10325

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-10-17-89

Registery No. ... H-10325

LOCALITY

State ... Texas

General Locality ... Corpus Christi Bay

Sublocality ... Two Miles East of Alta

... Vista Reef

1989-90

CHIEF OF PARTY
LCDR V.D. Ross

LIBRARY & ARCHIVES

DATE ... May 14, 1991

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

10325

EC&G
Chts

11309
11311
11307 NC

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

H-10325

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-10-17-89

State Texas

General locality Corpus Christi Bay

Locality Two Miles East of Alta Vista Reef

Scale 1:10000 Date of survey 01 Dec. 1989 - 04 Apr 1990

Instructions dated September 14, 1989 Project No. October 15, 1990 OPR-K229-AHP2

Vessel Atlantic Hydrographic Party-2

Chief of party LCDR Vincent Dale Ross

Surveyed by Ms Maria Mangual-Ortiz

Soundings taken by echo sounder, hand lead, pole Raytheon DE-719-C/with Odom Digitrace

Graphic record scaled by MMO, JB, CEP, JJC

Graphic record checked by MMO

Evaluation by: R.N. Mihailov Automated plot by PHS Xynetics Plotter

~~Protracted by~~

Verification by R.N. Mihailov

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

REMARKS: Time meridian used was UTC

Least depths were with lead line

The sheet letter is designated as "T"

Revisions and marginal notes in black were generated during office processing.

SURF/AWOIS ✓ 6/27/91 SS ✓

SC 1-30-97

K.W.W. 6-25-91

U.S. GOVERNMENT PRINTING OFFICE: 1986 - 652-007/41215

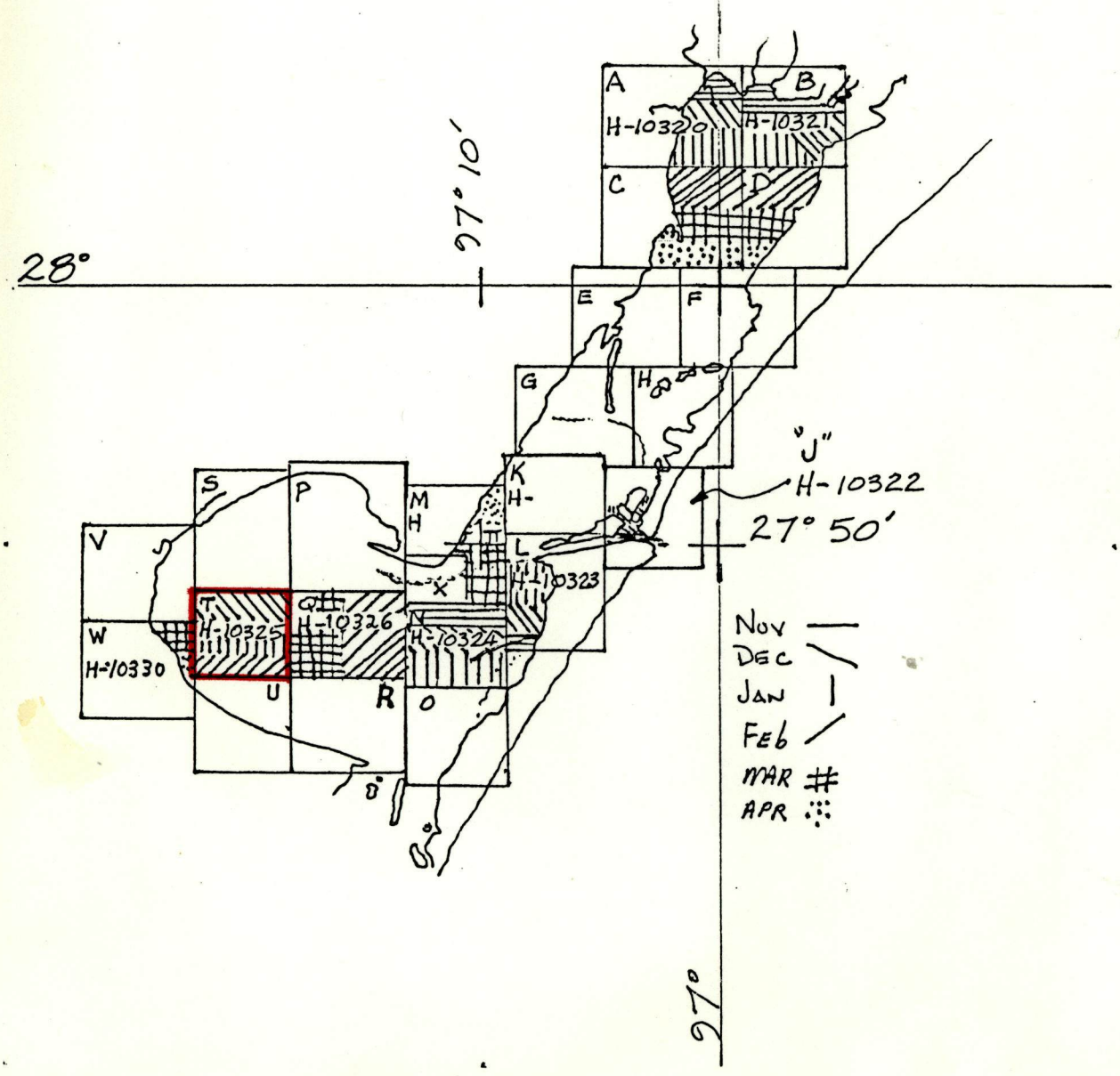
Progress Sketch

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
SQ 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-10325
(Field No. AHP-10-17-89)
Scale:1:10,000
1989-90
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 "T" 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-10325 is the west center portion of Corpus Christi Bay, Texas, two miles east of Alta Vista Reef bounded by the following limits:

North - 27°49'07"N
South - 27°45'00"N
East - 097°17'53"W
West - 097°21'18"W

This survey was conducted from December 1, 1989 (day 335) to April 4, 1990 (day 094).

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

Depths in this survey range from five to fifty-~~three~~ five feet.

C. SOUNDING VESSEL

Vessel 770 (EDP No. 770), a 21-foot MonArk, was the only sounding vessel used during this survey. There were no unusual vessel configurations nor problems encountered.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following Raytheon Fathometers (Model DE-719-C), with Odom Hydrographic Systems, Inc. Digitraces, were used on vessel 770 during the survey: ✓

VESSEL	S/N	Days
770	7881-ID406	335 - 339/89
	5881-42B	341 - 347/89
	7881-ID406	348 - 058/90
	5881-42B	065 - 094/90

Fathometer S/N 7881-ID406 was replaced on day 341 because soundings were not appearing on the listings of days 335-339. The same problem occurred with Fathometer S/N 5881-42B on day 341. After further consultation with Lieutenant Commander Nicholas Perugini, Hydrographic Surveys Branch, Rockville, MD, we realized that the configuration set-up on the Texas Microsystems was incorrect. Both the DE-719-C fathometer and the DSF-6000 echo-sounder were chosen as "installed" causing the Texas Microsystems to record a "0" in lieu of the correct depth. S/N 7881-ID406 was reinstalled after the Texas Microsystems problem was corrected.

All effected soundings have been edited with the corrected digitized depths for days 335-339-341

No major problems were encountered with the fathometers used on vessel 770.

Fathometer S/N 7881-ID406 developed a minor problem with the grounding bar where a small hole wore through on day 023. A new grounding bar was installed on day 026. S/N 7881-ID406 was replaced on day 065 due to a problem with the sensitivity control. The sensitivity could not be adjusted in waters deeper than 50 feet. ✓ non hydro day 65

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 0.2 foot, except in depths of 40 to 55 feet where the fathometer S/N 7881-ID406 differences were slightly higher, 0.6 foot. This higher difference only affected three 3-mile long lines of hydrography run on days 352 (1989), 005, 022, and 036 (1990). Any necessary corrections were done during scanning of the fathograms. Any required adjustments of the tide and draft, speed of sound, sensitivity, and chart speed were made and noted on the fathogram. Any departures from the initial zero were corrected during scanning of the fathogram. ✓

The Raytheon DE-719-C Fathometers were adjusted for an assumed speed of sound through water of 4800 feet/second. Corrections for the speed of sound through water were computed from data obtained with an Odom Hydrographic System, Inc. Digibar electronic speed of sound probe (S/N's 154, 155, and 169), and an Applied Microsystems Laboratory, Inc. (AML) speed of sound profiler (S/N 03003). NOS Program "Velocity" was used for the speed of sound correction computations. Copies of velocity casts forms can be found in the separates of this report.*

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

Table Applied	Type	Day	Depth	Location NAD 1983	Days
1	Digibar(154)	335	14 meters	27°48'33"N 097°19'30"W	335-349
2	AML(03003)	354	14.6 meters	27°48'40"N 097°20'45"W	352-355
3	Digibar(169)	009	14 meters	27°48'40"N 097°20'45"W	005-011
4	AML(03003)	017	13.1 meters	27°48'39"N 097°20'45"W	017
5	Digibar(155)	022	16 meters	27°48'40"N 097°20'45"W	022-026
6	Digibar(155)	029	15 meters	27°49'00"N 097°17'00"W	029-030
7	Digibar(155)	037	15 meters	27°48'50"N 097°16'00"W	036-038
8	Digibar(155)	043	15 meters	27°48'00"N 097°17'00"W	043
10	Digibar(155)	058	15 meters	27°48'36"N 097°16'46"W	057-058
11	AML(03003)	075	14 meters	27°48'35"N 097°18'00"W	075
12	AML(03003)	085	11.6 meters	27°48'40"N 097°20'00"W	086
13	AML(03003)	094	13 meters	27°48'30"N 097°19'20"W	092-094

* Filed with hydrographic data

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.*

Weather permitting, lead line comparisons were conducted on each day of hydrography to determine an instrument corrector and check the static draft. No instrument corrections were applied to the soundings on the final field sheets. Lead line comparison forms can be found in the separates of this report.

