7021-7037

CORRECTORS APPLIED: ~~Predicted Tides~~ <sup>Actual</sup> Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°41'35.12 <sup>✓</sup> 0"	097°14'02.8 <sup>4</sup> 60"
OBSERVED:	NAD83	27°41'33.74 <sup>✓</sup> 0"	097°13'58.8 <sup>8</sup> 1 <sup>5</sup> "

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers X  
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: A chain drag was performed at 15 meter line spacing over the area and nothing was found. Concrete rubble was found about 100 meters southeast of the Awois Item. A dive investigation was performed on day 065 position 6448. See Item Investigation in the separates for dive report. *THE SMOOTH SHEET Shows 2.4 meter obstr (rubble). 2.4 meters = 7.8 feet = Rounded To 8 feet.*

CHARTING RECOMMENDATIONS: Remove the visible pile from the chart. *CONCUR*  
Chart ~~submerged obstruction~~ at the observed position.  
*8 ft Obstr.*

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.: 11309

AWOIS ITEM NO.: 4811

ITEM DESCRIPTION: platform ruins

SOURCE: CL1439/84--USPS

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: February 27, 1991 DAY NO.: 058 TIME: 174448-193437

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT:

POSITION: 6011-6056

CORRECTORS APPLIED: Predicted Tides \_\_\_ Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°42'18.11 <sup>✓</sup> 0"	097°13'09.96 <sup>✓</sup> 0"
OBSERVED:	NAD83		

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers X  
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: A wire drag was performed over the area at 20 meter line spacing and nothing was found.

CHARTING RECOMMENDATIONS: Remove from chart *CONCUR*

---

COMPILATION USE

CHART:

APPLIED AS:

---

CHART NO.: 11309

AWOIS ITEM NO.: 4897

ITEM DESCRIPTION: determine controlling depth (5ft rep.) *1.5 meters*

SOURCE: CL1439/84--USPS

CHIEF OF PARTY: Lt. Cdr. V. Dale Ross

INVEST. DATE: March 20, 1991 DAY NO.: 079 TIME: 175256-180827

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT: N\A

POSITION: 7123-7131

CORRECTORS APPLIED: Predicted Tides \_\_\_ Velocity \_\_\_ Draft \_\_\_  
Settlement and Squat \_\_\_

GEODETIC POSITION: DATUM LATITUDE N LONGITUDE W

CHARTED: NAD83 27°41'36.120" 097°14'30.960"

OBSERVED: NAD83

POSITION DETERMINED BY: Multiple LOP, Mini-Rangers X  
R/AZ, T-2 and Mini-Rangers \_\_\_

METHOD OF ITEM INVESTIGATION: The main scheme hydrography in this area was split to 50 meters. The soundings indicated there was very little change in the depths.  
*Position Number 5357/6 at Latitude 27°41'41.74"N, longitude 97°14'31.09"W. depth is 1.0 meters (3.3 feet)*  
*See Evaluation Report sections 3 and 7.c.*

*Delete the present NOTE. Chart a new NOTE "3 ft 1991"*  
CHARTING RECOMMENDATIONS: ~~Remain as charted~~

---

COMPILATION USE

CHART:

APPLIED AS:

---

CONTROL STATIONS  
 OPR-K299-AHP2  
 AHP-10-1-91  
 H-10365

<u>No.</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Station Name</u>	<u>Cart.</u>
· 034	27°41'41.796"N	097°11'01.545"W	FLAT 2 1989	250
· 036	27°41'37.285"N	097°15'02.810"W	DEMIT 1919	250
· 037	27°41'38.941"N	097°16'06.724"W	CORPUS CHRISTI NAS WATER TANK 1985	139
· 038	27°42'40.782"N	097°18'48.182"W	CALLO 2 1963	250
· 040	27°44'42.927"N	097°22'21.160"W	DODDRIDGE 1985	250
<del>045</del>	<del>27°48'26.106"N</del>	<del>097°21'52.434"W</del>	<del>CORPUS CHR HARBOR CUT R RNG LT 1989</del>	<del>250</del>
· 046	27°48'18.064"N	097°16'05.640"W	CORPUS CHR CHAN CUT AW RNG R LT 1989	250
· 049	27°48'20.498"N	097°13'00.008"W	LA QUINTA CHAN OUTER RNG R LT 1989	250
· 063	27°44'01.556"N	097°16'32.909"W	C C BAY SPOIL BANK LT A 1990	250
· 065	27°40'58.151"N	097°15'39.854"W	NAS CORPUS 1988	250
<del>066</del>	<del>27°39'37.725"N</del>	<del>097°18'31.879"W</del>	<del>FLOUR BLUFF DISTRICT WATER TANK 1963</del>	<del>139</del>
· 067	27°53'23.934"N	097°20'08.860"W	PORTLAND NW MUNICIPAL TANK 1989	139
· 068	27°52'50.265"N	097°12'47.886"W	INGLESIDE MUNICIPAL TANK 1989	139

NOAA FORM 76-40  
(8-74)

Replaces C&GS Form 567.

