

10326

Diagram No. 1286-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. AHP-10-1-90
Registry No. H-10326

LOCALITY

State Texas
General Locality Corpus Christi Bay
Sublocality Seven Miles East of
..... Corpus Christi

19 90

CHIEF OF PARTY
LCDR V.D. Ross

LIBRARY & ARCHIVES

DATE October 2, 1991

10326

EC/G

PRODUCTS

11309

11312

11308 "A"

HYDROGRAPHIC TITLE SHEET

H-10326

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-10-1-90

State Texas

General locality Corpus Christi Bay

Locality Seven Miles East of Corpus Christi

Scale 1:10,000 Date of survey Jan 30 - May 7, 1990

Instructions dated September 14, 1989 Project No. OPR-K229

Vessel NOAA Launch 0520

Chief of party LCDR V. Dale Ross, NOAA

Surveyed by Glenn D. Hendrix

Soundings taken by echo sounder, ~~hand lead, potex~~ Raytheon DE-719-C with ODOM Digitrace

Graphic record scaled by Field Personnel

Graphic record checked by Field Personnel

Evaluation by: Gordon E. Kay Automated plot by PHS Xynetics Plotter

Verification by Arsenio Luceno

Soundings in ~~fathoms~~ feet at ~~MLLW~~ MLLW

REMARKS: All times are 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.

Acoustic/SURF ✓ 1/24/92 35V ✓

XWW 12/4/91

#2

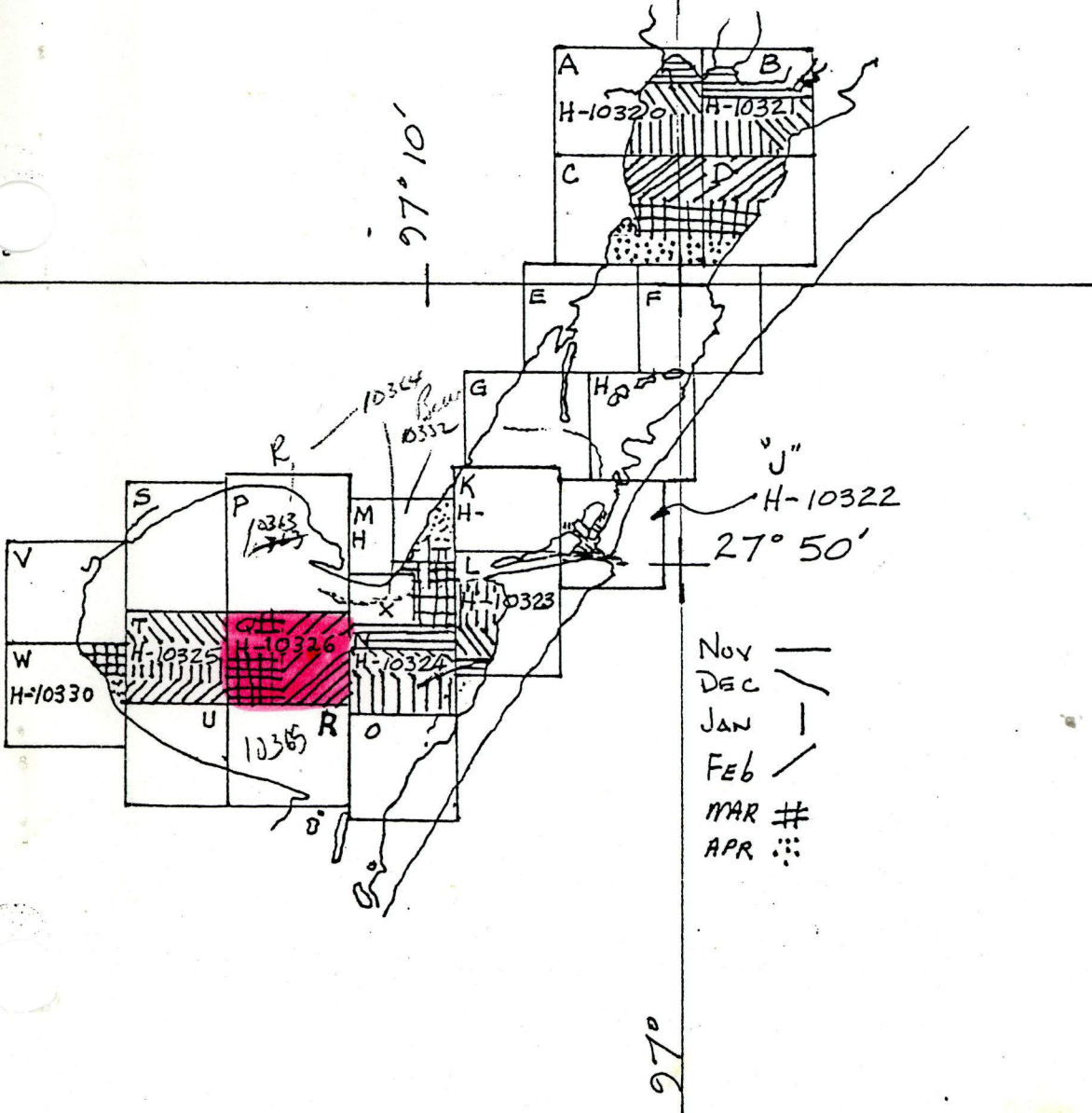
Progress Sketch

OPR-K229-AHP2-89
Corpus Christi
Texas

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

LEGEND

	OCT	NOV	DEC	JAN	FEB	MAR	APR
SO NMI SDG	0	13	13	21	21	27	8
LNMI SDG	0	309	712	674	495	528	176
LNMI TO/FRM	0	258	422	527	326	342	183
LNMI MISC	0	129	259	350	293	248	183
DP/BS	0	88	177	455	107	190	290
TIDE STA	6	0	0	0	0	0	0
CONTROL	18	0	0	0	5	4	0



DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10326
(Field No. AHP-10-1-90)
Scale: 1:10,000
1990

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, 1989, Change No. 1 dated October 19, 1989, and Change No. 2 dated January 10, 1990. ✓

This survey is designated as sheet "Q" in the project sheet layout. ✓

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 naval base at Ingleside, Texas. ✓

B. AREA SURVEYED

The area surveyed for H-10326 is the center portion of the Corpus Christi Bay bounded by the following survey limits: ✓

North - 27° 49' 07"N
South - 27° 45' 00"N
East - 097° 13' 14"W
West - 097° 18' 00"W

The survey area is also bounded to the north by the Corpus Christi ship channel. ✓

This survey was conducted from January 30, 1990 (day 030) to May 7, 1990 (day 127). *Additional Work was Accomplished October 12 to November 1, 1990* ✓
Additional Work Report follows.

The bottom is composed of mostly mud and broken shell. ✓

Depths in this survey range from ~~one~~^{SIX} to fifty ~~four~~ feet. ✓

C. SOUNDING VESSEL

Vessel 0520 (EDP No. 0520), a 21-foot MonArk, was the only sounding vessel used during this survey. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

1. SOUNDING EQUIPMENT

The following Raytheon DE-719-C fathometer with an Odom Hydrographic Systems, Inc. Digitrace was used for this survey: ✓

<u>S/N</u>	<u>Days</u>
6211	030 - 127

Soundings were recorded in feet using the Raytheon DE-719-C fathometer with an assumed speed of sound through water of 4800 ft/sec. ✓

The digitized soundings matched the fathometer's trace to plus or minus 0.2 foot through constant observation and manipulation of the tide and draft adjustment knob. ✓

2. CORRECTIONS TO ECHO SOUNDINGS

Corrections for the speed of sound through the water column were computed from data obtained with a Digibar speed of sound probe, serial number (s/n) 155. Also used was an Applied Microsystems Laboratory (AML), Model SVP-16 speed of sound profiler serial number 03003. Program "Velocity" was used for determining the speed of sound correctors. ✓

All speed of sound correctors were applied during semi-smooth and final plotting by the HDAPS system. ✓

<u>Table Applied</u>	<u>Cast</u>	<u>Day</u>	<u>Depth</u>	<u>Location</u>	<u>Days</u>
6	6	030	15 meters	27°49'00" N 097°11'45" W	030
7	7	037	15 meters	27°48'50" N 097°16'00" W	036-038 ✓
8	8	043	15 meters	27°48'00" N 097°17'00" W	043-046
9	9	053	15 meters	27°48'40" N 097°15'00" W	053-055

<u>Table Applied</u>	<u>Cast</u>	<u>Day</u>	<u>Depth</u>	<u>Location</u>	<u>Days</u>
10	10	058	15 meters	27°48'36" N 097°16'46" W	058
11	11	075	14 meters	27°48'35" N 097°18'00" W	075-082
12	12	085	13.2 meters	27°48'40" N 097°20'00" W	085-092
13	13	094	13.9 meters	27°48'30" N 097°19'20" W	094-096
14	14	117	15.4 meters	27°48'37" N 097°19'22" W	117
15	15	129	15.4 meters	27°48'45" N 097°20'30" W	124-127

THESE ABOVE TABLES HAVE BEEN GROUPED AND REDUCED TO SIX FOR FINAL PROCESSING.

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, ~~Following Text.~~ *Filed with the SURVEY RECORDS.*

Lead line comparisons were performed daily, excluding days of harsh weather, to determine instrument error and to verify static draft. The instrument errors computed varied from +0.4 to -0.2 foot. These instrument corrections were not applied to final field sheet soundings and are included in the Separates ~~Following Text,~~ along with lead line comparison logs, for reference.