Instrument correction 0 for this survey

Settlement and squat measurements for vessel 770 were performed on November 29, 1989 (DN 333), at Redfish Bay Terminal, using the NOS prescribed level rod method (Zeiss Level S/N 08765). Settlement and squat correctors and the static draft corrector of 1.1 feet were applied on-line through the offset table. Copies of the field data, the graph of the settlement and squat correctors vs. RPM, and the offset table are included in the separates.*

A problem was encountered with the speed of the boat monitored by the Texas Microsystems on vessel 770. The listings show unrealistic speeds made good, up to 36 m/sec, in many sections of this survey. The corrector applied through the offset table due to the wrong speed creates a maximum error of 0.2 foot shoaler. These data are considered acceptable. This problem can be corrected by creating a "dummy" offset table with the corrector for 2500 rpm as the maximum corrector listed for 2500 rpm or higher, and apply this "dummy" table through the draft correction table while plotting. This was not done in the field since the final field sheet had been plotted before this trick was discovered.

smooth sheet soundings were corrected using TRA determined during office processing

The final field sheets and rough sheets were plotted using predicted tides using the reference station and correctors designated in the project instructions. Approved tides were requested from the Sea and Lake Levels Branch, N/OMA1212, in a letter dated May 5, 1990. Copies of the field tide note, request for approved tides, and HDAPS tide tables are included with the separates.*

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.

* Filed with the hydrographic data

E. HYDROGRAPHIC SHEETS

All field sheets were produced by AHP-2 with the HDAPS on the Bruning ZETA 824 plotter at a scale of 1:10,000. The following sheets have been submitted:

Sheet	Quantity
Boat Sheet	1
Edited Trackline	1
Rough Sounding Sheet	1
Rough Sounding Overlay Sheet	1
Final Field Sheet	1
Final Field Sheet Overlay	1

The final field sheet contains main scheme hydrography, crosslines, and splits. The final field sheet overlay shows detached positions, additional development lines, bottom samples, and channel lines. The center channel line was also used as a main scheme line and is plotted on the final field sheet. All soundings on the final field sheet are corrected for draft, predicted tides, settlement and squat, and the speed of sound through water.

Survey sheets, fathograms, listings, descriptive report, separates, detached positions record book* micro floppy disks and 32-track tape have been submitted to the Pacific Hydrographic Section, N/CG245, Seattle, Washington.

F. CONTROL STATIONS

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

Two monumented control stations (stations 038 and 059), and four fixed aids to navigation (stations 044, 045, 046, and 063) were used to control this survey. The station list is included in the separates of this report. Attached to 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. (Control File)

* Filed with the hydrographic data

light located off sheet limits

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 conversation with Chief Hernandez, U. S. Coast Guard, Corpus Christi Aids to Navigation Team, confirmed the name of this light to be as listed on 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 was observed.

Chief Warrant Officer Eduardo Anastacio, of the U. S. Coast Guard, Corpus Christi Aids to Navigation Team, informed me of their plan to remove "Corpus Christi Bay Spoil Bank Light", since they feel it is no longer needed. He will wait until we can provide him with a complete depth coverage of the discontinued spoil area covered by Sheet H-10326 (1990) and Sheet "R" not yet started.

Sheet R = H-10365

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 field party personnel. Copy of the NOAA Form 76-40 submitted to N/CG245, is included in 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.

G. HYDROGRAPHIC POSITION CONTROL

1. Survey Methods

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. 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:

VESSEL	Equipment	S/N
0770	RPU	E0257
	R/T	E2957
	R/S	E2926
	R/S	F3217
	R/S	F3244
	R/S	C2091
	R/S	C2059

The R/S serial number C2091 was set-up at station 045 with very little success. Residuals where very high most of the time the unit was interrogated. The unit was moved to station 044 but still did not function properly. It would communicate for a very short time and then it would be off the air the rest of the day. Several checks were performed with no success and the unit was shipped for repairs. Only positions 0010-0023, 0326-0353, and 0357-0384 were run with this remote. The residuals were below the 5-meter limit and the data are considered acceptable. Due to this problem and the fact that there was not another unit available, most of the survey was run using three stations.

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" during processing. Positions were "smoothed" by dead reckoning between two accurate positions. If more than seven consecutive positions 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 and the angle of intersection was outside the 30 to 150 degree margin, 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 without smoothing on the final field sheet. Point computation was used if possible when high residuals occurred at the first or last position of a line.

Another occasional problem encountered was when a good residual and error circle radius appeared on the "raw" listing, but the easting or northing of the position was off by thousands of meters. These positions were rejected or smoothed following the standards mentioned above. This problem is attributed to the excessive amount of interference encountered from the large steel gas gathering stations found in the Corpus Christi Bay area.

2. Critical System Checks

Critical system checks were performed by visually observing the error circle radii and residual values on the Comflex screen in the survey vessels. The "DUMP ALPHA" and "DUMP GRAPHICS" functions are not available with COMFLEX so no hard copy 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. These system checks occurred on days 335, 341/1989, 011, and 074/1990. 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.

3. Mini-Ranger Falcon Calibrations

Baseline calibrations were performed as specified in the field procedures manual. The baseline values were incorporated into the 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.*

Two "C-O" tables were created for vessel 770 because the HDAPS has a problem allowing you to put two years in one "C-O" table. It will not let you enter a day number beyond 366 and will not let you enter a lower day number after a larger number.

Another problem with the "C-O" tables was found when data for day 005 and part of day 008 were run with code 5 on S/N C-2059 and changed to code 8 after 190000 on day 008. The computer automatically changed code 5 to code 8 for all of day 008 and the previous day 005. It assumed that I was correcting a mistake since the corrector being applied and the station number had not changed.

no effect on data, Correctors are the same

A closing baseline calibration was not performed since the survey was conducted in less than a six month period. Critical system checks and residuals within limitations confirm the opening baseline calibration.

H. SHORELINE

There is no shoreline within this survey's limits.

* Filed with the hydrographic data

I. CROSSLINES

A total of 46 linear nautical miles of crosslines were run on H-10325 which equals 17% of the linear nautical miles of hydrography. Crossline soundings agree to within one foot of the main scheme soundings.

J. JUNCTIONS See Evaluation Report - Section 5

This sheet junctions with H-10326, sheet "Q" (1990) to the east, and H-10330, sheet "W" (1990) to the southwest. Junction sheet "V" to the northwest, sheet "S" to the north, and sheet "U" to the south have not been started at this time. Sheet "V" = H-10362 Sheet "U" = H-10361

Junction soundings between the present survey and the junction surveys agree well. Depths agree to within 2 feet.

K. COMPARISON WITH PRIOR SURVEYS

This survey was compared with the following prior surveys:

H-5612 (1934)	1:10,000	
H-5694 (1934-35)	1:20,000	(1:10,000 enlargement)
T-9183 (1951)	1:20,000	

Generally, depths within the survey area have remained within one-two feet since 1934. There appears to be no areas of consistant shoaling nor deepening which are attributable to natural causes. However, there are two specific areas which should be noted concerning larger disagreements in depths between the prior and present surveys. The first area pertains to three active spoil sites, where the present survey revealed a few scattered soundings 3-4 feet shoaler than the older surveys. These spoil sites are located at latitude 27°48'18"N, longitude 097°21'22"W along the south side of the channel to latitude 27°48'18"N, longitude 097°20'21"W; latitude 27°48'18"N, longitude 097°20'13"W along the south side of the channel to latitude 27°48'18"N, longitude 097°19'01"W; and latitude 27°48'56"N, longitude 097°19'01"W along the north side of the channel to south of Ingleside Point. All positions are based on North American Datum 1983. prior survey H-5612

The second area is the Corpus Christi Channel where soundings in and along the channel are deeper since the last prior survey due to increased dredging.

There is no shoreline common to the present and prior topographic sheet. Numerous piles shown on T-9183 (1951) along Corpus Christi Channel have been removed and are not charted. Telephone conversation with Mr. Frank Garcia, Corps of Engineers, Corpus Christi, Texas, revealed that these piles were dredging ranges which have been removed because newer positioning systems are now in use. There is no other information warranting discussion.

Piles are not shown on the smooth sheet

Considering the above statements, the present survey is adequate to supersede the prior surveys within the common areas.