TO BE CHARTED  
 TO BE REVISED  
 TO BE DELETED

REPORTING UNIT  
(If field Party, Ship or Office)

AHP-2

STATE

TEXAS

LOCALITY

CORPUS CHRISTI BAY

DATE

4/12/90

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

**NONFLOATING AIDS**

**ORIGINATING ACTIVITY**

- HYDROGRAPHIC PARTY
  - GEODETIC PARTY
  - PHOTO FIELD PARTY
  - COMPILATION ACTIVITY
  - FINAL REVIEWER
  - QUALITY CONTROL & REVIEW GRP.
  - COAST PILOT BRANCH
- (See reverse for responsible personnel)

The following objects  HAVE  HAVE NOT  been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.

OPR-K229-AHP2

JOB NUMBER

H-10325

DATUM

27 48

POSITION

NAD 1983

METHOD AND DATE OF LOCATION

(See instructions on reverse side)

OFFICE

FIELD

F-3-6-L  
3/23/90

CHARTS  
AFFECTED

11309

CHARTING  
NAME

LIGHT

DESCRIPTION  
(Record reason for deletion of landmark or aid to navigation.  
Show triangulation station names, where applicable, in parentheses)

CORPUS CHRISTI CHANNEL LIGHT #62"  
LIGHT LIST #27320, VOL. IV, 1990

LATITUDE

° /

D.M. Meters

41-119

LONGITUDE

° /

D.P. Meters

06-152

POSITION

097-18

OFFICE

FIELD

F-3-6-L  
3/23/90

CHARTS  
AFFECTED

11309

LIGHT

CORPUS CHRISTI CHANNEL LIGHT #67"  
LIGHT LIST #27325, VOL. IV, 1990

32-588

19-329

OFFICE

FIELD

F-3-6-L  
3/23/90

CHARTS  
AFFECTED

11309

LIGHT

CORPUS CHRISTI SPOIL BANK LIGHT  
(C C BAY SPOIL BANK LT A)  
LIGHT LIST #27730, VOL. IV, 1990

01-556

32-909

OFFICE

FIELD

F-2-6-L  
2/90

CHARTS  
AFFECTED

11309

NOTE: FOR INFORMATION COPY  
ONLY. PREVIOUSLY SUBMITTED  
WITH H-10325.

RESPONSIBLE PERSONNEL		ORIGINATOR
TYPE OF ACTION	NAME	
OBJECTS INSPECTED FROM SEAWARD	Maria Mangual-Ortiz, Surveying Technician	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	James Verlaque, LTJG, NOAA	FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)		
<b>OFFICE</b> <b>1. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75		
<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions** require</b> entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982		
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75		
<b>**FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b>		
<b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75		
<b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b>		
<b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75		





**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE  
Atlantic Hydrographic Party 2  
P. O. Box 1299  
Aransas Pass, Texas 78336

April 1, 1991

**ADVANCE  
INFORMATION**

MEMORANDUM FOR: Rear Admiral J. M. Loy  
Commander, U. S. Coast Guard District

FROM: Lieutenant Commander *V. Dale Ross*, NOAA  
Chief, Atlantic Hydrographic Party Two

SUBJECT: Report of Dangers to Navigation

The following shoals were discovered during hydrographic survey operations of project number OPR-K229-AHP2, Hydrographic Survey Registry Number H-10365, Survey Title: Texas, Corpus Christi Bay, Alongshore of the Encinal Peninsula, by the Atlantic Hydrographic Party Two:

An 8.5-foot shoal in a charted thirteen feet area at latitude 27°42'59"N, longitude 097°16'02"W.

Four 8.8-foot shoals in charted twelve or thirteen feet areas at latitude 27°44'33"N, longitude 097°13'29"W; latitude 27°44'29"N, longitude 097°13'29"W; latitude 27°44'40"N, longitude 097°17'08"W; and latitude 27°43'44"N, longitude 097°17'40"W.