A static draft correction was determined by measurements performed at Redfish Bay Terminal on November 16, 1989 (DN 320). This data was applied to all soundings acquired with the Raytheon DE-719-C echo sounders. The 1.2 foot static draft correction was applied to all sounding data. The offset tables are included with the Separates ~~Following Text.~~ *Filed with the SURVEY RECORDS.*

Settlement and squat measurements for vessel 0520 was performed on November 16, 1989 (DN 320), at Redfish Bay Terminal, using the NOS prescribed level rod method (Zeiss level s/n 59972). Settlement and squat correctors were determined and applied to all survey data.

Predicted tides, MLLW datum, were applied to all soundings using the reference station and correctors designated in the project instructions.

Approved tides were requested from the Sea and Lake Levels Branch in a letter dated May 15, 1990. A copy of the letter is included in the Separates ~~Following Text~~. *Filed with THE SURVEY RECORDS.*
APPROVED TIDES HAVE BEEN APPLIED TO ALL SOUNDINGS ON THE SMOOTH SHEET.

E. HYDROGRAPHIC SHEETS

The survey scale is 1:10,000. All sheets were produced by AHP-2 employees with the HDAPS on the Bruning ZETA 824 plotter. A list of sheets submitted for H-10326 follows:

<u>Sheet</u>	<u>Scale</u>	<u>Quantity</u>
Boat Sheet	1:10,000	2
Edited Trackline Plot	1:10,000	4
Final Field Sheet	1:10,000	2
Overlay	1:10,000	2

Main scheme hydrography, crosslines, and horizontal control stations used during the survey are plotted on the final field sheet. Channel lines, developments, detached positions, and bottom samples are plotted on the overlay. All soundings on the final field sheet are corrected for draft, tides, settlement and squat, and speed of sound through water. *Predicted*

All survey sheets were submitted with the descriptive report to the Pacific Hydrographic Section in Seattle, Washington.

F. CONTROL STATIONS

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

All control stations used on this survey were either existing stations or stations set by the Coastal Surveys Unit 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.

Station number 063 was assigned to two different stations within the project area. Station "Warehouse 1989" which was not used during this survey. Station "C C Bay Spoil Bank Lt A 1990" which was used during this survey.

Geographic positions for all control stations used on this survey are underlined and included with the station list in the Separates Following Text.

G. HYDROGRAPHIC POSITION CONTROL

Survey Methods

Hydrographic position control was accomplished using the Mini-Ranger Falcon 484 system which provided accuracy to meet 1:10,000 scale survey requirements. Range/range positioning using four stations simultaneously was used during this project. 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>VESNO</u>	<u>Equipment</u>	<u>S/N</u>
0520	RPU	E0146 (days 030-058)
	RPU	D0018 (days 075-127)
	CDU	E009
	R/T	C2000
	R/S	E2922
	R/S	F3290
	R/S	F3298
	R/S	F3217
	R/S	F3244
	R/S	C2059
	R/S	E2926

On day 066, RPU S/N E0146 failed and was replaced with RPU S/N D0018. A baseline was performed on day 067 with the new RPU.

Positions which had erratic lines of position indicated by high residuals on the "raw" listing were "smoothed" in post 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. In areas where only two lines of position were received, the "raw" listing would indicate the angle of intersection between these lines enclosed by brackets. If more than four consecutive positions were outside of the 30 to 150 degree intersection margin, the data were rejected and later rerun. If less than five positions were outside the 30 to 150 degree margin, the positions were smoothed. Occasionally, the residual values were greater than 5 meters, yet the trackline plot showed that the position of the survey vessel was accurate. In those instances, the data were considered adequate and were

plotted with the other data on the final field sheet. ✓

Critical System Checks

Critical system checks, as defined by N/CG241, were performed by visually observing the error circle radius (ecr) and residual (res) values on the Complex screen in the survey vessels. The "DUMP ALPHA" and "DUMP GRAPHICS" functions are not available with COMPLEX so no listing of these checks are possible. ✓

Fixed point system checks were performed after Mini-Ranger reference stations were established on shore stations or when relocating Mini-Ranger reference stations to different locations. All fixed point checks values were less than 5 meters which is within the required limits in the field procedures manual. Results of these fixed point checks are included in the Separates ~~Following Text.~~ *Filed with the SURVEY RECORDS.* ✓

Mini-Ranger Falcon Calibrations

Baseline calibrations were performed to the standards of Section 3.1.2.1 of the field procedures manual. The baseline values were incorporated into the Complex "C-0" table and applied directly to all "on-line" data. All records of these calibrations are included in the Separates ~~Following Text.~~ *Filed with the SURVEY RECORDS.* ✓

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

H. SHORELINE

Shoreline drawn on the final field sheet originates with a 1:10,000 scale photographic enlargement of topographic map 01613. The shoreline manuscript was compiled on NAD 1927, while this survey was run using the NAD 1983. The datum shift was applied during the enlargement of the manuscript. The grid on the topographic map is NAD 1983 with NAD 1927 tick marks. ✓

Shoreline was verified by its junction with hydrographic data and by visual inspection when possible. Verified shoreline is shown in black ink on the final field sheet. ✓

I. CROSSLINES

A total of 41.6 linear nautical miles of crosslines were run on H-10323 which equals 12% of the main scheme hydrography. These soundings agree to within one foot of the main scheme ✓

soundings.

J. JUNCTIONS *SEE EVALUATION REPORT SECTION 5*

This sheet junctions with H-10325 (1989-90), to the west and H-10324 to the east. ✓

Junction soundings with H-10325 agree to within two feet and junction soundings with H-10324 agree to within two feet. ✓

K. COMPARISON WITH PRIOR SURVEYS *SEE EVALUATION REPORT SECTION 6*

The present survey was compared to the following prior surveys.

T-9183 (1948-50) 1:20,000 ✓
 T-9184 (1948-51) 1:20,000 ✓
 H-5694 (1934-35) 1:20,000 ✓

The line of piles north of Corpus Christi ship channel on T-9183 and T-9184 were put in several years ago by the Army Corps of Engineers as ranges for dredging. The area was visually inspected during hydrography and nothing was found. These piles are not charted and a phone conversation with the Army Corps of Engineers confirmed that these piles no longer exist. ✓

The channel, daybeacons, and lights on T-9183 centered around latitude 27°45'30" N, longitude 097°15'30" W no longer exist and are not charted. ✓

Encinal channel centered around latitude 27°47'30" N, longitude 097°14'30" W on T-9184 no longer exists and is charted as a discontinued channel. The channel lights and daybeacons do not exist and are not charted. ✓

Soundings from H-5694 and the present survey soundings generally agree within 3 feet, except just north and south of the channel where there is a 3- to 5-foot difference. The present survey soundings are deeper. ✓

The shoal located at latitude 27°48'36", longitude 097°13'30" on H-5694 has been filled-in and is now a spoil island. ✓

L. COMPARISON WITH THE CHART *SEE EVALUATION 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>
11309	29th	November 15, 1986 (NJADZ7)

In general, the soundings from this survey compared within two feet of the charted depths except on the north and south side of the ship channel. The depths varied 3- to 5-feet deeper according to the present survey soundings. The hydrographer recommends that the present survey soundings be charted.

CONCUR

An 1⁰/₂-foot spike was found at latitude 27°45'06" N, longitude 097°17'51" W in 14 feet of water. A development was run at 50-meter line spacing in a north-south, east-west direction on day 117. Detached positions (pos. ~~3081 and 3082~~ day 117) ⁹⁸ were taken using the fathometer. The least depth found was ^{MLLW} 12 feet, which was corrected for TRA, sound speed, and tides. ^{ACTUAL}

CHART AREA AS SHOWN ON SHOOT SHEET

There were several small areas within the limits of this survey that revealed some shoaling. Some of these areas were close to well platforms. According to local information obtained by telephone conversations, we learned that to provide a stable foundation for well drilling platforms shells are dumped overboard to create a "pad" on the bottom. This process is used because of the unstable muddy bottom. Such areas in and around these platforms were not developed but a few isolated areas were. These isolated areas were developed at a 50-meter line spacing in a north-south, east-west direction. ✓

Locations of areas that were developed:

latitude 27°45'03" N	longitude 097°17'38" W
latitude 27°46'09" N	longitude 097°17'39" W
latitude 27°46'46" N	longitude 097°17'00" W
latitude 27°47'18" N	longitude 097°18'39" W
latitude 27°47'30" N	longitude 097°17'48" W
latitude 27°45'30" N	longitude 097°14'20" W
latitude 27°46'45" N	longitude 097°14'00" W
latitude 27°47'48" N	longitude 097°13'42" W
latitude 27°48'05" N	longitude 097°14'39" W

Locations of areas that were not developed:

latitude 27°46'12" N	longitude 097°17'42" W	✓
latitude 27°45'00" N	longitude 097°13'16" W	
latitude 27°45'24" N	longitude 097°13'16" W	

The soundings in these areas were 3- to 4-feet shoaler than the natural bottom. The hydrographer recommends that the present survey soundings be charted. CONCUR

A 3.5-foot sounding charted at latitude 27°48'51" N, longitude 097°14'09" W no longer exists. A development was run at 50-meter line spacing in a north-south, east-west direction and nothing was found. The shoalest sounding found was 7-foot located at latitude 27°48'51" N, longitude 097°14'07" W. The hydrographer recommends that the present survey soundings be charted. CONCUR
 (2) POSITION NUMBER 298/2. DELETE THE CHARTED 3½ FOOT SOUNDING.

A 4-foot sounding charted at latitude 27°48'48" N, longitude 097°14'30" W no longer exists. A development was run at 50-meter line spacing in a north-south, east-west direction and nothing was found. The shoalest sounding found was 11-foot located at latitude 27°48'51" N, longitude 097°14'30" W. The hydrographer recommends that the present survey soundings be charted. ✓
 (6) POSITION NUMBER 3576. DELETE THE CHARTED 4 FOOT SOUNDING.