Concur

See Eval report Section 6

L. COMPARISON WITH THE CHART

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

Chart No.	Edition	Edition Date
11309	30th	December 2, 1989
11309	29th	November 15, 1986
11311	15th	September 13, 1986

There are twelve AWOIS items within the limits of the present survey. Findings and descriptions were as follows:

AWOIS item 4785 was described as a "platform in ruins" at latitude 27°48'42.03"N, longitude 097°20'39.47"W, on Chart Letter 1416/80 by the U. S. Power Squadron. A 30-meter circle search diver investigation was performed at this location and nothing was found. Another 30-meter circle search was performed at a position obtained from a local shrimper, Mr. Frank Cortez, latitude 27°48'42"N, longitude 097°20'38"W. A submerged wood pile was found at latitude 27°48'42.2"N, longitude 097°20'38.1"W, with a lead line least depth of 7.0 feet, uncorrected, in waters of 15 feet. The 30-meter circle search was continued from the position of the submerged pile and no other item was found. See * Dive Report No. 1 of day 075, position 2587, included with the separates of this report, for additional information. The hydrographer recommends that the platform in ruins symbol be changed to a submerged pile symbol on Chart 11309 and Chart 11311 at the surveyed position.

(6 ft corrected

Do not concur. Delete charted platform (ruins and chart the 6-foot obstruction (subm pile) as found on the survey.

* Filed with hydrographic data

AWOIS item 4786 was described as a "sign (pipeline crossing)" at latitude 27°48'40.03"N, longitude 097°20'53.47"W on Chart Letter 138/71 by the U. S. Power Squadron. Two 30-meter circle search diver investigations were performed at this location and nothing was found. See Dive Report No. 1 of day 037, position 2481 and Dive Report No. 2 of day 058, position 2584. However, a sign and a 2-inch pvc pipe was found during a 30-meter circle search diver investigation of the remains of the charted "Corpus Christi Channel Pipeline Crossing Light A" at latitude 27°48'43.5"N, longitude 097°20'55.5"W, (privately maintained). This position was obtained from the Light List, Volume IV, 1990, Light List No. 27355. See Dive Report No. 1 of * day 058, position 2583, included with the separates of this report, for additional information. The dolphin of the charted Light "A" was not found. Telephone conversation with Mr. Mike Downs, Anron Gas Pipeline Company, revealed that the Light "A" piling was pulled out in 1988 by the Raymond Dugat Company. The hydrographer recommends that Light "A" and the sign symbol be removed from Chart 11309 and Chart 11311. The remains of this sign are not considered a danger to navigation since the 2-inch pvc pipe is laying down on the bottom and the sign is buried in the ground extending off the bottom 1 foot, with a lead line least depth of 15 feet, uncorrected, in depths of 12-16 feet made out of a thin sheet metal.

- concur See EVAL report Section 7.d. and additional work attached to this report

AWOIS item 4787 was described as a "sign (pipeline crossing)" at latitude 27°48'32.53"N, longitude 097°20'52.97"W, on Chart Letter 138/71 by the U. S. Power Squadron. A 30-meter circle search diver investigation was performed at this location and nothing was found. See Dive Report No. 3 of day 058, * position 2585. However, a 2-inch pvc pipe was found during a 30-meter circle search diver investigation of the remains of the charted "Corpus Christi Channel Pipeline Crossing Light B" at latitude 27°48'31.0"N, longitude 097°20'54.5"W, (privately maintained). The position was obtained from the Light List, Volume IV, 1990, Light List No. 27360. See Dive Report No. 2 of day 057, position 2582, included with the separates of this * report, for additional information. The dolphin of the charted Light "B" was not found. Telephone conversation with Mr. Mike Downs, Anron Gas Pipeline Company, revealed that the Light "B" piling was pulled out in 1988 by the Raymond Dugat Company. The hydrographer recommeds that Light "B" and the sign symbol be removed from Chart 11309 and Chart 11311. The remains of this sign are not considered a danger to navigation since the 2-inch pvc pipe is laying down on the bottom with a lead line least depth of 12 feet, uncorrected, in depths of 12-13 feet.

- concur See EVAL report Section 7d and additional work attached to this report

* Filed with hydrographic data

"shl rep 1978"

AWOIS item 4837 was described as a "shoaling" at latitude 27°48'13.03"N, longitude 097°20'32.97"W. in the Local Notice to Mariners dated May 31, 1978 by the 8th Coast Guard District. This area was developed by running 50-meter splits of the main scheme and 50-meter lines perpendicular to the main scheme. Shoaling was not found at the position reported. A shoal area was located approximately 200 meters east of the reported position in the vicinity of latitude 27°48'14"N, longitude 097°20'26"W which is the west limit of an active spoil area. The hydrographer recommends the charted shoaling reported (1978) warning be removed from Chart 11309. - concur - chart area as found on this survey.

11 foot depths presently surveyed in this area

AWOIS item 4838 was described as a "wreck missing" on Chart Letter 1111/82 by the U. S. Power Squadron which is charted as a "submerged dangerous wreck" at latitude 27°48'34.03"N, longitude 097°19'34.97"W. Wreck was a pleasure boat with flying bridge, approximately 42 feet long. One 100-meter and one 30-meter circle search diver investigations were performed at latitude 27°48'33.0"N, longitude 097°19'33.8"W, and latitude 27°48'34.2"N, longitude 097°19'35.0"W, respectively, and nothing was found. See Dive Report No. 4 of day 037, position 2484, and Dive Report No. 4 of day 075, position 2591, included with the separates of this report, for additional information.* The hydrographer recommends the submerged dangerous wreck symbol be removed from Chart 11309. Do not concur. AWOIS required 200 meter investigation for disproval. Retain as charted

AWOIS item 4839 was described as a "dangerous submerged wreck with mast position approximate" at latitude 27°48'43.03"N, longitude 097°20'30.97"W, in the Local Notice to Mariners 34/86 dated August 27, 1986 by the 8th Coast Guard District. Wreck was a fishing vessel "Sir John" sunk in 12 feet of water. Vessels outriggers were visible. One 100-meter and one 30-meter circle search diver investigations were performed at this location and nothing was found. See Dive Report No. 2 of day 037, position 2482 and Dive Report No. 2b of day 075, position 2589, included with the separates of this report for additional information. An additional 30-meter circle search diver investigation was performed at latitude 027°48'43.3"N, longitude 097°20'21.3"W, and nothing was found. This position was acquired from a local shrimper, Mr. Frank Cortez. See Dive Report No. 2a of day 075 included with the separates of this report for additional information. No position number was taken at this additional dive. The hydrographer recommeds this dangerous submerged wreck with mast ED ~~PA~~ be removed from Chart 11309. See additional work for this survey attached to this report.

* Filed with hydrographic data

AWOIS item 4840 was described as a "visible pile near Light "68", platform missing", on Chart Letter 1111/82 by the U. S. Power Squadron which is charted as "ruins" at latitude 27°48'43.03"N, longitude 097°19'22.97"W. Submerged wooden beams which appear to be platform ruins were found at latitude 27°48'42.2"N, longitude 097°19'22.1"W (west end), position 2486, and latitude 27°48'42.2"N, longitude 097°19'21.6"W (east end), position 2487, by a diver investigation. A lead line least depth of 5.7 feet, uncorrected, in depths of 13-42 feet was observed on the west end of these ruins. See Dive Report No. 5 of day 037 (positions 2486 and 2487) included with the separates of this report, for additional information.* The hydrographer recommends a ~~submerged ruins~~ sounding on obstruction symbol be charted on Chart 11309 at the surveyed position.- concur 6 obstn shown on smooth sheet (5.8 feet corrected)

AWOIS item 4841 was described as a "visible pile position approximate" at latitude 27°48'44.03"N, longitude 097°19'18.97"W, on Chart Letter 180/86 by the NOAA Ship Whiting. A 30-meter circle search diver investigation was performed at this location and nothing was found. See Dive Report No. 3 of day 075, position 2590, included with the separates of this report, for additional information.*The hydrographer recommends the pile PA symbol be removed from Chart 11309. See Eval Report section 7.b

AWOIS items 4842 and 4843 were described as "sign not visible" on Chart Letter 180/86 by the NOAA Ship Whiting which are charted as a "submerged pile position approximate" at latitude 27°48'46.53"N, longitude 097°18'11.47"W and latitude 27°48'28.53"N, longitude 097°18'12.47"W, respectively. A 100-meter and a 30-meter circle search diver investigation, respectively, was performed at these locations and nothing was found. See Dive Report No. 2 of day 038 (position 2490) and Dive Report No. 4 of day 058 (position 2586), respectively. These reports are included with the separates of this report.*The hydrographer recommeds the submerged pile symbols be removed from Chart 11309. concur on AWOIS item 4842. AWOIS item 4843 not adequately investigated (only 30 meter dive search, 100 meter required). Retain subm pile PA as charted

AWOIS item 4844 was described as "50 concrete piles, 20-45 feet long were lost overboard" on Chart Letter 134/62 by the Corps of Engineers which is charted as "obstrs rep" at latitude 27°48'35.03"N, longitude 097°18'11.47"W.

The hydrographer suspects that the 5 15-inch diameter pipes found during a dive investigation of a suspicious fathogram trace at latitude 27°48'40.3"N, longitude 097°20'21.8"W, and the bunch of concrete pipes found during a dive investigation of a position obtained from a local shrimper, Mr. Frank Cortez of a suspected submerged barge at latitude 27°48'40.1"N, longitude 097°20'21.4"W, are part of these 50 concrete piles lost overboard. See Dive Report No. 3 of day 037 (position 2483) and

14 Obstr (concrete pipes) shown on smooth sheet

* Filed with hydrographic data.