Four 9.2-foot shoals in charted twelve or thirteen feet areas at latitude 27°44'57"N, longitude 097°15'00"W; latitude 27°45'01"N, longitude 097°13'16"W; latitude 27°43'58"N, longitude 097°15'39"W; and latitude 27°45'05"N, longitude 097°17'40"W.

Three 9.5-foot shoals in charted thirteen feet areas at latitude 27°43'54"N, longitude 097°16'33"W; latitude 27°44'11"N, longitude 097°15'51"W; and latitude 27°45'02"N, longitude 097°17'37"W.

Four 9.8-foot shoals in charted thirteen feet areas at latitude 27°43'45"N, longitude 097°14'55"W; latitude 27°43'40"N, longitude 097°14'52"W; latitude 27°44'41"N, longitude 097°14'41"W; and latitude 27°44'42"N, longitude 097°14'04"W.

A 10.1-foot shoal in a charted thirteen feet area at latitude 27°44'53"N, longitude 097°14'53"W.



**ADVANCE  
INFORMATION**

A 10.8-foot shoal in a charted thirteen feet area at latitude 27°43'42"N, longitude 097°14'57"W.

All depths were corrected for predicted tides (mean lower low water datum), draft and settlement/squat of vessel, and speed of sound through water.

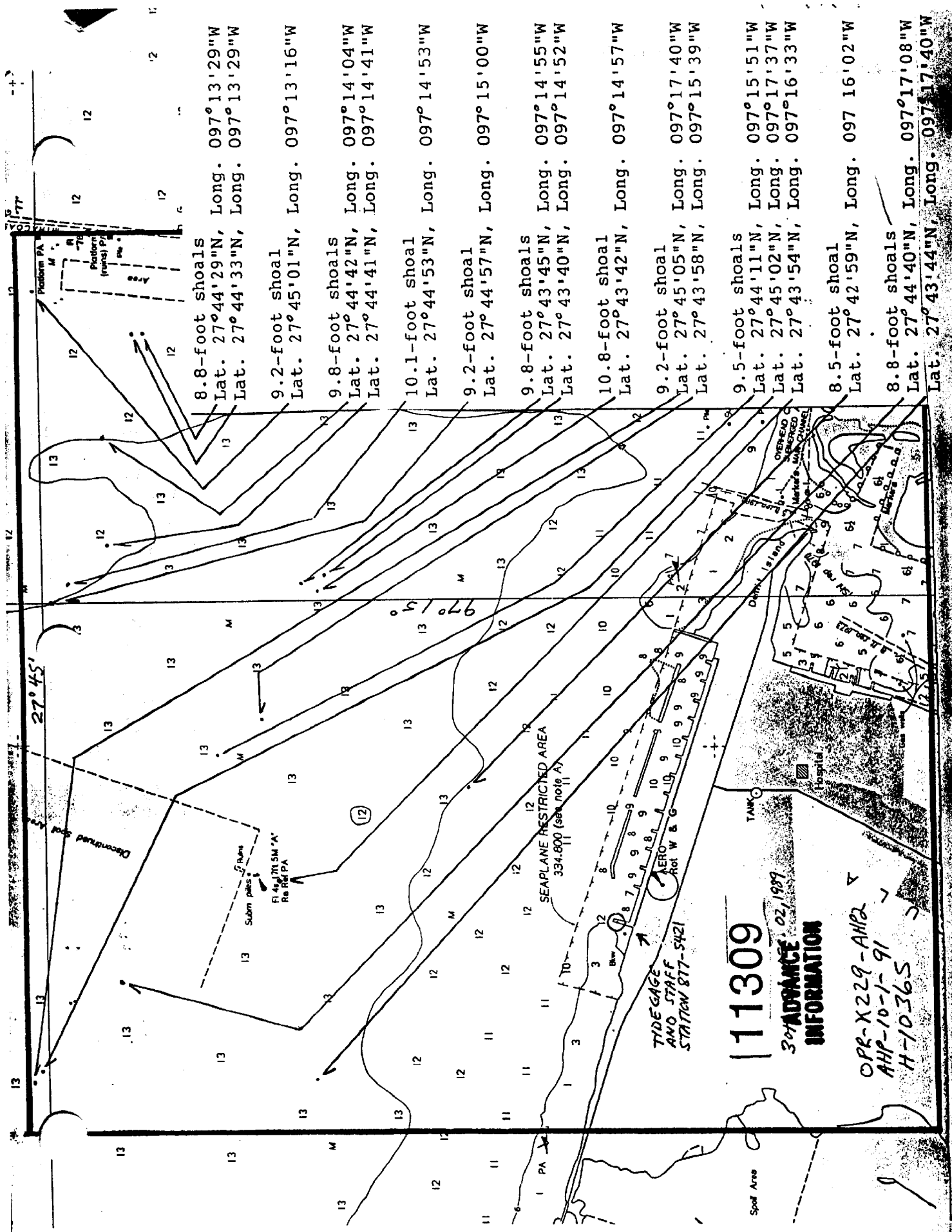
All reported positions are based on the North American Datum of 1927 and affects Chart Number 11309 dated December 2, 1989, 30th Edition.