A discontinued spoil area centered around latitude 27°46'00" N, longitude 097°16'00" W no longer exists. The main scheme hydrography in this area was split to 50 meters and the soundings in the area were no more than a foot different than the rest of the survey soundings. The hydrographer recommends that the discontinued spoil area be removed from the chart and the present survey soundings be charted. CONCUR

A discontinued spoil area and a discontinued channel centered around latitude 27°48'00" N, longitude 097°14'00" W no longer exist. The main scheme hydrography in this was split to 50 meters and the soundings in the area were no more than a foot different than the rest of the survey soundings, except for a 9-foot sounding located at latitude 27°47'58" N, longitude 097°14'07" W. The hydrographer recommends that the discontinued spoil area and the discontinued channel be removed from the chart and the present survey soundings be charted. CONCUR

M. ADEQUACY OF SURVEY

This survey is a complete basic hydrographic survey and is adequate to supersede all prior surveys within the common area. do NOT CONCUR,
 ALDIS ITEMS NOT INVESTIGATED. SEE ADDITIONAL FIELD WORK FOLLOWING THIS REPORT.

N. AIDS TO NAVIGATION

The buoy and lights listed below exhibit characteristics as described in the USCG LIGHT LIST, Volume IV, 1990 Edition. ✓

There were two floating aids to navigation located in the survey area. ✓

Floating Aids to Navigation

<u>Floating Aid</u>	<u>Position No</u>	<u>Survey Position</u>	<u>Light List Position</u>
lighted buoy "R44"	3587	27°48'43.9" N 097°14'11.6" W	27°48.7' N 097°14.2' W
lighted buoy "WR52"	3595	27°48'42.2" N 097°15'40.9" W	None

Comparison of the surveyed position for buoy "R44" to the charted position shows it to be accurately charted and sufficient to accomplish its intended purpose. ✓

Buoy "WR52" is not charted. The hydrographer recommends that the buoy be charted at the surveyed position. ✓

do NOT CONCUR
THIS BUOY WAS REMOVED BY USCG FEB. 19, 1991 (LNM 8-91)

There were eight non-floating aids to navigation located in the survey area. ✓

<u>Non-Floating Aid</u>	<u>Position No</u>	<u>Survey Position</u>	<u>Light List Position</u>	<u>Light List #</u>
light 43	3588	27°48'35. ⁵⁸ N 097°14'11. ⁵⁸ W	None	27275
light 49	3597	27°48'34. ³⁵ N 097°15'29. ³⁵ W	None	27295
light 50	3596	27°48'42. ⁴⁷ N 097°15'31. ⁴⁷ W	None	27300
light 55	3593	27°48'34. ³⁵ N 097°16'46. ³⁵ W	None	27305
light 56	3594	27°48'41. ⁴⁹ N 097°16'47. ⁴⁹ W	27°48.7' N 097°16.8' W	27310
Corpus Chr Chan Cut AW Rng R (CONTROL STATION 046)		27°48'18. ⁰⁴⁴ N 097°16'05. ⁰⁴⁴ W	None	27220

<u>Non-Floating Aid</u>	<u>Survey Position</u>	<u>Light List Position</u>	
Corpus Chr Chan Cut	27°48'30. ¹⁹ 2" N	27°48.5' N	
AW Rng F (control station 047)	097°15'00. ⁴²² 5" W	097°15.0' W	27215
Corpus Chr Chan BE	27°48'38. ⁷⁸⁶ 8" N	27°48.6' N	
Rng F Lt. (control station 048)	097°13'41. ⁴⁹⁸ 0" W	097°13.7' W	27285

Comparison of the surveyed position for lights 43, 49, 55, and 56 to the charted position showed them to be accurately charted and sufficient to accomplish their intended purpose.

CONCUR

The surveyed position of light 50 shows that the light is about 100 meters west of the charted position. The hydrographer recommends that the light be charted at the surveyed position. The location of the light is sufficient to accomplish its intended purpose.

CONCUR

No submarine nor overhead cables were located in the survey area. ✓

O. STATISTICS

<u>Description</u>	<u>VESNO</u>
	<u>0520</u>
Total Positions	3597
Detached Positions	9
Duplicate Positions	9
Total Nautical Miles of Hydro	483.0
Sq. Nautical Miles of Hydrography	16
Bottom Samples	64
Velocity Cast	10
Tide Stations Leveled	--
Days of Production	23

P. MISCELLANEOUS

Bottom samples were taken and submitted to the Smithsonian Institution as directed in section 6.7 of the project instructions. Sixty four bottom samples were transmitted on April 16, 1990. 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 Text~~. *Filed with THE SURVEY RECORDS.* ✓

Predicted tides were applied to the soundings on the final field sheet which cause depths to differ by one to two feet on adjacent lines. ✓

There were extremely low or high tides from day to day caused by high winds. This made drawing of the depth curves very difficult. When smooth tides are applied this problem should be resolved. *This problem has been resolved by application of actual tides.* ✓

There are nine duplicated position numbers in this survey. This occurs when the computer loses count of the position numbers by one. When you break a line and start a line it will use the last fix on the last line for the first fix of the next line. This problem is in the process of being corrected. *This did NOT cause a difficulty in office processing.* ✓

There were no investigations of AWOIS items nor well platforms performed on this survey because of high winds and rough seas. These investigations will be performed in the near future and item investigation reports will be forwarded under separate cover. *SEE FOLLOWING ADDITIONAL WORK REPORT.*

The following changes should be made in the data during processing of day number 94: ✓

Insert a depth of 50.2 feet between the first and second out of position 2793 at the time of 174206. ✓

Change the depth on the second out of position of 2793 (time 174212) to 47.4 feet. ✓

THESE CHANGES HAVE BEEN MADE.

No anomalous currents were observed in the survey area. ✓

Q. RECOMMENDATIONS

Not all of the AWOIS items could be fully resolved because of extended foul weather and time restraints. AWOIS items will be addressed in the near future under separate cover. *THE ADDITIONAL WORK HAS BEEN DONE. AWOIS ITEMS ARE ATTACHED FOLLOWING THE NEXT REPORT.*

R. AUTOMATED DATA PROCESSING

The HDAPS utilizing software provided by N/CG24 was the system used to acquire and process data for this survey. ✓

The following non-HDAPS computer programs were used:

	<u>Version</u>	<u>Date</u>
VELOCITY Velocity Computations (IBM PC)	1.0 extended	9/89
MTEN3 with enhancements Geodetic Computations (IBM PC)		6/88

S. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report To Accompany Survey H-10324	Pacific Hydrographic Section N/CG245 Seattle, WA
Descriptive Report To Accompany Survey H-10325	Pacific Hydrographic Section N/CG245 Seattle, WA
<i>Geodetic Control Report for CM-8716</i> Horizontal Control Report for OPR-K229-AHP-2 <i>Geodetic Control Survey Job HC-9901</i> Chart Sales Agent Report	Field Photogrammetry Section N/CG233 Norfolk, VA
User Evaluation Report	Chart Distribution Branch N/CG33 Rockville, MD
Chart Inspection Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA
Coast Pilot Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA
	Coast Pilot Section Mapping and Charting Branch N/CG223 Rockville, MD

Submitted by:

Glenn D. Hendrix, Launch Hydrographer in Charge

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-K229-AHP
AHP-10-1-90
H-10326
1990

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-K229-AHP, 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 M of this report.

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

HYDROGRAPHIC TITLE SHEET

H-10326

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-10-1-90

State Texas

General locality Corpus Christi Bay

Locality Seven Miles East of Corpus Christi

Scale 1:10,000 Date of survey Oct 12 - Nov 1, 1990

Instructions dated September 14, 1990 Project No. OPR-K229

Vessel NOAA Launch 0520

Chief of party LCDR V. Dale Ross, NOAA

Surveyed by Glenn D. Hendrix

Soundings taken by echo sounder, hand lead, ~~probe~~ Raytheon DE-719-C with the ODOM Digitrace

Graphic record scaled by Field Personnel

Graphic record checked by Field Personnel

Evaluation by: Gordon E. Kay Automated plot by PHS Xynetics Plotter

Verification by Gordon E. Kay

Soundings in meters
fathoms ~~XXXX~~ at ~~MLLW~~ MLLW

REMARKS: Time in UTC. This additional work completes the basic hydrographic
survey H-10326, AHP 10-1-90, Sheet Q. Revisions and marginal notes
in black were generated during office processing. Separates are
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ADDITIONAL WORK
DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10326
(Field No. AHP-10-1-90)
Scale:1:10,000
1990

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

A. PROJECT

The additional work was conducted in accordance with Hydrographic Project Instructions OPR-K229-AHP2, Corpus Christi and Aransas Bays, Texas, dated September 14, 1990. ✓

The additional work is for the survey designated as sheet "Q" in the project sheet layout. ✓

The purpose of the additional work is to complete the AWOIS item investigations not resolved in the ~~winter of 1989 and the~~ spring of 1990. ✓

B. AREA SURVEYED

The additional work is in the area surveyed for H-10326 which is the center portion of the Corpus Christi Bay bounded by the following survey limits: ✓

North - 27° 49' 07"N
South - 27° 45' 00"N
East - 097° 13' 14"W
West - 097° 18' 00"W

The survey area is also bounded to the north by the Corpus Christi ship channel. ✓

This survey was conducted from October 12, 1990 (day 285) to November 1, 1990 (day 305). ✓

C. SOUNDING VESSEL

Vessel 0520 (EDF No. 0520), a 21-foot MonArk, was the only sounding vessel used during this survey. ✓

D. AUTOMATED DATA PROCESSING

The HDAPS utilizing software provided by N/CG24 was the system used to acquire and process data for this survey. ✓