Dive Report No. 5 of day 075 (position 2592), respectively, included with the separates of this report, for additional information on these findings. These two dives are explained in more detail in this same section under discrepancies.

Due to weather conditions and time restrictions, a dive investigation was not performed at the reported location of AWOIS item 4844. This dive will be made in the near future. See additional work for this survey attached to this report.

AWOIS item 4845 was described as "platform in ruins consisting of four piles with no deck" on Chart Letter 262/83 by the U. S. Power Squadron which is charted as "ruins" at latitude 27°48'43.03"N, longitude 097°18'04.97"W. These platform ruins were located by diver investigation at latitude 27°48'42.7"N, longitude 097°18'03.3"W. A lead line least depth of 11.0 feet, uncorrected, in depths of 12-14 feet was observed. The hydrographer recommends a ~~submerged ruins~~ sounding on obstruction symbol be charted on Chart 11309 at the surveyed position. See Dive Report No. 1 of day 038 (position 2488), included with the separates of this report, for a description of the findings.* pos 2488 (11.4 feet corrected) - concur - delete charted platform in ruins. 11 Obstr shown on smooth sheet

In general, the soundings from this survey compared to within one foot of the charted depths. See Section K for a discussion of areas with larger disagreements. ✓

The following discrepancies were noted:

The present survey information collected along the inside and outside quarters and along the center line of Corpus Christi Channel was compared with the controlling depths as provided by the Corps of Engineers. Survey soundings range from 40-53 feet within the maintained channel. There are indications that within the channel some shoaling has occurred to less than the 45-foot project depth. Mr. Noe Cadena of the Corps of Engineers informed me that there is a dredging project scheduled for the near future. Soundings all deeper than charted controlling depths

(shown as oil platform (lighted)

Five gas well heads, one gathering station with its mooring piles and one burn-off pipe were located within the present survey area. A general warning in the vicinity of these well heads should be charted. Suggested positions are at approximately latitude 27°47'00"N, longitude 097°20'00"W, and latitude 27°46'00"N, longitude 097°18'30"W. Pictures and additional information on these structures can be found in the detached positions record book submitted with this survey.* Concur

A third order, class I position was requested by U. S. Coast Guard on the big gathering station mentioned in the above paragraph "Texaco Oil Big Platform Pipe" and another small gas well head "Texaco Small Platform Light" located in the survey area of Sheet "V" not jet started. A copy of the NOAA Form 76-40 submitted to N/CG245 is ~~included in the separates of this report.~~ Sheet "V" = H-10362 attached to this report

* Filed with hydrographic data

Compile not 6
3' sounding
not disproved
SJV
6-22-91

A 3-foot sounding of unknown origin charted at latitude 27°48'17"N, longitude 097°20'28"W was not found. This area was developed by running 50-meter splits of the main scheme. The present survey depth is 7 to 11 feet. This 3-foot sounding should be replaced by the present survey depths. Do not concur. The 3 foot sounding was not disproved. Retain as charted.

There were seven newly found unreported dangers to navigation within the present survey area and are listed below. A report of dangers to navigation dated February 16, 1990 with two follow-up amendments dated March 2, 1990, were submitted to the Commander, U. S. Coast Guard District, New Orleans, Louisiana, with copy to Commanding Officer, USCG Detachment, Corpus Christi, Texas, and other government offices as described in the Hydrographic Survey Guideline No. 66. Copies are included with the separates of this report.

Description	Latitude	Longitude	Position Numbers
1-inch pipe	27°46'43.9"N	097°19'51.6"W	2163 pipe pulled out by Coast Guard on 4-3-90 see note below
6-foot shoal	27°47'58.4"N 27° 47' 58.44"N	097°18'47.6"W 097° 18' 46.84"W	1406+2-~~1406+3~~ 1406+3
7-foot shoal	27°47'28.9"N	097°20'27.2"W	1582+6
7-foot shoal	27°48'01.6"N	097°20'26.1"W	1387+2-1387+3 & 2534+2 coordinates unrevised
8-foot shoal	27°46'40.3"N	097°20'06.7"W	2128+4-2128+5
8-foot shoal	27°47'32.4"N	097°20'34.5"W	1573+3-1573+4
8-foot shoal	27°46'51.7"N	097°20'11.7"W	2353+4-2353+5

The 1-inch pipe listed above was pulled out by the U. S. Coast Guard Aids to Navigation Team, Corpus Christi, Texas, on April 3, 1990, and is no longer a danger to navigation. See copy of the "Amendment to Report of Dangers to Navigation dated February 16, 1990" dated March 2, 1990, included with the separates of this report for additional information on the removal operations.

All shoal areas within the limits of the survey were developed by running 50-meter splits of the main scheme, except for shoals in the active spoil area and the 2-3 feet shoalings at the position of some of the gas well heads. The present soundings are adequate to supersede charted soundings within the common areas. Concur, except for the 3 foot sounding noted above.

A dive investigation was performed on one of the newly developed shoals, listed above at latitude ~~27°48'00.6"N~~, 27° 47' 28. "N longitude 097°20'~~25.1~~ 27.35"W, to better define its origin. The shoal was found to be composed of oyster shell aggregate and calcified tube worm casings with bryozoan. See Dive Report No. 1 of day 057 (position 2581), included with the separates of this report, for additional information.* Mr. Mike Downs, Pipeline Supervisor, Anron Gas Pipeline Company, and the Production Manager (Phil) of Oxy U.S.A. Inc., informed me that these shoals are not due to submerged piping since their pipes are straight and completely buried under the bottom. They also informed me that in order to set-up a drilling bay rig, the drilling company dumps shell to provide a solid foundation. This action can be attributed to the soft mud found in most of this survey area. This information explains and marks the origin of the numerous symmetric shoals in the vicinity of some of the established gas well heads, since before they finally hit a gas pocket they probably had set a drilling bay rig in several places and found nothing. The charted depths should be revised with the present survey depths. CONCUR

A 10 9-foot shoal which was not revealed during the normal pos 3001+5 hydrography run on this survey area, was found during inspection of a rejected crossline run during operations of survey sheet H-10330, "W", at latitude 27°46'29.24"N, longitude 097°21'08.46"W. Due to the similar circumstances regarding this shoal and the shell shoals previously described, weather conditions, and time restrictions development of this shoal was not performed. The hydrographer suspects that other shoals like this one may exist in this survey area. See the discussion of the origin of these shoals in the previous paragraph. The data for this shoal are being submitted with this survey, position 3000-3006, day 078. (1990) The plotter sheet number, and position numbers were changed with the block edit option on the active file and all the data for sheet H-10330 were rejected. The floppy disk is being submitted with H-10330. These soundings are adequate to supersede charted shoundings within the common area. Concur - This data was added to this survey. record # 121180-121540

A ~~5 to~~ 6-foot shoal was found in the vicinity of latitude 27°48'04"N, longitude 097°21'16"W, approximately 150 meters south of the charted southern limit of the active spoil area located along the south side of the Corpus Christi Channel from latitude 27°48'18"N, longitude 097°21'44"W to latitude 27°48'18"N, longitude 097°20'42"W. This shoal appears to be an extension of a 5-foot shoal in the active spoil area. The hydrographer recommends the charted southern limit of this spoil area be extended from latitude 27°48'09"N to latitude 27°48'00"N on Charts 11309 and 11311. Do not concur. Chart 6 foot shoal found on this survey.

* Filed with hydrographic data

A 7 ~~8~~-foot shoal and a 7-foot shoal were found in the vicinity of latitude 27°48'05"N, longitude 097°19'36"W, and latitude 27°48'01.6"N, longitude 097°20'26.1"W, respectively. These shoals are approximately 100 meters and 200 meters, respectively, south of the charted southern limit of the active spoil area located along the south side of the Corpus Christi Channel from latitude 27°48'18"N, longitude 097°20'26"W to latitude 27°48'18"N, longitude 097°19'01"W. These shoals appear to be an extension of existing shoals in the active spoil area. The hydrographer recommends the charted southern limit of this spoil area be extended from latitude 27°48'09"N to latitude 27°47'57"N on Chart 11309. The 7-foot shoal mentioned in this paragraph was reported in the dangers to navigation report dated February 16, 1990. Do not concur chart 7-foot shoals as found on this survey.

A 7 ~~8~~-foot shoal area in the vicinity of latitude 27°48'14"N, longitude 097°20'26"W was found to extend west from inside the same active spoil area mentioned in the paragraph above to the west limit of this active spoil area. The hydrographer recommends the west limit of this active spoil area be extended from longiude 097°20'26"W to longitude 097°20'31"W on Chart 11309 to safely cover this shoal area. Do not concur. chart a 7 foot sounding at limit of active spoil area.