The above information is subject to verification.

Questions concerning this report should be directed to the Pacific Hydrographic Section at Seattle, Washington (telephone number 206-526-6835).

The Corpus Christi Aids to Navigation Team has been notified of these dangers to navigation via telephone conversation and by a copy of this memorandum.

Attached is a chartlet showing the location of the shoals.



- 8.8-foot shoals  
Lat. 27°44'29"N, Long. 097°13'29"W  
Lat. 27°44'33"N, Long. 097°13'29"W
- 9.2-foot shoal  
Lat. 27°45'01"N, Long. 097°13'16"W
- 9.8-foot shoals  
Lat. 27°44'42"N, Long. 097°14'04"W  
Lat. 27°44'41"N, Long. 097°14'41"W
- 10.1-foot shoal  
Lat. 27°44'53"N, Long. 097°14'53"W
- 9.2-foot shoal  
Lat. 27°44'57"N, Long. 097°15'00"W
- 9.8-foot shoals  
Lat. 27°43'45"N, Long. 097°14'55"W  
Lat. 27°43'40"N, Long. 097°14'52"W
- 10.8-foot shoal  
Lat. 27°43'42"N, Long. 097°14'57"W
- 9.2-foot shoal  
Lat. 27°45'05"N, Long. 097°17'40"W  
Lat. 27°43'58"N, Long. 097°15'39"W
- 9.5-foot shoals  
Lat. 27°44'11"N, Long. 097°15'51"W  
Lat. 27°45'02"N, Long. 097°17'37"W  
Lat. 27°43'54"N, Long. 097°16'33"W
- 8.5-foot shoal  
Lat. 27°42'59"N, Long. 097 16'02"W
- 8.8-foot shoals  
Lat. 27°44'40"N, Long. 097°17'08"W  
Lat. 27°43'44"N, Long. 097 17'40"W

**11309**  
 30' ADVANCE 02/1997  
**INFORMATION**

OPR-X229-AHP2  
 AHP-10-1-91  
 H-10365

TIDE GAGE  
 AND STAFF  
 STATION 877-5421

SEAPLANE RESTRICTED AREA  
 334.800 (see note A)

Spill Area

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

November 3, 1992

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

Dear Sir:

During the final office processing of hydrographic survey H-10365, Texas, Corpus Christi Bay, three additional dangers to navigation were discovered. These dangers affect the following charts.

Chart	Edition/date	Datum
11308(SC)	16th Ed., 8/25/90	NAD 83
11309	31th Ed., 8/31/91	NAD 83

It is recommended that the 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,

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

Enclosure

cc: DMA/TC  
 N/CG221

FILE COPY

CODE	SURNAME	DATE	CODE	SURNAME	DATE
N/CG221	Hennick	11/3/92			
N/CG221	BHU	11/3/92			

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number and Title:

<u>Survey Number</u>	<u>Title</u>
H-10365	Texas, Corpus Christi Bay, Alongshore of the Encinal Peninsula

Project Number: OPR-K229-AHP2

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

Affected nautical charts:

<u>Chart</u>	<u>Edition/date</u>	<u>Datum</u>
11308(SC)	16th Ed., 8/25/90	NAD 83
11309	31th Ed., 8/31/91	NAD 83

<u>Danger to Navigation</u>	<u>LATITUDE(N)</u>	<u>LONGITUDE(W)</u>
wreck covered 4 ft	27/42/00.4	97/15/06.7
replace charted note "5 ft rep 1984" with note "4 ft 1991"	27/41/38	97/14/30
replace charted note "8 ft rep 1973" with note "5 ft 1991"	27/41/10	97/15/13

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



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

February 2, 1993

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

Dear Sir:

During the final office processing of hydrographic survey H-10365, Texas, Corpus Christi Bay, one additional danger to navigation was discovered. This danger affects the following charts.