The following non-HDAPS computer programs were used:

	Version	Date	
VELOCITY Velocity Computations (IBM PC)	1.0 extended	9/89	
MTEN3 with enhancements Geodetic Computations (IBM PC)		6/88	✓
WORDPERFECT - Descriptive Report (IBM PC)	5.0	6/88	

E. SONAR EQUIPMENT

Not applicable ✓

F. SOUNDING EQUIPMENT

The Raytheon DE-719-C fathometer with an Odom Hydrographic Systems, Inc. Digitrace and the Innerspace Model 448 echo sounder were used for this survey:

	<u>S/N</u>	<u>Days</u>	
(DE-719-C)	3947	285-290	✓
(Innerspace)	187	298-305	

G. CORRECTIONS TO SOUNDINGS

Soundings were recorded in meters* using the Raytheon DE-719-C fathometer and the Innerspace echo sounder with an assumed speed of sound through water of 1500 m/sec. ✓

The digitized soundings matched the DE-719-C fathometer's trace to plus or minus 0.1 meter through constant observation and manipulation of the tide and draft adjustment knob. The digitized soundings matched the Innerspace echo sounder's trace to plus or minus 0.1 meter. The Innerspace echo sounder is totally automated and does not need adjustments. ✓

Corrections for the speed of sound through the water column were computed from data obtained with a Applied Microsystems Laboratory (AML), Model SVP-16 speed of sound profiler, serial number 03003. Program "Velocity" was used for determining the speed of sound correctors. ✓

* SMOOTH SHEET SOUNDINGS UNITS ARE FEET.

<u>Table Applied</u>	<u>Cast</u>	<u>Day</u>	<u>Depth</u>	<u>Location</u>	<u>Days</u>
16	1	284	14 meters	27°49'00" N 097°13'30" W	285-290
17	2	302	15 meters	27°48'50" N 097°17'30" W	302 ²⁹⁸ -305

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 ~~Following Text~~. *Filed with the SURVEY RECORDS.* ✓

Lead line comparisons were performed daily, excluding days of harsh weather, to determine instrument error and to verify static draft. The instrument errors computed varied from +0.1 to -0.1 meter and are included in the Separates ~~Following Text~~, along with lead line comparison logs. *Filed with the SURVEY RECORDS* ✓

A static draft correction was determined by measurements performed at the Coopers Alley T-Head, Corpus Christi, Texas on October 11, 1990 (DN 284). The data was applied to all soundings acquired with the echo sounders. The .36 meter static draft correction was applied to all sounding data. The offset tables are included with the Separates ~~Following Text~~. *Filed with the SURVEY RECORDS.* ✓

Settlement and squat measurements for vessel 0520 were performed on October 11, 1990 (DN 284), at the T-Head Corpus Christi, Texas, using the NOS prescribed level rod method (Zeiss level s/n 59972). Settlement and squat correctors were determined and applied to all survey data. ✓

H. CONTROL STATIONS

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

All control stations used on this survey were either existing stations or stations set by the Coastal Surveys Unit 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. ✓

Geographic positions for all control stations used on this survey are underlined and included with the station list in the Separates Following Text. ✓

I. HYDROGRAPHIC POSITION CONTROL

Hydrographic position control was accomplished using the Mini-Ranger Falcon 484 system which provided accuracy to meet 1:10,000 scale survey requirements. Range/range positioning using three or four stations simultaneously was used during this project. 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>VESNO</u>	<u>Equipment</u>	<u>S/N</u>
0520	RPU	E0164 (days 285-305)
	CDU	E009
	R/T	E2960
	R/S	E2962
	R/S	F3293
	R/S	C2096
	R/S	F3242
	R/S	E2911

Positions 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. In areas where only two lines of position were received the "raw" listing would indicate the angle of intersection between these lines enclosed by brackets. If more than four consecutive positions were outside of the 30 to 150 degree margin, the positions were smoothed. Occasionally, the residual values were greater than 5 meters, yet the trackline plot showed that the position of the survey vessel was accurate. In those instances, the data were considered adequate and were plotted on the final field sheet. ✓

Critical system checks, as defined by N/CG241, were performed by visually observing the error circle radius (ecr) and residual (res) values on the Complex screen in the survey vessels. The "DUMP ALPHA" and "DUMP GRAPHICS" functions are not available with COMPLEX so no listing of these checks are possible. ✓

Fixed point system checks were performed after Mini-Ranger reference stations were established on shore stations or when relocating Mini-Ranger reference stations to different locations. All fixed point checks values were less than 5 meters which is within the required limits in the field procedures manual. Results of these fixed point checks are included in the Separates ✓
~~Following Text.~~ *Filed with the SURVEY RECORDS.*

Baseline calibrations were performed to the standards of Section 3.1.2.1 of the field procedures manual. The baseline values were incorporated into the Complex "C-0" table and applied directly to all "on-line" data. All records of these calibrations are included in the Separates ~~Following Text~~. *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

~~Not applicable~~ SEE JAN to MAY 1990 HYDROGRAPHER'S REPORT, SECTION A.

K. CROSSLINES

~~Not applicable~~ SEE JAN to MAY 1990 HYDROGRAPHER'S REPORT, SECTION I.

L. JUNCTIONS

~~Not applicable~~ SEE EVALUATION REPORT SECTION 5

M. COMPARISON WITH PRIOR SURVEYS

~~Not applicable~~ SEE JAN to MAY 1990 HYDROGRAPHER'S REPORT, SECTION K.

N. COMPARISON WITH THE CHART SEE EVALUATION 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>
11309	29th	November 15, 1986 (NAD 27)

There are fourteen well platforms located within the survey area that are not charted. The well platforms are located at the following surveyed positions.

<u>Position Number</u>	<u>Latitude</u>	<u>Longitude</u>	
5000	27° 44' 55.9"N	097° 13' 16.3"W	
5002	27° 44' 58.7"N	097° 13' 18.8"W	
5003	27° 45' 25.2"N	097° 13' 15.6"W	
5015	27° 45' 34.8"N	097° 16' 59.2"W	CHART,
5023	27° 45' 35.5"N	097° 17' 10.1"W	
5024*	27° 45' 34.3"N	097° 17' 09.5"W	OIL PLATFORM
5025	27° 46' 14.2"N	097° 17' 37.8"W	(LIGHTED)
5031	27° 46' 12.5"N	097° 17' 40.0"W	
5032	27° 46' 10.9"N	097° 17' 42.2"W	AS SHOWN ON
5033	27° 46' 09.1"N	097° 17' 44.0"W	SMOOTH SHEET
5034	27° 46' 07.3"N	097° 17' 42.1"W	
5035	27° 46' 07.3"N	097° 17' 38.2"W	
5036	27° 46' 07.3"N	097° 17' 40.1"W	
6072	27° 48' 12.4"N	097° 15' 02.7"W	

There were three pile-mooring dolphins located with some of the well platforms that were not charted. Detached positions were taken on the dolphins on day 285 (positions 5026-5030, 5037-5040). See photographs of the well platforms and mooring dolphins in the Separates ~~Following Text~~. *CHART AREA AS SHOWN ON SMOOTH SHEET. Filed with THE SURVEY RECORDS.*

There were two pipeline crossing signs located within the survey area that were not charted. Detached positions were taken on these signs on day 285 (positions 5007, 5011). See photographs of the signs in the Separates ~~Following Text~~. *CHART AREA AS SHOWN ON SMOOTH SHEET. Filed with THE SURVEY RECORDS.*

The hydrographer recommends that the well heads, mooring dolphins and the pipeline crossing signs be charted at their surveyed positions. *CONCUR*

There were fifteen AWOIS items located within the survey area. See ~~section VI~~ of the Separates Following Text for AWOIS item reports and dive reports. *DIVE REPORTS FILED WITH THE SURVEY RECORDS.* ✓

O. ADEQUACY OF SURVEY

This additional work completes the basic hydrographic survey H-10326 and is adequate to supersede all prior surveys within the common area. *CONCUR*

P. AIDS TO NAVIGATION

Not applicable *SEE JAN TO MAY HYDROGRAPHER'S REPORT, SECTION N.*

* Position # 5023 is the OPPOSITE CORNER OF OIL PLATFORM FROM POSITION # 5024, AND IS RECORDED AS A MISSED DEPTH.

Q. STATISTICS

<u>Description</u>	<u>VESNO</u> <u>0520</u>
Total Positions	771
Detached Positions	40
Duplicate Positions	1
Developments	47.9
Sq. Nautical Miles of Hydrography	N/A
Bottom Samples	N/A
Velocity Cast	2
Tide Stations Levelled	0
Days of Production	8

R. MISCELLANEOUS

Developments were run on most of the AWOIS items at 20 meter line spacing. The data were scanned and edited but not smooth plotted. The marine center will plot the data if they need it. ✓

S. RECOMMENDATIONS

Not applicable.

T. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report To Accompany Survey H-10326	Pacific Hydrographic Section N/CG245 Seattle, WA

Submitted by:

Glenn D. Hendrix

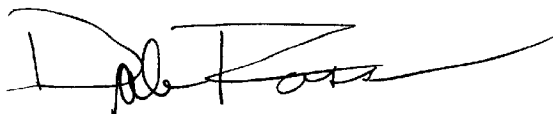
Glenn D. Hendrix, Launch Hydrographer in Charge

APPROVAL SHEET

**BASIC HYDROGRAPHIC SURVEY ADDITIONAL WORK
OPR-K229-AHP2
AHP-10-1-90
H-10326
1990**

This additional work 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 additional work completes the aforementioned basic hydrographic survey for the area described in section B of this report.