A dive investigation was performed at latitude 27°48'40.8"N, longitude 097°20'37.6"W, to investigate a suspicious fathogram trace. Concrete and steel ruins measuring 5 feet in length by 5 feet in width by 3 feet in height were found with a lead line least depth of 12.5 feet, uncorrected, in depths of 14-15 feet. (13 foot corrected) The hydrographer recommends a submerged obstruction symbol be charted on Chart 11309 at the surveyed position. For additional information, see Dive Report No. 3 of day 029 (position 2238), included with the separates of this report. * Concur

A dive investigation was performed at latitude 27°48'40.3"N, longitude 097°20'21.8"W, to investigate a suspicious fathogram trace. Five 15-inch diameter pipes and 50-feet in length were found at this position near the channel edge in depths of 14-20 (15.2 corrected) feet. A lead line least depth of 15 feet, uncorrected, was found. The hydrographer recommends a ~~submerged obstruction~~ sounding on obstruction symbol be charted on Chart 11309 at the surveyed position. For additional information, see Dive Report No. 3 of day 037 (position 2483), included with the separates of this report. The hydrographer suspects these findings along with the findings mentioned in the paragraph below are part of the 50 concrete piles lost overboard which are reported on AWOIS 4844. - concur chart 14 foot Obstr pos # 2592 (See next page) See additional work for this survey attached to this report.

* Filed with hydrographic data

A dive investigation was performed at a position obtained from a local shrimper, Mr. Frank Cortez, latitude 27°48'40.1"N, longitude 097°20'21.4"W. A bunch of submerged concrete pipes were found at this position with a lead line least depth of 16 14 06str feet, uncorrected, in depths of 16-35 feet. The hydrographer (14.6 corrected) recommends a submerged obstruction symbol be charted on Chart 11309 at the surveyed position. See Dive Report No. 5 of day 075 * (position 2592), included with the separates of this report, for additional information. The hydrographer suspects these findings concur along with the findings mentioned in the paragraph above are part of the 50 concrete piles lost overboard which are reported on AWOIS 4844. See additional work attached to this report for this survey

M. ADEQUACY OF SURVEY

This survey is a complete basic hydrographic survey and is adequate to supersede all prior surveys within the common areas. concur

N. AIDS TO NAVIGATION See Evaluation Report Section 7.d

There are no floating aids to navigation within the survey area.

Six fixed aids to navigation positioned along Corpus Christi Channel reside within the survey area. Lights ~~63~~, 68, ~~70~~, and ~~73~~ were verified as charted. Lights 62 and 67 were ~~61~~ checked ~~73~~ and do ~~74~~ not agree with the charted position. Telephone conversation with Chief Warrant Officer Eduardo Anastacio, United States Coast Guard (USCG), Aids to Navigation Team at Corpus Christi, Texas, verified that Lights 62 and 67 had been damaged and relocated to align them with other fixed aid lights. Chief Warrant Officer Eduardo Anastacio informed me that the dolphins of the previous lights 62 and 67 had either been pulled out or cut flush with the bottom, according to their standard policy. Lights 62 and 67 have been located to Third-Order Class I standards by the Atlantic Hydrographic Party Two. A copy of the NOAA Form 76-40 submitted to N/CG245, can be found in the separates of this report.

The lights listed below sit atop a pile and platform structure and exhibit characteristics as described in the USCG LIGHT LIST, Volume IV, 1989 Edition. Additional information and photographs can be found in the detached positions record book submitted with this survey.*

* Filed with hydrographic data

Non-Floating Aid	Survey Position		Light List Position		Pos #
Light "61"	Lat. 27°48'33.5"N Long. 097°18'03.6"W		None	27315	2147
Light "62"	Lat. 27°48'41.1"N Long. 097°18'06.2"W	**	None	27320	control file
Light "67"	Lat. 27°48'32.6"N Long. 097°19'19.3"W	**	None	27325	control file
Light "68"	Lat. 27°48'40.7"N Long. 097°19'21.9"W		None	27330	2145
Light "73"	Lat. 27°48'32.7"N Long. 097°20'39.0"W		None	27345	2144
Light "74"	Lat. 27°48'40.2"N Long. 097°20.39.9"W		None	27350	2143

The hydrographer recommends lights 61, 68, 73, and 74 remain as charted and lights 62 and 67 be charted at the new Third-Order Class I survey position listed above. The fixed aids within the limits of this survey are adequate to serve the purposes intended. concur See Eval. Report section 7.d

One privately maintained fixed aid (Daybeacon "2") pos# 1309 positioned along the Rincon Industrial Park Channel, which is listed in the LIGHT LIST, Volume IV, 1989 Edition was located at latitude 27°48'51.0"N, longitude 097°21'08.7"W and was verified as charted. Daybeacon "2" sits atop a pile, with a platform, and exhibits the characteristics described in the USCG LIGHT LIST, Volume IV, 1989 Edition, except the color of the dayboard is listed as red but is actually light yellow. Additional information and photographs can be found in the detached positions record book submitted with this survey. * LL# 27690 ✓

The Corpus Christi Channel Cut B West Range Rear and Front Lights used to steer the center of the channel can not be aligned from a small vessel. The rear range hides behind the building on which the front range stands. See Eval. Report section 7.d

Mr. Mike Downs, Pipeline Supervisor, Anron Gas Pipeline Company, and the Production Manager (Phil), Oxy U.S.A. Inc., informed me that there are pipelines going out of the wellheads and gathering station, and that they are buried under the bottom. No submerged pipeline signs were found within this survey area.

No submarine cables, overhead cables, bridges, ferry routes, nor overhead pipelines are within the survey area.

* Filed with hydrographic data

** See attached 76-40 for third order positions

O. STATISTICS

Description	Vessel 770
Total Number of Positions	2431 ~~2727~~
Total Lineal Nautical Miles of Hydrography	373
Square Nautical Miles of Hydrography	12
Days of Production	32
Bottom Samples	48
Tide Stations	3
Speed of Sound Casts	12
Detached Positions	85

P. MISCELLANEOUS

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

Two dive investigations were performed on suspicious fathogram traces but nothing was found. See Dive Report numbers 1 and 2 of day 029, positions 2236 and 2237, respectively.* These position numbers were rejected since nothing was found and are considered unnecessary.

processor inserted these positions back into hydro file for verification purposes

A predicted tide anomaly was observed during this survey causing depths on adjacent sounding lines to differ by one foot. There were high winds during this survey which caused extremely low or high water from day to day. This problem made contouring very difficult. The hydrographer believes that when smooth tides are applied this problem will be resolved. Problem not evident on smooth sheet. Resolved by application of observed tides.

Thirty six position numbers were duplicated. This was caused by a "system crash" on day 339. The data acquiring program does not update position numbers after a "system crash". It assigns the position number of the beginning of the line being run at the time of the crash as if that line was not filed. This causes all the position numbers used on that line to be duplicated. Also, while on line the data acquiring program looses count and ends up with one or two position numbers short causing the processing system to duplicate the first one or two position numbers of the next line. Many of these duplicated positions were rejected due to various problems like high residuals and high ecr's. They are all listed in the Abstract of Positions found in the separates of this report.* ✓ ✓

Forty-eight bottom samples were taken and submitted to the Smithsonian Institution on February 20, 1990 as directed in Section 6.7 of the project instructions. Bottom sample positions ✓

* Filed with hydrographic data

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. *

No anomalous currents were observed in the survey area.

Q. RECOMMENDATIONS

Two dives are pending to complete the item investigations for this survey. One is on AWOIS 4844, and the other is on a suspicious fathogram trace between position 2682+4 and 2682+5, day 094. These dives will be made in the near future. See additional work for this survey attached to this report.

R. AUTOMATED DATA PROCESSING

The HDAPS, currently in use, consists of the following system components: A Hewlett Packard (HP) 9000 Model 300 computer, an HP 9153B Disk Drive with a hard disk storage capacity of 20 Mbytes, an HP 7959B hard disk with a storage capacity of 300 Mbytes, an HP 98785A Color Monitor, a Bruning ZETA 824 plotter, an HP Ruggedwriter 480 printer, and an HP Model 9145 tape drive. On the 21-foot MonArks is an IBM PC compatible system, using the Navitronic's Hyflex 1000 as the interface between the computer and the hydrographic sensors. Data are acquired and stored on vessel 520, using a Comflex 1030 NX hard disk, and on vessel 770, using a Texas Microsystems. Data are written to 3.5 inch double sided micro-floppy diskettes. A Navitronic Path Guidance Unit (PGU) functions both as a remote steering display for the coxswain and as a remote control for the HDAPS. The office and launch systems are not compatible. The Oswego "Lif" utility program must be used to convert the raw data collected on-line to Hewlett-Packard format.

In addition to the HDAPS, 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
VOLKSWRITER(R) DELUXE Rel 2.0 - Position Abstract (IBM PC)		1983

* Filed with hydrographic data

S. REFERRAL TO REPORTS

Title	Transmittal Information
Descriptive Report to Accompany Survey H-10326	Pacific Hydrographic Section N/CG245 Seattle, WA, 1990
Descriptive Report to Accompany Survey H-10330	Pacific Hydrographic Section N/CG245 Seattle, WA, 1990
Horizontal Control Report* for OPR-K229-AHP2	Field Photogrammetry Section N/CG23322 Norfolk, VA, 1990
Chart Sales Agent Report	Chart Distribution Branch N/CG33 Rockville, MD, 1990
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

* See E.R, sect 2

Submitted by:

Maria Mangual-Ortiz

Maria Mangual-Ortiz
Surveying Technician, Atlantic Hydrographic Party Two

ADDITIONAL WORK
DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10325
(Field No. AHP-10-17-89)
Scale:1:10,000
1990
Atlantic Hydrographic Party Two
Chief of Party: Lt. Cdr. V. Dale Ross, NOAA

A. PROJECT

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

The survey area of this additional work is designated as sheet "T" in the project instructions.