<u>Chart</u>	<u>Edition/date</u>	<u>Datum</u>
11308(SC)	16th Ed., 8/25/90	NAD 83
11309	31th Ed., 8/31/91	NAD 83

It is recommended that the attached 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,

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

Enclosure

cc: DMA/TC  
N/CG221



REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number and Title:

<u>Survey Number</u>	<u>Title</u>
H-10365	Texas, Corpus Christi Bay, Alongshore of the Encinal Peninsula

Project Number: OPR-K229-AHP2

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

Affected nautical charts:

<u>Chart</u>	<u>Edition/date</u>	<u>Datum</u>
11308(SC)	16th Ed., 8/25/90	NAD 83
11309	31st Ed., 8/31/91	NAD 83

<u>Danger to Navigation</u>	<u>LATITUDE(N)</u>	<u>LONGITUDE(W)</u>
-----------------------------	--------------------	---------------------

replace charted note "5 ft rep 1984" with note "3 ft 1991"	27/41/38	97/14/30
--	----------	----------

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

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY

OPR-K229-AHP2


AHP-10-1-91

H-10365

1991

This survey was conducted in accordance with the project instructions for OPR-K229-AHP2, 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 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.



V. Dale Ross  
Lieutenant Commander, NOAA  
Chief, Atlantic Hydrographic Party Two



ORIGINAL

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: Jun 11, 1991

MARINE CENTER: Pacific

OPR: K229

HYDROGRAPHIC SHEET: H-10365

LOCALITY: Alongshore of Encinal Peninsula, Corpus Christi  
Bay, TX

TIME PERIOD: January 16 - April 1, 1991

TIDE STATIONS USED: 877-5283 Port Ingleside, TX

27°49.2'N 97°12.0'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.40 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.6 feet

REMARKS: RECOMMENDED ZONING

Apply a + 30 min time correction.

Note: Times are in Local Standard Time.

  
CHIEF, TIDAL DATUM QUALITY  
ASSURANCE SECTION

GEOGRAPHIC NAMES

H-10365

Name on Survey	A ON CHART NO. 11309 B ON PREVIOUS SURVEY NO. C ON U.S. QUADRANGLE MAPS D FROM LOCAL INFORMATION E ON LOCAL MAPS F P.O. GUIDE OR MAP G RAND McNALLY ATLAS H U.S. LIGHT LIST K											
	CORPUS CHRISTI BAY	X										
DEMIT ISLAND	X											2
ENCINAL PENINSULA	X											3
LAGUNA MADRE	X											4
TEXAS (TITLE)	X											5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved:

*Charles E. Harrington*

Chief Geographer - N/CG 245

JUN 17 1991

RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	8
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	6

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	2				
ENVELOPES					
VOLUMES	1				
CAHIERS					
BOXES					

**SHORELINE DATA**

SHORELINE MAPS (List): TP-01616 and TP-01199

PHOTOBATHYMETRIC MAPS (List): N/A

NOTES TO THE HYDROGRAPHER (List): TP-01616

SPECIAL REPORTS (List): None

NAUTICAL CHARTS (List): Chart 11309 31st Ed., August 31, 1991

OFFICE PROCESSING ACTIVITIES  
 The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET			3555
POSITIONS REVISED			34
SOUNDINGS REVISED			261
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	33.3		33.3
VERIFICATION OF SOUNDINGS	92.0		92.0
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	40		40
COMPARISON WITH PRIOR SURVEYS AND CHARTS		14	14
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		35	35
GEOGRAPHIC NAMES			
OTHER: Digitization			
*USE OTHER SIDE OF FORM FOR REMARKS	TOTALS	165.3	49
			214.3

Pre-processing Examination by <b>M. Brown</b>	Beginning Date 4/12/91	Ending Date 5/2/91
Verification of Field Data by <b>G.E. Kay</b>	Time (Hours) 92	Ending Date 7/21/92
Verification Check by <b>J.S. Green</b>	Time (Hours) 8	Ending Date 9/25/92
Evaluation and Analysis by <b>G.E. Kay</b>	Time (Hours) 49	Ending Date 9/25/92
Inspection by <b>D.J. Hill</b>	Time (Hours) 2	Ending Date 2/3/93

## EVALUATION REPORT H-10365

### 1. INTRODUCTION

Survey H-10365 is a basic hydrographic survey accomplished by the Atlantic Hydrographic Party 2, under the following Project Instructions.

OPR-K229-AHP2, dated September 14, 1990  
CHANGE NO. 1, dated February 12, 1991

This survey covers an area in Corpus Christi Bay, Texas. The surveyed area extends from latitude 27/45/07N, south to the shoreline along the Encinal Peninsula and Laguna Madre to latitude 27/40/40N. The eastern limit is longitude 97/12/52W; the western limit is longitude 97/18/04W. The bottom consists of gray mud and broken shells. Depths range from zero along the shore to five meters in the bay.