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

CHART NO.:11309

AWOIS ITEM NO.:4816

ITEM DESCRIPTION:submerged wk (PA)

SOURCE:LNM 50/76

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

INVEST. DATE:October 29, 1990 DAY NO.:302 TIME:161136

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6329

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°47'31. ^{.1} 0"	097°13'31.0"
OBSERVED:	NAD83	27°47'31.0"	097°13'31.0"

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

METHOD OF ITEM INVESTIGATION:A 50 meter radius circle search was performed by divers (dive No.2) and nothing was found. A development was run at 20 meter line spacing in a north-south, east-west direction on day 303 (positions 6538-6602) and day 305 (positions 6613-6675), nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

SURVEY disapproval SPECIFICATION OF 200 METER RADIUS SEARCH BY DIVE OR BOTTOM DRAG NOT MET. Retain AS CHARTED.

do Not CONCERN

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.: 11309

AWOIS ITEM NO.:4817

ITEM DESCRIPTION:submerged wk (PA)

SOURCE:LNM 43/63

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

INVEST. DATE:October 17, 1990 DAY NO.:290 TIME:163826

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6041

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'01. ^{.1} 0"	097°15'31.0"
OBSERVED:	NAD83	27°48'01.2"	097°15'30.4"

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

METHOD OF ITEM INVESTIGATION: A 50 meter radius circle search was performed by divers (dive No.1) and nothing was found. A development was run at 20 meter line spacing in a north-south, east-west direction on day 303 (positions 6335-6462), nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

do not CONCUR
SURVEY disapproval SPECIFICATIONS OF 200 METER RADIUS SEARCH BY DIVE OR
bottom drag NOT MET. RETAIN AS CHARTED.

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4846

ITEM DESCRIPTION:submerged wk (PA)

SOURCE:LNM 17/86

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

INVEST. DATE:October 29, 1990 DAY NO.:302 TIME:184312

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6334

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION: DATUM LATITUDE N LONGITUDE W

CHARTED: NAD83 27°48'55.¹0" 097°17'19.0"

OBSERVED: NAD83 27°48'55.0" 097°17'19.0"

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

METHOD OF ITEM INVESTIGATION: A 50 meter radius circle search was performed by divers (dive No.6) and nothing was found. A development was run at 20 meter line spacing in a north-south, east-west direction On day 298 (positions 6044-6197) and nothing was found. (400 METER SQUARE)

CHARTING RECOMMENDATIONS:remove from chart

do not CONCUR

SURVEY disPROVAL SPECIFICATIONS OF 200 METER RADIUS SEARCH BY DIVE OR BOTTOM DRAG NOT MET. RETAIN AS CHARTED.

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.: 11309

AWOIS ITEM NO.: 4847

ITEM DESCRIPTION: marker "Warning pipeline crossing Reynolds Metals Co."

SOURCE: CL159/65---COE permit

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

INVEST. DATE: Oct. 12, 1990 DAY NO.: 285 TIME: 155957

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT: 3.3 METERS

POSITION: 5008

CORRECTORS APPLIED: Predicted Tides x Velocity Draft
Settlement and Squat

GEODETTIC POSITION: DATUM LATITUDE N LONGITUDE W

CHARTED: NAD83 27°48'43.¹0" 097°16'55.0"

OBSERVED: NAD83 27°48'43.6" 097°16'58.0"

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

METHOD OF ITEM INVESTIGATION: Visual search

The observed position of the marker is ~~about 80~~⁴¹⁶ meters west of the charted position. A phone conversation, (phone number 512-777-2358) with mr. Toy Fowler, Reynolds Metals Co., informed us that the marker has been moved and that the old pile was either removed or cut-off flush with the bottom.

CHARTING RECOMMENDATIONS: ^{DELETE CHARTED MARKER.} A Marker should be charted at surveyed CONCUR position.

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.: 11309

AWOIS ITEM NO.: 4848

ITEM DESCRIPTION: marker "Warning pipeline crossing Reynolds Metals Co."

SOURCE: CL159/65---COE permit

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

INVEST. DATE: Oct. 12, 1990 DAY NO.: 285 TIME: 161532

REFERENCE: OPR-K229

VESSEL: 0520

HEIGHT: 3.3 meters

POSITION: 5014

CORRECTORS APPLIED: Predicted Tides X Velocity Draft
Settlement and Squat

GEODETTIC POSITION: DATUM LATITUDE N LONGITUDE W

CHARTED: NAD83 27°48'32.⁶" 097°16'56.0"

OBSERVED: NAD83 27°48'26.7" 097°16'59.0"

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

METHOD OF ITEM INVESTIGATION: visual search

The observed position of the marker is ~~about~~ ^{91.51} 180 meters south-southwest of the charted position. A phone conversation, (512-777-2358) with Mr. Toy Fowler, Reynolds Metals Co., informed us that the marker has been moved and the old pile was either removed or cut-off flush with the bottom.

DELETE CHARTED MARKER.
CHARTING RECOMMENDATIONS: Marker should be charted at the surveyed position. *CONCUR*

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4849

ITEM DESCRIPTION:platform ruins

SOURCE:CL 1111/82 USPS

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

INVEST. DATE:October 29, 1990 DAY NO.:302 TIME:171146

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:5.1 meters (lead line)

POSITION:6331

CORRECTORS APPLIED: Predicted Tides_no_ Velocity _no_ Draft _no_
Settlement and Squat _no_

GEODETTIC POSITION: DATUM LATITUDE N LONGITUDE W

CHARTED: NAD83 27°48'33.¹/₀" 097°16'47.0"

OBSERVED: NAD83 27°48'31.3" 097°16'47.0"

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

METHOD OF ITEM INVESTIGATION: A development was run at 20 meter line spacing in a north-south, east-west direction. The awois item was found during the development. Divers (dive No.3), found a 5 meter by 5 meter square platform made-up of concrete, wire cables and rusty metal.

CHARTING RECOMMENDATIONS: ^{DELETED CHARTED PLATFORM RUINS} chart ^{16 Obs'n} (platform ruins) at the surveyed position CONCUR

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.: 4850

ITEM DESCRIPTION: platform ruins

SOURCE: CI 1274/82 USPS

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

INVEST. DATE: October 29, 1990 DAY NO.:302 TIME:173450

REFERENCE: OPR-K229

VESSEL:0520

DEPTH/HEIGHT: N\A

POSITION:6332

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'44. ¹ 0"	097°16'45.0"
OBSERVED:	NAD83	27°48'44.0"	097°16'45.4"

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

METHOD OF ITEM INVESTIGATION: A 50[✓] meter radius circle search was performed by divers (dive No.4) and nothing was found. A development was run at 20 meter line spacing in a north-south, east-west direction on day 299 (positions 6254-6281), nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

CONCUR

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4851

ITEM DESCRIPTION:submerged pile

SOURCE:CL 1326/72 USPS

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

INVEST. DATE:October 29, 1990 DAY NO.:302 TIME:182147

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6333

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETTIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'43. ⁶ 5"	097°16'34.0"
OBSERVED:	NAD83	27°48'43.4"	097°16'34.0"

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

METHOD OF ITEM INVESTIGATION: A 50 meter radius circle search was performed by divers (dive No.5) and nothing was found. A development was run at 20 meter line spacing in a north-south, east-west direction on day 299 (positions 6282-6327) and nothing was found.
AND COVERED A 100 METER SQUARE AREA.

CHARTING RECOMMENDATIONS: Remove from chart

*A 100 METER SEARCH RADIUS, REQUIRED FOR DISPROVAL. RETAIN AS CHARTED.
DIVE OR BOTTOM DRAG*

do NOT CONCUR

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4852

ITEM DESCRIPTION:submerged pile

SOURCE:unknown

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

INVEST. DATE:October 31, 1990 DAY NO.:304 TIME:173820

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6608

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETTIC POSITION: DATUM LATITUDE N LONGITUDE W

CHARTED: NAD83 27°48'42.⁶5" 097°14'22.0"

OBSERVED: NAD83 097°48'42.8" 097°14'22.1"

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

METHOD OF ITEM INVESTIGATION: A 50 meter radius circle search was performed by divers (dive No.9) and nothing was found. A development was run at 20 meter line spacing in a north-south, east-west direction on day 303 (positions 6463-6498) and nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

do NOT CONCUR

*A 100 METER SEARCH RADIUS REQUIRED FOR DISPROVAL. RETAIN AS CHARTED.
DIVE OR BOTTOM DRAG*

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4853

ITEM DESCRIPTION:platform ruins

SOURCE:unknown

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

INVEST. DATE:October 31, 1990 DAY NO.:304 TIME:145756

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6604

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'33. ¹ 0"	097°14'17.0"
OBSERVED:	NAD83	27°48'33.0"	097°14'17.0"

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

METHOD OF ITEM INVESTIGATION: A 50 meter radius circle was performed by divers (dive No.7) and nothing was found. A development was run at 20 meter line spacing in a north-south, east-west direction on day 303 (positions 6514-6537) and nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

CONCUR

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4856

ITEM DESCRIPTION:submerged wk PA

SOURCE:LNM 36/77

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

INVEST. DATE:November 2, 1990 DAY NO.:305 TIME:190204

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6774

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETTIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'43. ¹ 0"	097°13'43.0"
OBSERVED:	NAD83	27°48'43.1"	097°13'43.0"

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

METHOD OF ITEM INVESTIGATION: This Awois item is ^{49.87 FEET} charted in the south portion of the main shipping channel in 15.2 meters of water. A phone conversation with Mr. Frank Garcia (512-884-3385), of the Corpus Christi Corps of Engineers informed us that when the channel is dredged whatever is in the channel is removed. This portion of the channel where the Awois item is charted was dredged in August, 1990. A development was run at 20 meter line spacing in a north-south, east-west direction on day 303 (positions 6499-6513) and on day 305 (positions 6676-6673) and nothing was found. A detached ^{positioned} was taken on day 305 at the charted position and nothing was found. There was no dive performed on this Awois item because of all the shipping traffic in the channel.