The purpose of this additional work is to complete the item investigations not resolved during the winter of 1989 and spring of 1990 season.

B. AREA SURVEYED

The additional work is in the area surveyed for H-10325 which is the west center portion of Corpus Christi Bay, Texas, two miles east of Alta Vista Reef bounded by the following limits:

North - 27°49'07"N
South - 27°45'00"N
East - 097°17'53"W
West - 097°21'18"W

The AWOIS item and suspicious trace investigations were conducted on October 15, 1990 (day 288).

C. SOUNDING VESSEL

Vessel 520 (EDP No. 520), a 21-foot MonArk, was the only sounding vessel used during the item investigations. There were no unusual vessel configurations nor problems encountered.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The HDAPS, currently in use, consists of the following system components: A Hewlett Packard (HP) 9000 Model 300 computer, an HP 9153B Disk Drive with a hard disk storage capacity of 20 Mbytes, an HP 7959B hard disk with a storage capacity of 300 Mbytes, an HP 98785A Color Monitor, a Bruning ZETA 824 plotter, an HP Ruggedwriter 480 printer, and an HP Model 9145 tape drive. On the 21-foot MonArks is an IBM PC compatible system, using the Navitronic's Hyflex 1000 as the interface between the computer and the hydrographic sensors. Data are acquired and stored on vessel 520 using a Comflex 1030 NX. Data are written to 3.5-inch double sided micro-floppy diskettes. A Navitronic Path Guidance Unit (PGU) functions both as a remote steering display for the coxswain and as a remote control for the HDAPS. The office and launch systems are not compatible. The Oswego "Lif" utility program must be used to convert the raw data collected on-line to Hewlett-Packard format.

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

	Version	Date
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
VOLKSWRITER(R) DELUXE Rel 2.0 - (IBM PC)		1983

E. SONAR EQUIPMENT

side scan
No sonar equipment was used during this survey.

F. SOUNDING EQUIPMENT

The following Raytheon Fathometer (Model DE-719-C), with Odom Hydrographic Systems, Inc. Digitrace, was used on vessel 520 during the item investigations:

VESSEL	S/N	Day
520	3947	288

No major problems were encountered with the fathometer used on vessel 520.

G. CORRECTIONS TO SOUNDINGS

No fathometer soundings are being reported for the item investigations submitted with this report. Corrections to fathometer soundings information is being submitted incase the verification office decides to use the fathometer soundings that accompany the detached positions recorded. *

fathometer soundings not used in the additional work

When using the Raytheon Model DE-719-C fathometer, calibration checks were made frequently on day 288. 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. Any necessary corrections were done during scanning of the fathogram. Any required adjustments of the tide and draft, speed of sound, sensitivity, and chart speed were made and noted on the fathogram. Any departures from the initial zero were corrected during scanning of the fathogram.

The Raytheon DE-719-C Fathometer was 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). NOS Program "Velocity" was used for the speed of sound correction computations. Copies of velocity cast forms can be found in the separates of this report. *

The following speed of sound cast was taken during the item investigations:

Table Applied	Type	Day	Depth	Location NAD 1983	Day
16	AML(03003)	284	13.5 meters	26°49'00"N 097°13'30"W	288

* Filed with hydrographic data

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 table is included in the separates of this report. *

A lead line comparison was conducted on day 288 to determine an instrument corrector and check the static draft. Lead line comparison form can be found in the separates of this report. *

Settlement and squat measurements for vessel 520 were performed on October 10, 1990 (DN 283), at the T-head, Corpus Christi, using the NOS prescribed level rod method (Zeiss Level S/N 08765). Settlement and squat correctors and the static draft corrector of .36 meter were applied on-line through the offset table. Copies of the field data, the graph of the settlement and squat correctors vs. RPM, and the offset table are included in the separates. *

Approved tides were requested from the Sea and Lake Levels Branch, N/OMA1212, in a letter dated October 30, 1990. Copies of the field tide note, request for approved tides, and HDAPS tide table are included with the separates of this report. *

Survey records were scanned by AHP-2 employees.

H. CONTROL STATIONS

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

Two monumented control stations (stations 039 and 059), and two fixed aids to navigation (stations 045 and 046) were used to control this additional work. The station list is included in ~~the separates of~~ this report.

All control stations used on this survey were either existing stations or stations set by the Coastal Surveys Unit. All stations were established using third order, class I traverse and intersection methods using basic network established by GPS observations. The horizontal control report was written within the Coastal Surveys Unit and was forwarded to the Atlantic Hydrographic section in Norfolk, Virginia.

* Filed with hydrographic data

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 three or four stations simultaneously was used during this additional work. 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:

VESSEL	Equipment	S/N
0520	RPU	E0164
	R/T	E2960
	R/S	E2911
	R/S	E2962
	R/S	F3242
	R/S	C2096

Critical system checks were performed by visually observing the error circle radii and residual values on the Comflex screen in the survey vessels. The "DUMP ALPHA" and "DUMP GRAPHICS" functions are not available with COMFLEX so no hard copy 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. These system checks occurred on day 277/1990. 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. *

Baseline calibrations were performed as specified in the field procedures manual. The baseline values were incorporated into the Comflex 1030 NX "C-O" table and applied directly to all "on-line" data. Baseline calibration forms and the "C-O" table are included in the separates of this report.

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

* Filed with survey records

J. SHORELINE

Not applicable. ✓

K. CROSSLINES

Not applicable. ✓

L. JUNCTIONS

Not applicable. ✓

M. COMPARISON WITH PIOR SURVEYS ✓

Not applicable.

N. COMPARISON WITH THE CHART

Findings during the additional work of the AWOIS item investigation not resolved during the winter of 1989 and spring of 1990 season were as follows:

AWOIS item 4844 was described as "50 concrete piles, 20-45 feet long were lost overboard" on Chart Letter 134/62 by the Corps of Engineers which is charted as "obstrs rep" at latitude 27°48'35.0"N, longitude 097°18'11.5"W. A 50-meter circle search diver investigation was performed at this location and nothing was found. See Dive Report No. 1 of day 288/1990, position 4000, included with the separates of this report* for additional information. The hydrographer recommends the "obstrs rep" be removed from Chart 11309. - concur For information on findings which the hydrographer believes are the concrete piles, see Section L, Comparison With The Chart, of the Descriptive Report to Accompany H-10325. The position reported as to where these piles were lost overboard appears to be incorrect. - concur

Additional information was obtained for AWOIS 4839 from Mr. Homer Roberson, Roberson's Marine Sales Inc., Port Aransas, Texas, (telephone no. 512-749-5820). Mr. Roberson salvages wrecks in the Corpus Christi Bay. He informed the hydrographer that he was contracted in 1986 by Mr. Scott Wilson, owner of the Sir John, a 45-foot boat, to dive on the Sir John wreck. Mr. Roberson salvaged the motor and the A-frame off of the Sir John. Mr. Roberson informed the hydrographer that only the keel remained and it was mostly buried below the mud line. He said that all other portions of the wreck were completely broken up and the majority of the wreck was covered. In 1986 the highest point of the wreckage was approximately 2 feet above the bottom. ✓

* Filed with hydrographic data.

Mr. Roberson also said that the charted position was approximately where the boat started to sink. However, the boat was dragged to shoaler waters, approximately one nautical mile north of the Corpus Christi Channel and one nautical mile ~~west~~ east of the Rincon Industrial Park Channel. This area falls within the limits of Sheet "S".* Sheet "S" has not been started at this time. The hydrographer recommends that this AWOIS be resolved ~~-~~ do not during the acquisition of Sheet "S". Mr. Roberson expressed the concur willingness to meet us and take us to the area where he salvaged parts of the Sir John, since the only position available is by lining up points of land. Delete ED wreck from its presently charted position. Based on follow up telecon with Mr. Roberson, wreck is considered disproved and should not be charted.

*H-10369

O. ADEQUACY OF SURVEY

This additional work completes the basic hydrographic survey H-10325 previously submitted and is adequate to supersede all prior surveys within the common areas. concur

P. AIDS TO NAVIGATION

Not applicable.