Predicted tides for Galveston Channel, Texas, were used for the reduction of soundings during field processing. Approved hourly heights zoned from Port Ingleside, Texas, gage 877-5283, 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. NAD 83 is used as the horizontal datum for plotting and position computations. Sound velocity correctors and electronic correctors are adequate. The TRA has been revised to apply a settlement and squat correction. An accompanying computer printout contains the parameters and the correctors.

The difference in depths between vessel 770 (echo sounder S/N 3947) and adjoining data noted in section F of the hydrographer's report was determined to be about 0.4 meters. Most of the junction discrepancy of 0.7 meters noted in section L of the hydrographer's report was also found to be attributable to echo sounder S/N3947. The remainder of the 0.7 meter difference in junction soundings was reduced to insignificance by the application of observed tides. Based on an evaluation of simultaneous lead line and echo sounding comparison, a correction of 0.2 meters has been applied to the soundings from the data from vessel 770, echo sounder S/N 3947, up to DN 042. The remaining 0.2 meter discrepancy cannot be accounted for but is within the allowable accuracy specification for measurement of depth.

A digital file has been generated for this survey that includes categories of information required to comply with Hydrographic Survey Guideline No. 52, Standard Digital Data Exchange Format, April 15, 1986. Certain feature 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. More detailed information on horizontal control is found in the following.

Geodetic Control Report for CM-8716  
Geodetic Control Survey Job-HC-9901

Positions of horizontal control stations used during hydrography are 1989 and 1990 field and published 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 using the NAD 83 projection by applying the following correction.

Latitude: 1.119 seconds (34.450 meters)  
Longitude: 0.962 seconds (26.345 meters)

The year of establishment of control stations shown on the smooth sheet originates with the previously listed horizontal control reports and the published data.

The quality of 462 positions exceeds the positional limits in terms of error circle radius and residual, or these positions have angles of intersection less than 30 degrees or more than 150 degrees. A review of the data, however, shows that none of these fixes are used to position dangers to navigation. The soundings positioned by these fixes are consistent with surroundings. These fixes are considered acceptable.

The following Class III shoreline maps, at a scale of 1:20,000, apply to this survey.

	<u>Photography Date</u>	<u>Datum</u>
TP-01199	Dec. 1982, Nov. 1983, Mar. 1984	NAD 1927
TP-01616	Feb. 1989	NAD 1983

The high water line revision centered at latitude 27/41/10N, longitude 97/13/54W, is depicted on the smooth sheet in red ink with supporting positional information. This is considered adequate to supersede the common photogrammetrically delineated shoreline.

## 3. HYDROGRAPHY

Except as noted below, 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.

Two charted channels with controlling depths were not adequately developed. These channels should have been developed with additional lines of hydrography, especially a center line. These channels are found east and south of Demit Island.

#### 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, April 1990 Edition.

#### 5. JUNCTIONS

Survey H-10365 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10324	1989-1990	1:10,000	Northeast
H-10326	1989-1990	1:10,000	North
H-10361	1990-1991	1:10,000	West
H-10368	1991	1:10,000	East

The junction with survey H-10368 is complete; however, some soundings, features and two fixed aids to navigation (Corpus Christi Daybeacon 78 and 79) have been added to survey H-10365 from survey H-10368.

The junctions with surveys H-10324, H-10326 and H-10361 have not been formally completed since those surveys were previously processed and forwarded for charting. The junction comparisons were made using copies. The soundings on surveys H-10324 and H-10326 are in feet, while soundings on survey H-10365 are in meters. Soundings are in good agreement; however, the depth curves shown on surveys H-10324 and H-10326 delineate different depths than those on survey H-10365 and, therefore, do not agree. The soundings on survey H-10361 are in meters and agree well with the soundings on survey H-10365.

There are no junction surveys to the south in Laguna Madre. A comparison was made to chart 11309, 31st edition. The charted soundings agree well with the present survey.

#### 6. COMPARISON WITH PRIOR SURVEYS

H-5694 (1934-35) 1:20,000

Survey H-5694 covers the survey area north of latitude 27/41/48N. Significant changes in the shoreline have occurred since the prior survey was completed. These changes are reflected in the new shoreline map detail that has been transferred to the smooth sheet. There have also been man-made changes to water depths, most notably in the addition of dredged channels and the disposal of bottom material in spoil areas. As a rule, soundings compare well with one another. Differences of between 0.1 to 0.5 meters can be detected with the present survey having shoaler depths. Considering the difference in the scales of the surveys and the methods of surveying, comparison with this prior survey is satisfactory.