CHARTING RECOMMENDATIONS: Remove from chart. ^{CONCUR IN REMOVAL OF THE} ~~chart outside the channel but not as a danger to navigation.~~

SUBMERGED WRECK FROM THE CHART.

COMPILATION USE

CHART NO.:11309

AWOIS ITEM NO.:4857

ITEM DESCRIPTION:visible pile

SOURCE:unknown

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

INVEST. DATE:October 31, 1990 DAY NO.:304 TIME:160737

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6606

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'37.0"	097°13'58.7"
OBSERVED:	NAD83	27°48'37.2"	097°13'58.5"

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

METHOD OF ITEM INVESTIGATION: A visual search and a 200 meter fathometer search were performed on day 304 and nothing was found. A 50 meter radius circle search was performed by divers (dive No.8) and nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

do not concur

*A 200 METER SEARCH RADIUS, REQUIRED FOR DISPROVAL. RETAIN AT CHARTED POSITION
DIVE OR BOTTOM DRAG AS SUBM. PILE*

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4858

ITEM DESCRIPTION: pile

SOURCE:unknown

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

INVEST. DATE:October 31, 1990 DAY NO.:304 TIME:182413

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6609

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'35. ^b 7 "	097°14'10.0"
OBSERVED:	NAD83	27°48'35.6"	097°14'10.5"

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

METHOD OF ITEM INVESTIGATION: A visual search and a 200 meter fathometer search were conducted on day 304 and nothing was found. A 50 meter radius circle search was perform by divers (dive No.10) at the awois item position and nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

*A 200 METER SEARCH RADIUS, REQUIRED FOR disPROVAL. Retain At Charted Position as
dive or Bottom DRAG*

do NOT CONCUR

SUBM FILE

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4859

ITEM DESCRIPTION:pile

SOURCE:unknown

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

INVEST. DATE:October 31, 1990 DAY NO.:304 TIME:192543

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6611

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'35. ¹ 0"	097°14'15.0"
OBSERVED:	NAD83	27°48'35.1"	097°14'15.1"

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

METHOD OF ITEM INVESTIGATION: A visual search and a 200 meter fathometer search were performed on day 304 and nothing was found. A 50 meter radius circle search was performed by divers (dive No.11) and nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

do not CONCUR

*A 200 METER RADIUS SEARCH REQUIRED FOR DISPROVAL. RETAIN AT CHARTED POSITION AS
DIVE OR BOTTOM DRAG SUBM. FILE.*

COMPILATION USE

CHART:

APPLIED AS:

CHART NO.:11309

AWOIS ITEM NO.:4860

ITEM DESCRIPTION:submerged pile

SOURCE:CL 138/71 USPS

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

INVEST. DATE:October 31, 1990 DAY NO.:304 TIME:194509

REFERENCE:OPR-K229

VESSEL:0520

DEPTH/HEIGHT:N/A

POSITION:6612

CORRECTORS APPLIED: Predicted Tides ___ Velocity ___ Draft ___
Settlement and Squat ___

GEODETIC POSITION:	DATUM	LATITUDE N	LONGITUDE W
CHARTED:	NAD83	27°48'30. ¹ 0"	097°13'54.0"
OBSERVED:	NAD83	27°48'30.0"	097°13'54.1"

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

METHOD OF ITEM INVESTIGATION: A 200 meter fathometer search was conducted on day 304 and nothing was found. A 50 meter radius circle search was performed by divers (dive No.12) and nothing was found.

CHARTING RECOMMENDATIONS:remove from chart

*A 200 METER RADIUS SEARCH REQUIRED FOR DISPOSAL. RETAIN AS CHARTED.
dive or bottom drag*

do NOT CONCUR ✓

COMPILATION USE

CHART:

APPLIED AS:

H-10326

USED STATIONS: 34, 38, 40, 44, 45, 46, 47, 48, 49, 51, 52, 59 AND 63.

<u>Station #</u>	<u>Station Name</u>	<u>Station #</u>	<u>Station Name</u>
1	ALLYN	53	DONNEL 1933
2	TALLEY	54	LA QUINTA CHAN
3	LIGHT 13		INNER RNG F LT
4	TRACK 1934	55	LA QUINTA CHAN
5	TRAYLOR		INNER RNG R LT
6	SKIFF 2	56	QUINTANA
7	SAM	57	WILCUT
8	CONN	58	SHAM, 1989
9	ARANSAS PASS WATER TANK	59	INDIAN
10	DRAW	60	PORTLAND 2 1973
11	LIGHT 83	61	TURTLE
12	LYDIA	62	COVE
13	BULB	63	C C BAY SPOIL
14	ARANSAS PASS LIGHTHOUSE		BANK LT A 1990
15	BASE		
16	SALT 1934		
17	NEED		
18	TANG		
19	HARBOR ID R RNG LT		
20	HARBOR ID F RNG LT		
21	JUNCTION		
22	CORPUS CHR CHAN AE RNG FT LT		
23	CORPUS CHR CHAN AE RNG R LT		
24	TIDAL 7		
25	25 USE		
26	GUN USE 1948		
27	GUN ECC (DO NOT USE!!!)		
28	PORT ARANSAS CG LT TOWER		
29	PORT ARANSAS TANK		
30	KNOLL 1934		
31	PORT ARANSAS MUSTANG TANK		
32	PIPER 1933		
33	WALBOLT 1968		
34	FLAT 2, 1954		
35	CRANE 1933		
36	DEMIT 1912		
37	CORPUS CHRISTI NAS WATER TANK		
38	CALLO 2 1963		
39	SWATNER		
40	DODDRIDGE, 1955		
41	SPOIL LIMIT 1 USE AZ MK		
42	SPOIL LIMIT 1 USE		
43	CORPUS CHR CHAN CUT BW RNG F		
44	CORPUS CHR HARBOR CUT F RNG LT, 1989		
45	CORPUS CHR HARBOR CUT R RNG LT, 1989		
46	CORPUS CHR CHAN CUT AW RNG R, 1989		
47	CORPUS CHR CHAN CUT AW RNG F, 1989		
48	CORPUS CHR CHAN BE RNG F LT, 1989		
49	LA QUINTA CHAN OUTER RNG R LT, 1989		
50	LA QUINTA CHAN OUTER RNG F LT		
51	CORPUS CHR CHAN BE RNG R LT, 1989		
52	PORT SAT		

CONTROL STATIONS

No	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY
001	F	027:59:23.706	096:58:52.815	0	250	0.0	0.0		11/09/89
002	F	027:58:29.535	097:04:10.149	0	250	0.0	0.0		11/09/89
003	F	027:58:04.172	097:05:17.395	0	250	0.0	0.0		11/09/89
004	F	027:57:04.646	097:06:32.476	0	250	0.0	0.0		11/09/89
005	F	027:57:07.493	097:04:21.062	0	250	0.0	0.0		11/09/89
006	F	027:55:59.444	097:02:35.781	0	250	0.0	0.0		11/09/89
007	F	027:55:28.634	097:07:27.771	0	250	0.0	0.0		11/09/89
008	F	027:54:28.873	097:07:57.049	0	250	0.0	0.0		11/09/89
009	F	027:54:07.962	097:08:37.958	0	250	0.0	0.0		11/09/89
010	F	027:53:27.057	097:06:40.209	0	250	0.0	0.0		11/09/89
011	F	027:54:00.350	097:02:58.382	0	250	0.0	0.0		11/09/89
012	F	027:53:35.460	097:02:36.464	0	250	0.0	0.0		11/09/89
013	F	027:52:53.534	097:02:59.352	0	250	0.0	0.0		11/09/89
014	F	027:51:50.992	097:03:22.978	0	250	0.0	0.0		11/09/89
015	F	027:51:57.536	097:08:03.817	0	250	0.0	0.0		11/09/89
016	F	027:52:13.989	097:09:38.108	0	250	0.0	0.0		11/09/89
017	F	027:50:14.295	097:07:24.517	0	250	0.0	0.0		11/09/89
018	F	027:49:51.528	097:06:18.582	0	250	0.0	0.0		11/09/89
019	F	027:50:53.636	097:03:56.573	0	250	0.0	0.0		11/09/89
020	F	027:50:45.343	097:03:41.174	0	250	0.0	0.0		11/09/89
021	F	027:50:46.290	097:03:17.424	0	250	0.0	0.0		11/09/89
022	F	027:50:41.222	097:03:16.971	0	250	0.0	0.0		11/09/89
023	F	027:50:46.351	097:02:49.217	0	250	0.0	0.0		11/09/89
024	F	027:50:18.364	097:03:05.660	0	250	0.0	0.0		11/09/89
025	F	027:50:05.552	097:02:42.749	0	250	0.0	0.0		11/09/89
026	F	027:50:05.288	097:03:12.941	0	250	0.0	0.0		11/09/89
027	F	027:50:05.288	097:03:12.941	0	250	0.0	0.0		11/09/89
028	F	027:50:18.234	097:03:32.884	0	250	0.0	0.0		11/09/89
029	F	027:49:47.749	097:03:49.421	0	250	0.0	0.0		11/09/89
030	F	027:47:33.070	097:05:14.862	0	250	0.0	0.0		11/09/89
031	F	027:45:06.747	097:07:29.192	0	250	0.0	0.0		11/09/89
032	F	027:43:11.688	097:08:24.994	0	250	0.0	0.0		11/09/89
033	F	027:41:34.291	097:09:46.274	0	250	0.0	0.0		11/09/89
034	F	027:41:41.796	097:11:01.545	9	250	0.0	0.0		11/09/89
035	F	027:39:15.663	097:10:57.432	0	250	0.0	0.0		11/09/89
036	F	027:41:37.285	097:15:02.810	0	250	0.0	0.0		11/09/89
037	F	027:41:38.941	097:16:06.724	0	250	0.0	0.0		11/09/89
038	F	027:42:40.782	097:18:48.182	9	250	0.0	0.0		03/08/90
039	F	027:43:43.325	097:21:08.634	8	250	0.0	0.0	E	11/09/89
040	F	027:44:42.927	097:22:21.160	0	250	0.0	0.0		11/09/89
041	F	027:48:00.368	097:23:27.629	0	250	0.0	0.0		11/09/89
042	F	027:48:18.952	097:23:31.350	0	250	0.0	0.0		11/09/89
043	F	027:48:37.012	097:23:33.859	0	250	0.0	0.0		11/09/89
044	F	027:48:28.020	097:22:03.321	6	250	0.0	0.0		11/09/89
045	F	027:48:26.106	097:21:52.434	8	250	0.0	0.0	D	03/08/90
046	F	027:48:18.064	097:16:05.640	20	250	0.0	0.0	B	03/08/90
047	F	027:48:30.168	097:15:00.922	0	139	0.0	0.0		11/09/89
048	F	027:48:38.784	097:13:40.988	0	139	0.0	0.0		11/09/89
049	F	027:48:20.498	097:13:00.008	17	250	0.0	0.0	D	11/09/89
050	F	027:48:44.552	097:13:11.552	0	139	0.0	0.0		11/09/89
051	F	027:48:39.235	097:11:41.427	21	250	0.0	0.0		03/08/90
052	F	027:49:19.865	097:12:56.768	0	250	0.0	0.0		11/09/89
053	F	027:51:33.800	097:14:28.383	0	250	0.0	0.0		11/09/89
054	F	027:52:31.870	097:15:00.964	0	250	0.0	0.0		11/09/89
055	F	027:53:30.187	097:15:29.076	0	250	0.0	0.0		11/09/89
056	F	027:52:55.315	097:16:57.522	0	250	0.0	0.0		11/09/89
057	F	027:44:18.951	097:08:19.954	0	250	0.0	0.0		11/13/89
058	F	027:45:14.605	097:10:27.938	9	750	0.0	0.0		03/08/90
059	F	027:51:02.658	097:21:17.960	9	250	0.0	0.0	C	11/13/89
060	F	027:53:23.367	097:20:09.429	0	250	0.0	0.0		11/13/89
061	F	027:59:24.830	097:04:00.780	0	250	0.0	0.0		11/14/89
062	F	027:59:13.578	097:04:23.900	0	250	0.0	0.0		11/14/89
063	F	027:44:01.556	097:16:32.909	8	250	0.0	0.0	F	03/08/90
064	F	027:45:35.030	097:22:08.971	0	0	0.0	0.0		03/08/90