Q. STATISTICS

Description	Vessel 520
Total Number of Positions	3
Total Lineal Nautical Miles of Hydrography	-
Square Nautical Miles of Hydrography	-
Days of Production	1
Bottom Samples	-
Tide Stations	3
Speed of Sound Casts	1
Detached Positions	3

R. MISCELLANEOUS

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

A dive investigation was performed at latitude 27°48'31.6"N, longitude 097°20'55.1"W, to investigate a suspicious fathogram trace. A wood pile protruding off the bottom at a 30° angle with a lead line least depth of 2.6 meters, corrected for predicted tides, was found. For additional information, see Dive Report No. 3 of day 288 (position 4002), included with the separates of this report. The hydrographer believes this pile is the remains of the charted "Corpus Christi Channel Pipeline Crossing Light B", at latitude 27°48'31.0"N, longitude 097°20'54.5"W. The pile of this light was previously searched for with a 30-meter circle search diver investigation. The hydrographer previously reported that this pile was pulled out in 1988 by the Raymond Dugat Company per telephone conversation with Mr. Mike Downs, Anron Gas Pipeline Company. See the description of AWOIS item 4787 under Section L "Comparison with the Chart" of the Descriptive Report to Accompany H-10325, for additional information. The hydrographer informed Mr. Mike Downs of the new findings. Mr. Mike Downs informed the hydrographer that he will send the Raymond Dugat Company to pull the pile and search for the remains of the charted "Corpus Christi Channel Pipeline Crossing Light A" as a safety procedure. The recommendations made previously under the descriptions of AWOIS item 4786 and 4787 are still good. Position 4002 has been rejected since the wood pile is no longer there. concur

Concur - remove both signs from the chart

What was thought to be the remains of Light "A" was pulled out November 2, 1990. The hydrographer assisted Raymond Dugat Company in locating the pile found with Dive 3 of day 288. Raymond Dugat Company said that what they pulled out was not the pile of Light "A". They affirmed that they had pulled out the piles of Light "A" and "B" in 1988. He said that what they pulled out must be some old dolphin which the currents and shrimpers have dragged and it happened to be near the position of Light "B". The hydrographer did notice that the end of the center pile, which was extending from a 3-pile dolphin, looked like a power line pole with shrimper's nets wrapped around it (See pictures included with the separates of this report).

The hydrographer also took Raymond Dugat Company to the position of the 2-inch pvc pipe and sign previously found by Dive No. 1 of day 058, position 2583, while searching for the remains of Light "A". The Raymond Dugat Company's diver did an approximately 20-meter circle search looking for the pile of Light "A", per Mr. Mike Downs request. Nothing was found but the 2-inch pvc pipe and sign previously found with Dive No. 1 of day 058, position 2583. Raymond Dugat Company pulled out the 2-inch pvc pipe and the sign (approximately 4 x 6 feet thin sheet metal, apparently saying "Danger - Do Not Anchor"). See picture included with the separates of this report. The position 2583 and Dive No. 1 of day 058 previously submitted needs to be rejected since the pvc pipe and sign are no longer there. positional data remains.

* Filed with hydrographic data.

Mr. Louis Deases, Pipeline Safety Patrolman, Enron Pipeline Operating Company (telephone no. (512) 241-2811) informed the hydrographer that the signs which marked the gas pipeline crossing the Corpus Christi Channel are constantly being knocked down by barges making a turn into the Rincon Industrial Park Channel. He also stated that due to the importance of these signs for vessels anchoring in the area, they plan to find a better location for them and install new signs in the near future. The hydrographer recommends that until new signs are installed, a warning statement in the vicinity of this gas pipeline crossing the channel should be charted on Chart 11309 and 11311. Suggested positions of these warning statements are at the charted positions of Lights "A" and "B", latitude 27°48'43.5"N, longitude 097°20'55.5"W and latitude 27°48'31.0"N, longitude 097°20'54.5"W, respectively. A copy of the diagram of this gas pipeline crossing the channel is included with the appendices of this report.

~~8.~~ S RECOMMENDATIONS

Not applicable.

~~8.~~ T REFERRAL TO REPORTS

Title	Transmittal Information
Descriptive Report to Accompany Survey H-10325	Pacific Hydrographic Section N/CG245 Seattle, WA, 1990

Submitted by:

Maria Mangual-Ortiz

Maria Mangual-Ortiz
Surveying Technician, Atlantic Hydrographic Party Two

CONTROL STATIONS

No.	Latitude	Longitude	Station Name	Cart.
038	27°42'40.782"N ✓	097°18'48.182"W ✓	CALLO 2 1963 ✓	250
039	27° 43' 43.325" N	097° 21' 08.634" W	SWATNER 1985	139
044	27°48'28.020"N ✓	097°22'03.321"W ✓	CORPUS CHR HARBOR CUT F RNG LT 1989	250
045	27°48'26.106"N ✓	097°21'52.434"W ✓	CORPUS CHR HARBOR CUT R RNG LT 1989	250
046	27°48'18.064"N ✓	097°16'05.640"W ✓	CORPUS CHR CHAN CUT AW RNG R LT 1989	250
059	27°51'02.658"N ✓	097°21'17.960"W ✓	INDIAN 1989	250
063	27°44'01.556"N ✓ (see 76-40)	097°16'32.909"W ✓	C C BAY SPOIL BANK LT A 1990	250

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS ~~OR LANDMARKS FOR CHARTS~~ FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

[ ] TO BE CHARTED [X] TO BE REVISED [ ] TO BE DELETED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
	AHP-2	TEXAS	CORPUS CHRISTI BAY	4/12/90

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

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-K229-AHP2		H-10325	NAD 1983

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	POSITION LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	POSITION LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	METHOD AND DATE OF LOCATION FIELD	CHARTS AFFECTED
LIGHT	CORPUS CHRISTI CHANNEL LIGHT "62" LIGHT LIST #27320, VOL. IV, 1990	27 48	41.119	097 18	06.152		F-3-6-L 3/23/90	11309
LIGHT	CORPUS CHRISTI CHANNEL LIGHT "67" LIGHT LIST #27325, VOL. IV, 1990	27 48	32.588	097 19	19.329		F-3-6-L 3/23/90	11309
LIGHT	CORPUS CHRISTI SPOIL BANK LIGHT (C C BAY SPOIL BANK LT A) LIGHT LIST #27730, VOL. IV, 1990	27 44	01.556	097 16	32.909		F-2-6-L 2/90	11309

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [X] TO BE CHARTED
- [ ] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
AHP-2	TEXAS	CORPUS CHRISTI BAY	4/12/90

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

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-K229-AHP2		H-10325	NAD 1983

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
PLATFORM	TEXACO OIL BIG PLATFORM PIPE	27 46	45.079	097 20	01.104		F-3-6-L 3/23/90	11309
PLATFORM	TEXACO SMALL PLATFORM LIGHT	27 47	23.354	097 21	53.240		F-3-6-L 3/23/90	11309 11311

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

February 16, 1990

MEMORANDUM FOR: Rear Admiral W. F. Merlin
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 item and shoals were discovered during hydrographic survey operations of Project Number OPR-K229-AHP2, Hydrographic Survey Registry Number H-10325, Survey Title: Texas, Corpus Christi Bay, Two Miles East of Alta Vista Reef, by the Atlantic Hydrographic Party Two:

"Unrevised. Retained as reported"

A one inch diameter steel pipe baring one foot (height corrected for predicted tides, mean lower low water datum) at latitude 27°46'42.9"N, longitude 097°19'50.6"W.

A six-foot shoal in a charted twelve feet area at latitude 27° 47' 57.4"N, longitude 097° 18' 46.6"W.

A seven-foot shoal in a charted twelve feet area at latitude 27°47'27.8"N, longitude 097°20'26.2"W.

A seven-foot shoal in a charted eleven feet area at latitude 27°48'01.6"N, longitude 097°20'26.1"W.

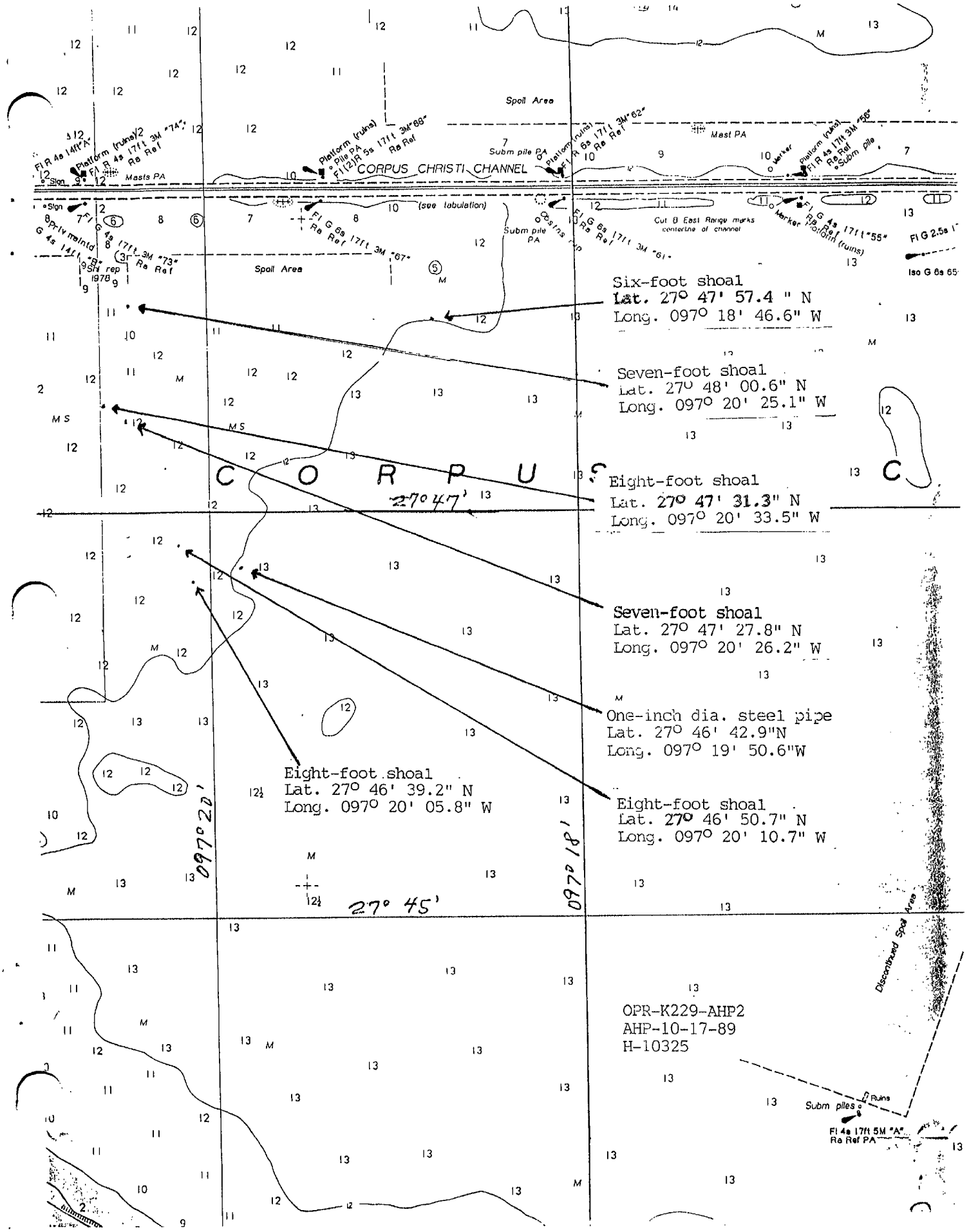
Three eight-foot shoals in charted twelve feet areas at latitude 27°46'39.2"N, longitude 097°20'05.8"W; latitude 27°47'31.3"N, longitude 097°20'33.5"W; and latitude 27°46'50.7"N, longitude 097°20'10.7"W.