Survey H-10365 is adequate to supersede the prior survey H-5694 within the common area.

There are no prior surveys south of latitude 27/41/48N.

T-9187 (1948-1950) 1:20,000

T-9188 (1948) 1:20,000

Shoreline map T-9187 covers an area west of longitude 97/15/00W. The shoreline has not changed significantly. The piers, breakwater and other cultural features are still found in the same areas as they were on the prior survey. There are three submerged piles at the southern limits of survey H-10365, centered at latitude 27/40/48N, longitude 97/15/32.5W. The hydrographer makes no mention of them. These piles have been transferred from prior shoreline map T-9187 to the smooth sheet as submerged piles in red ink.

Shoreline map T-9188 covers the area east of longitude 97/15/00W. The natural shoreline has changed a great deal since survey T-9188 was completed in the late 1940's. The small islands in Laguna Madre have developed into two larger islands. Demit Island, west of these two islands, still preserves its basic profile.

In the descriptive report, section M, page 11, the hydrographer mentions three rows of piles. The area is extremely shallow and the hydrographer was unable to obtain positions on them. He observed these piles with an elevation of 0.9 meters on DN 081 at 200000 UTC. With the application of actual tides (0.3 meters), the reduced elevation is 1.0 meter at MHW. These 13 piles have been transferred from prior shoreline map T-9188 to the smooth sheet in brown ink.

The end pile in each row is located as follows:

From:		To:	
<u>Latitude North</u>	<u>Longitude West</u>	<u>Latitude North</u>	<u>Longitude West</u>
27/41/05	97/14/10.5	27/41/02	97/14/11
27/41/03	97/14/36	27/40/57	97/14/12
27/41/02	97/14/45.5	27/40/50	97/14/50

With the transfer of the above piles from prior shoreline maps T-9187 and T-9188 to the smooth sheet, survey H-10365 is adequate to supersede the prior shoreline map T-9187 and T-9188 as a source for charting hydrography within the common area.

There are no AWOIS items originating from prior survey H-5694, or prior shoreline maps T-9187 and T-9188, that apply to the present survey.

## 7. COMPARISON WITH CHART

Chart 11308 SC, 16th edition, dated August 25, 1990; scale 1:40,000, NAD 83

Chart 11309, 30th edition, dated December 2, 1989; scale 1:40,000, NAD 83

Chart 11309, 31st edition, dated August 31, 1991; scale 1:40,000, NAD 83

a. Hydrography

Charted hydrography originates with the prior surveys discussed above and miscellaneous sources.

A section of a charted overhead power cable that extends from Demit Island (latitude 27/41/27N, longitude 97/14/39W) to south of Grants Cove on Padre Island (latitude 27/41/30N, longitude 97/11/42W) is built on piles. The hydrographer mentions that these features no longer exist. However, only two piles were investigated and were disproven (see hydrographer's report, section N, page 12-13). The hydrographer mentions a discussion with an engineer from Central Power and Light Company. The descriptive report does not contain any discussion about the existence of the charted piles, only a statement on the power company's general policy when removing piles. When asked by this office for information on these specific piles, the Central Power and Light Company engineer stated that this transmission line was not theirs, but belonged to the US Navy. Mr. Bob Carlson, Master Planner, US NAS Corpus Christi (512-939-2159), was contacted and confirms that this transmission line has not been in existence for at least ten years. As of this date he cannot establish if the ruins do or do not exist. Without confirmation of the removal of these piles, except for the two piles mentioned in section N, page 12-13, of the hydrographer's report, the remaining features should be retained as "submerged piles" at their charted positions.

Except for the reported submerged pile at latitude 27/41/04N, longitude 97/13/46W (see hydrographer's report, section N, page 13, second paragraph), and the submerged piles as mentioned above, survey H-10365 is adequate to supersede charted hydrography within the common area.

b. AWOIS

The following AWOIS items originate with miscellaneous sources: 4805, 4806, 4807, 4808, 4809, 4810 and 4811. The disposition of AWOIS items may be found in the item investigation reports that follow the descriptive report.

c. Controlling Depths

The Intracoastal Waterway crosses this survey twice along this survey's eastern limits. The project depth for the Intracoastal Waterway is 12 feet (3.6 meters). Present survey soundings are deeper than the maintained depths on the northern section of Intracoastal Waterway. The southwestern section of the Intracoastal Waterway, the area of Laguna Madre, contains several soundings along the channel limits that are shoaler than the Intracoastal Waterway 12-foot project depth. These soundings are as follows:

<u>Depth</u> <u>Meters</u> (feet)	<u>Position</u> <u>Number</u>	<u>Latitude</u> <u>North</u>	<u>Longitude</u> <u>West</u>
3.3 (10.8)	7369/1	27/41/28.90	97/13/26.89
3.4 (11.2)	6693/10	27/41/09.17	97/13/32.10
2.7 (8.9)	7351/1	27/40/59.49	97/13/34.34



A charted channel, centered at latitude 27/41/32N, longitude 97/14/32W, passes east of Demit Island. This channel contains the note, "5 ft rep 1984" (1.5 meters). The shoalest present survey depth is 1.0 meters (3.3 feet). The present charted note should be removed and a note, "3 ft 1991", charted. This is AWOIS item 4897.

A charted channel, centered at latitude 27/41/09N, longitude 97/15/15W, is located south of Demit Island. This channel contains the note, "8 ft rpt 1973", (2.4 meters); the shoalest present survey depth is 1.6 meters (5.3 feet) The present charted note should be removed and a note, "5 ft 1991", charted.

d. Aids to Navigation

The following information summarizes the results of survey H-10365 with regard to aids to navigation.

Four fixed aids and six floating aids were located during this survey by hydrographic positioning methods, unless otherwise noted. In addition, Corpus Christi Bay Daybeacons 78 and 79 are located in the junction area with survey H-10368 and have been transferred to this survey.

The positions for the fixed aids to navigation follow.

<u>Name</u>	<u>Light List Number</u>	<u>Latitude North</u>	<u>Longitude West</u>
Corpus Christi-Baffin Bay Light 1	36265	27/42/17.43	97/13/11.68
Corpus Christi-Baffin Bay Light 9	36285	27/41/23.26	97/13/25.62
Corpus Christi Bay Spoil Bank Light (Third Order Class I position)	27730	27/44/01.556	97/16/32.909
Corpus Christi-Baffin Bay Entrance Light C	27735	27/43/05.47	97/13/07.39

The positions and characteristics of these aids agree well with the chart, except Corpus Christi-Baffin Bay Light 1. This aid is now located 100 meters south of the charted position.

The positions for the floating aids located during this survey follow.

<u>Number</u>	<u>Light List Number</u>	<u>Latitude North</u>	<u>Longitude West</u>
"3"	36270	27/42/06.81	97/13/15.61
"5"	36275	27/41/49.00	97/13/20.04
"7"	36280	27/41/36.43	97/13/23.29
"11"	36290	27/41/04.56	97/13/31.27
"12"	36291	27/40/55.19	97/13/35.44
"13"	36295	27/40/50.23	97/13/34.89

The positions and characteristics of these aids agree reasonably well with the chart, except Buoys "5", "11" and "12." Buoy "5" is located 100 meters south of its charted position. Buoy

"11" is now located 80 meters south of its charted position. Buoy "12" is now located 150 meters south of its charted position.

These aids adequately serve their intended purpose.

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

The hydrographer reported eighteen 2 to 3-meter-sized shoals to the Eighth U.S. Coast Guard District, New Orleans, Louisiana and N/CG222. A copy of the report is attached.

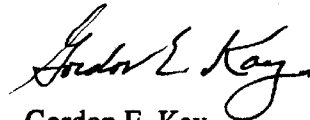
Three additional dangers were discovered during office processing and initially reported to the Eighth U.S. Coast Guard District, New Orleans, Louisiana and N/CG222. Upon further processing, one of the previously submitted dangers was resubmitted with a shoaler value. Copies of the reports are attached.

**8. COMPLIANCE WITH INSTRUCTIONS**

Survey H-10365 adequately complies with the Project Instructions.

**9. ADDITIONAL FIELD WORK**

This is an adequate hydrographic survey. No additional field work is recommended.

  
Gordon E. Kay  
Cartographer

APPROVAL SHEET  
H-10365

Initial Approvals:

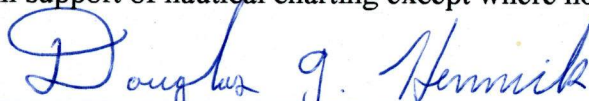
The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The digital data have been completed and all revisions and 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.



Date: 2/3/93

Dennis J. Hill  
Chief, Hydrographic Processing Unit  
Pacific Hydrographic Section

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.



Date: 2/4/93

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

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Final Approval

Approved:



Date: 12-12-94

J. Austin Yeager  
Rear Admiral, NOAA  
Director, Coast and Geodetic Survey

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

Hydrographic Index No. 91 C