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-K229-AHP
AHP-10-1-90
H-10326
1990

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-K229-AHP, 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 M of this report.

V. Dale Ross 
Lt. Cdr. 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: July 9, 1990

MARINE CENTER: Pacific

OPR: K229

HYDROGRAPHIC SHEET: H-10326

LOCALITY: Seven miles east of Corpus Christi Bay, TX

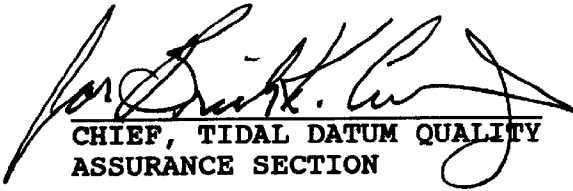
TIME PERIOD: January 30 - May 7, 1990

TIDE STATION USED: 877-5283 Port Ingleside, TX

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.43 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.6 feet

REMARKS: RECOMMENDED ZONING
Apply a +30 min time correction.


CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION



ORIGINAL

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: Apr 9, 1991

MARINE CENTER: Pacific

OPR: K229

HYDROGRAPHIC SHEET: H-10326

LOCALITY: Seven Miles East of Corpus Christi, TX

TIME PERIOD: October 12 - November 1, 1990

TIDE STATIONS USED: 877-5283 Port Ingleside, TX
27°49.2'N 97°12.0'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.38 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.6 feet

REMARKS: RECOMMENDED ZONING
Apply a +30 min time correction.

James R. Hull
CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

GEOGRAPHIC NAMES

H-10326

Name on Survey		A	B	C	D	E	F	G	H	K	
TEXAS, CORPUS CHRISTI BAY SEVEN MILES EAST OF CORPUS CHRISTI		ON CHART NO. 11308 & 11309 ON PREVIOUS SURVEY CON U.S. QUADRANGLE MAPS FROM LOCAL INFORMATION ON LOCAL MAPS P.O. GUIDE OR MAP ATLAS U.S. LIGHT LIST									
CORPUS CHRISTI (title)	X										1
CORPUS CHRISTI BAY	X										2
TEXAS (title)	X										3
											4
											5
											6
											7
											8
											9
											10
											11
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											23
											24
											25

Approved:

Charles E. Harrington
Chief Geographer - N/CG 2x05

JUL 19 1990

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS., ARC, EXCESS		6
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS		10
DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES					
ENVELOPES					
VOLUMES					
CAHIERS	2				
BOXES					

SHORELINE DATA

SHORELINE MAPS (List): TP-01613

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List): 11308 14th Ed., 11309 29th Ed., 11309 30th Ed., 11312 1st Ed.

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			4143
POSITIONS REVISED			1
SOUNDINGS REVISED			185
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	64		64
VERIFICATION OF SOUNDINGS	93		93
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	19		19
COMPARISON WITH PRIOR SURVEYS AND CHARTS		35	35
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		91	91
GEOGRAPHIC NAMES			
OTHER: Digitization			
USE OTHER SIDE OF FORM FOR REMARKS	TOTALS	176	126

Pre-processing Examination by M. Brown	Beginning Date 6/22/90	Ending Date 7/18/90
Verification of Field Data by A. Luceno, G.E. Kay	Time (Hours) 176	Ending Date 7/31/91
Verification Check by J.S. Green	Time (Hours) 10	Ending Date 9/13/91
Evaluation and Analysis by G.E. Kay	Time (Hours) 126	Ending Date 9/13/91
Inspection by D. Hill	Time (Hours) 3	Ending Date 9/17/91

EVALUATION REPORT H-10326

1. INTRODUCTION

Survey H-10326 is a basic hydrographic survey accomplished by the Atlantic Hydrographic Party 2 under the following Project Instructions.

OPR-K229-AHP2, dated September 14, 1989
CHANGE NO. 1, dated December 21, 1989
CHANGE NO. 2, dated January 10, 1990

Survey H-10326 is a two season survey. The field work was started during the winter and spring 1990 and work was completed during the fall of 1990. The reports for both field seasons are bound sequentially.

This survey occurred in Texas and covers a part of Corpus Christi Bay, including some of the Corpus Christi Channel. The survey area extends from latitude 27/45/00N north to latitude 27/49/07N and from longitude 97/13/14W westward to longitude 97/18/00W. The bottom consists of mud, sand and broken shells. Depths range from 1 foot along the shore to 56 feet at the mid section in the controlled channel.

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. Ten casts, to determine the velocity of sound, were made and used in calculating the correctors using the program "Velocity." Six velocity tables from the ten casts were used for the velocity tables used during office processing. 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 the specifications contained in Hydrographic Survey Guideline No. 53, 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 depiction of survey data.

2. CONTROL AND SHORELINE

Sections F and G in the January to May 1990 hydrographer's report, and sections H and I in the October to November 1990 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 and
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. The smooth sheet and accompanying overlays are annotated with NAD 27 adjustment

ticks based on values determined by N/CG121. Geographic positions based on NAD 27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: 1.096 seconds (33.8 meters)
Longitude: 0.965 seconds (26.4 meters)

The year of establishment of control stations shown on the smooth sheet originates with the horizontal control data for this project.

The quality of several positions exceeds limits in terms of error circle radius and residual. A review of the data, however, indicates that none of these fixes are used to position dangers of navigation. The soundings found by these fixes are consistent with surroundings. These fixes are considered acceptable.

Shoreline map TP-01613 (NAD 83), photography dated February 2, 1989, Class III, applies to this survey. Only a small part of this shoreline near latitude 27/48/30N, longitude 97/13/30W, and some channel lights are common between the shoreline map and the smooth sheet.

3. HYDROGRAPHY

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.

4. CONDITION OF SURVEY

With the exception of the following, 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, January 1990 Edition.

The "Correctors Applied" portion of the item investigation forms is confusing and is used inconsistently. The hydrographer should clearly report which correctors have been applied to field reduced soundings.

5. JUNCTIONS

Survey H-10326 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10324	1989	1:10,000	East
H-10325	1989	1:10,000	West
H-10363	1990	1:10,000	North
H-10364	1990	1:5,000	Northeast
H-10365	1990	1:10,000	South

The junction with survey H-10324 has not been formally completed since that survey was previously processed and forwarded for charting. The junction comparison was made using a copy. Soundings are in good agreement.

The junction with survey H-10325 has been completed. Soundings are in good agreement.

Surveys H-10363, H-10364 and H-10365 are meter surveys. Surveys H-10363, H-10364 and H-10365 have been plotted, there is good agreement between soundings, however, the depth curves shown on these survey's delineate different depths and, therefore, do not agree. The junction note is "Adjoins" for these three surveys.

6. COMPARISON WITH PRIOR SURVEYS

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

Survey H-5694 covers the whole area of the present survey. Depths from survey H-10326 are generally one half to one and one half feet deeper south of Corpus Christi Channel. North of the channel sporadic differences up to nine feet deeper and up to seven feet shallower are found with the present survey. The area has changed much in the past 55 years. The dolphins and piles shown on survey H-5694 along the southern limits of Corpus Christi Channel are no longer in existence.

Survey H-10326 is adequate to supersede the prior survey H-5694 within the areas of common coverage.

T-9183 (1948-50) 1:20,000

T-9184 (1948-50) 1:20,000

Prior shoreline maps T-9183 and T-9184 were compared to the present survey. The charted note in the area of Encinal Channel shows that this channel has been discontinued. The present survey confirms that this channel has been abandoned. The current shoreline map TP-01613 shows major changes to the shoreline from that shown on shoreline map T-9184. More information can be found in the January to May 1990 hydrographer's report, section K.

Survey H-10326 is adequate to supersede prior shoreline maps T-9183 and T-9184 as a source for charted hydrography.

There are no AWOIS items originating from the prior survey H-5694 and prior shoreline maps T-9183 and T-9184 that apply to the present survey.

7. COMPARISON WITH CHART

<u>Chart</u>	<u>Edition</u>	<u>Date</u>	<u>Scale</u>	<u>Datum</u>
11312	1st	June 23, 1990	1:20,000	NAD 83
11308	14th	July 9, 1988	1:40,000	NAD 27
11309	29th	November 15, 1986	1:40,000	NAD 27
11309	30th	December 2, 1989	1:40,000	NAD 83

Chart 11312, 1st Edition, is marked for "Official Use Only" and contains depths that are in meters. The chart covers a small area of the present survey, east of longitude 97/14/00W.

The 29th Edition and 30th Edition of chart 11309, except being on different datums, contain identical soundings. However, some minor revisions are noted, such as added notations for new aids to navigation and an obstruction.

a. Hydrography

Charted hydrography originates with the prior survey and prior shoreline maps discussed in section 6 of this report and miscellaneous sources.

There is a charted wreck shown on chart 11312 at latitude 27/46/25N, longitude 97/13/20W, that was neither assigned for investigation nor investigated on the present survey. Depths of 13 to 14 feet are shown in this area, with no indication of the feature on the echograms. The charted PA wreck should be retained as charted.

Chart 11309, 30th Edition, shows a PA obstruction at latitude 25/48/19N, longitude 97/16/26W. This feature was not specifically investigated by the hydrographer. The surveyed area exhibits depths of 14 to 15 feet, with no indication of an obstruction on the echograms. This obstruction should remain as charted.

There is a "Discontinued Spoil Area" centered at latitude, 27/46/15N, longitude 97/15/45W. The area was developed at 50-meter line spacing. This survey shows evenly spaced and equal depths over the entire area.

Several charted features were not found or investigated during this survey, or not investigated adequately for disproval. These features, listed below, should be retained at their presently charted positions and depicted as shown below.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>	<u>AWOIS No.</u>
Subm Wk	27/47/31.1	97/13/31.0	4816
Subm Wk PA	27/48/01.1	97/15/31.0	4817
Subm Wk PA	27/48/55.1	97/17/19.0	4846
Subm Pile PA	27/48/43.6	97/16/34.0	4851
Subm Pile	27/48/43.6	97/14/22.0	4852
Subm Pile	28/48/37.1	97/13/58.5	4857
Subm Pile	27/48/35.6	97/14/10.0	4858
Subm Pile	27/48/35.1	97/14/15.0	4859
Subm Pile	27/48/30.1	97/13/54.0	4860
Obstr PA	27/48/19.0	97/16/26.0	<u>none</u>
<u>Subm WK PA</u>	<u>27/47/25.0</u>	<u>97/13/20.0</u>	<u>none</u>

*AWOIS # 8206 (55V 1/22/92)
Deleted thru
LNM 18/89
55V (1/24/92)*

Except as noted above, survey H-10326 is adequate to supersede charted hydrography within the common area.

b. AWOIS

There are fifteen AWOIS items assigned for investigation. Of these, nine items were not adequately investigated.

All fifteen AWOIS items originate with miscellaneous sources. The discussion and disposition of these items follow the October to November hydrographer's report.

c. Controlling Depths

The channel depths within the Corpus Christi Channel equal or exceed the tabulated depths shown on the chart.

d. Aids to Navigation

There are five fixed lights, three lighted range lights and two lighted buoys within the survey area. Except for lighted buoy "WR52", these aids are charted and listed in Volume IV of the 1990 Gulf of Mexico Light List. In accord with headquarters direction five of the fixed aids were not located to third order specifications, but were adequately located using hydrographic methods. Positions for these aids are shown in the January to May 1990 hydrographer's report, section N. The aids adequately serve their intended purposes.

There are no landmarks within the limits of this survey.

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


No reports of dangers to navigation were reported by the hydrographer to the USCG, DMAHTC and N/CG222. No dangers to navigation were discovered during office processing.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10326 adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is an adequate hydrographic survey. Additional field work is recommended to investigate the features mentioned in section 7.a of this report.


Gordon E. Kay
Cartographer

APPROVAL SHEET
H-10326

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.

Dennis J. Hill Date: 9-19-91
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.

Douglas G. Hennick Date: 20 Sep 1991
Commander Douglas G. Hennick, NOAA
Chief, Pacific Hydrographic Section

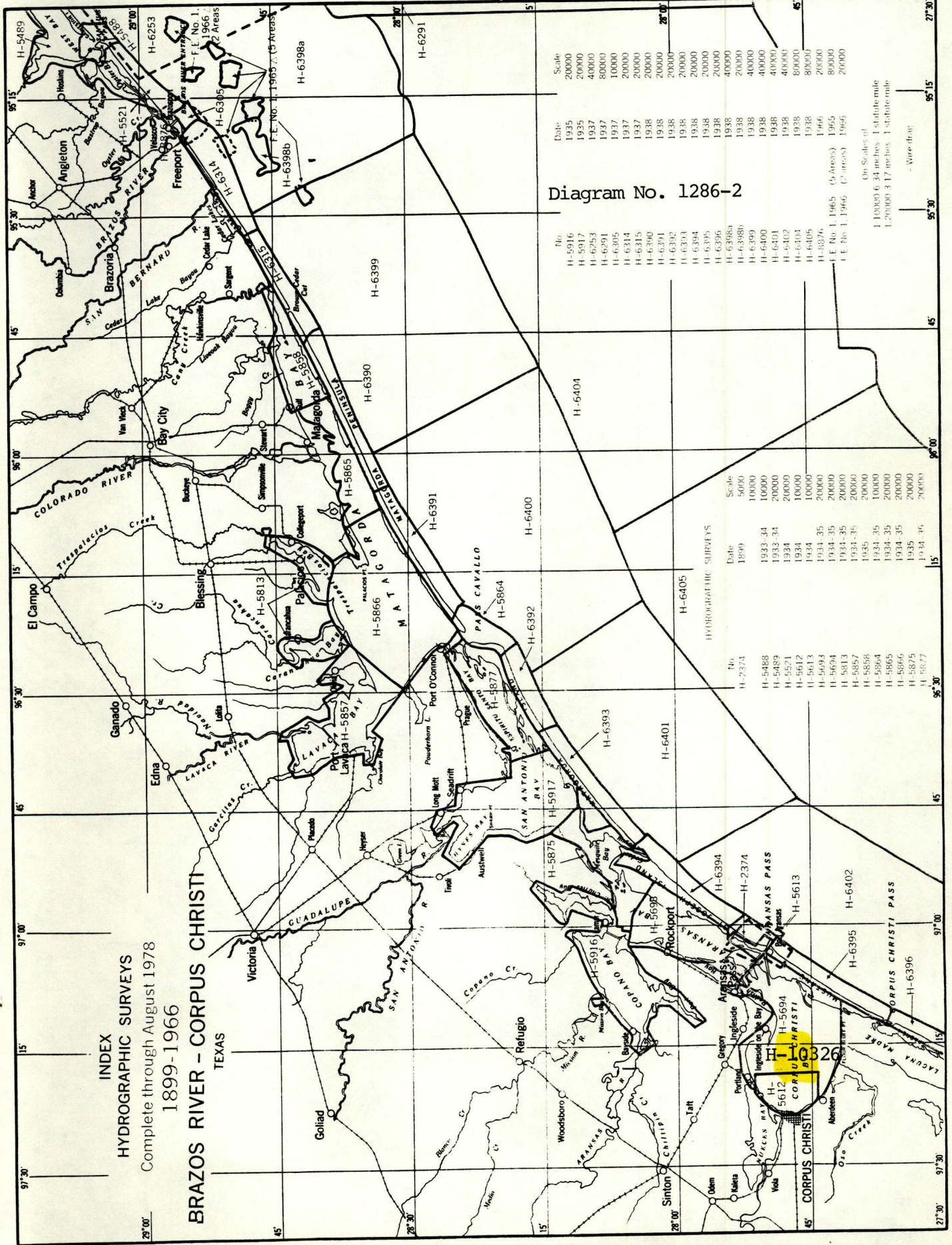
Final Approval

Approved:

J. Austin Yeager Date: 10/25/91
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. 90 C



MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10326

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
11308	3-10-92	Don Black	Full Part Before After Marine Center Approval Signed Via Drawing No. 17
11300	6-10-92	K.R. Foster	Full Part Before After Marine Center Approval Signed Via Drawing No. 45 Exam - n/c - no coverage.
11309	6-24-92	L. A. Kenan	Full Part Before After Marine Center Approval Signed Via Drawing No. 51 APPD then H-DWG / CHT 11308
11312	11-12-96	Travis Neumann	Full Part Before After Marine Center Approval Signed Via Drawing No. 2
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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