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 November 15, 1986, 29th Edition.

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

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


CORPUS CHRISTI CHANNEL
Spoil Area
Mast PA
Masts PA
Subm pile PA
Cut B East Range marks centerline of channel
(see tabulation)
Six-foot shoal
Lat. 27° 47' 57.4 " N
Long. 097° 18' 46.6" W
Seven-foot shoal
Lat. 27° 48' 00.6" N
Long. 097° 20' 25.1" W
Eight-foot shoal
Lat. 27° 47' 31.3" N
Long. 097° 20' 33.5" W
Seven-foot shoal
Lat. 27° 47' 27.8" N
Long. 097° 20' 26.2" W
One-inch dia. steel pipe
Lat. 27° 46' 42.9"N
Long. 097° 19' 50.6"W
Eight-foot shoal
Lat. 27° 46' 50.7" N
Long. 097° 20' 10.7" W
Eight-foot shoal
Lat. 27° 46' 39.2" N
Long. 097° 20' 05.8" W
27° 47'
27° 45'
097° 20'
097° 18'
C O R P U S
Discontinued Spoil Area
Subm piles
Ruins
Fl 4s 17ft 5M "A"
Re Ref PA
OPR-K229-AHP2
AHP-10-17-89
H-10325

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

March 2, 1990

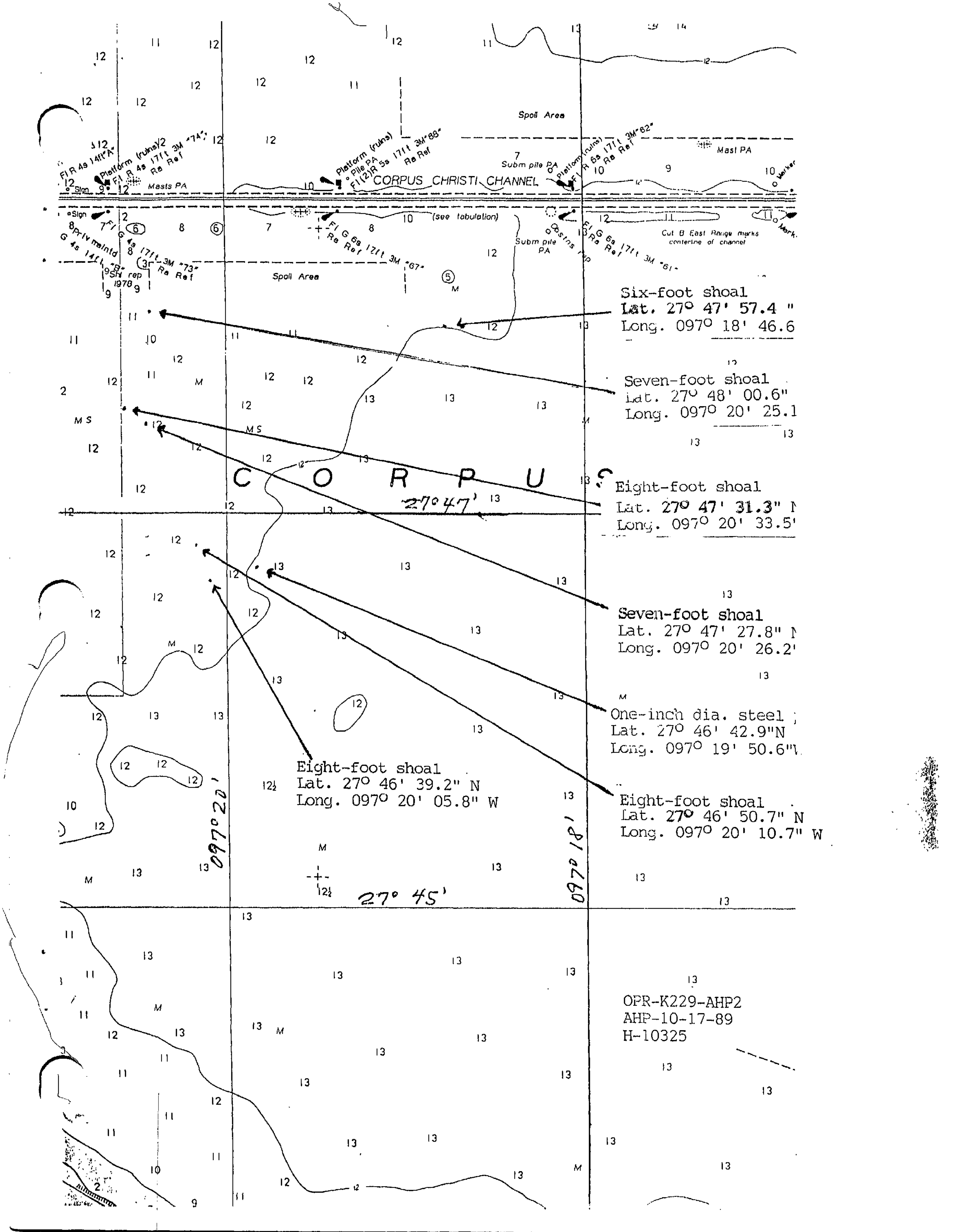
MEMORANDUM FOR: Rear Admiral W. F. Merlin
Commander, U. S. Coast Guard District

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

SUBJECT: Ammendment to Report of Dangers to Navigation dated February 16, 1990

The one-inch diameter steel pipe located at latitude 27°46'42.9"N, longitude 097°19'50.6"W was pulled out by the U. S. Coast Guard Aids to Navigation Team, Corpus Christi, Texas, on April 3, 1990, and is no longer a danger to navigation. Chief Warrant Officer Eduardo A. Anastacio informed me that in the process of removing the pipe, the pipe slipped and dropped back in the water. The launch cruised the area to make sure the pipe was not still a danger to navigation. He also mentioned that the Aids to Navigation Team will drag for the pipe, in the near future, to make sure the pipe is laying on the bottom.

Unrevised. Retained as reported



CORPUS CHRISTI CHANNEL
Spoil Area
Mast PA
Masts PA
Subm pile PA
Platform (ruins)
Pile PA
(see tabulation)
Cut B East Range marks centerline of channel
Spoil Area
C O R P U S
27°47'
27° 45'
097°20'
097°18'
Six-foot shoal
Lat. 27° 47' 57.4 "
Long. 097° 18' 46.6
Seven-foot shoal
Lat. 27° 48' 00.6"
Long. 097° 20' 25.1
Eight-foot shoal
Lat. 27° 47' 31.3" N
Long. 097° 20' 33.5'
Seven-foot shoal
Lat. 27° 47' 27.8" N
Long. 097° 20' 26.2'
One-inch dia. steel
Lat. 27° 46' 42.9"N
Long. 097° 19' 50.6"
Eight-foot shoal
Lat. 27° 46' 39.2" N
Long. 097° 20' 05.8" W
Eight-foot shoal
Lat. 27° 46' 50.7" N
Long. 097° 20' 10.7" W
OPR-K229-AHP2
AHP-10-17-89
H-10325

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

March 2, 1990

MEMORANDUM FOR: Rear Admiral W. F. Merlin
Commander, U. S. Coast Guard District

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

SUBJECT: Amendment to Report of Dangers to Navigation dated February 16, 1990

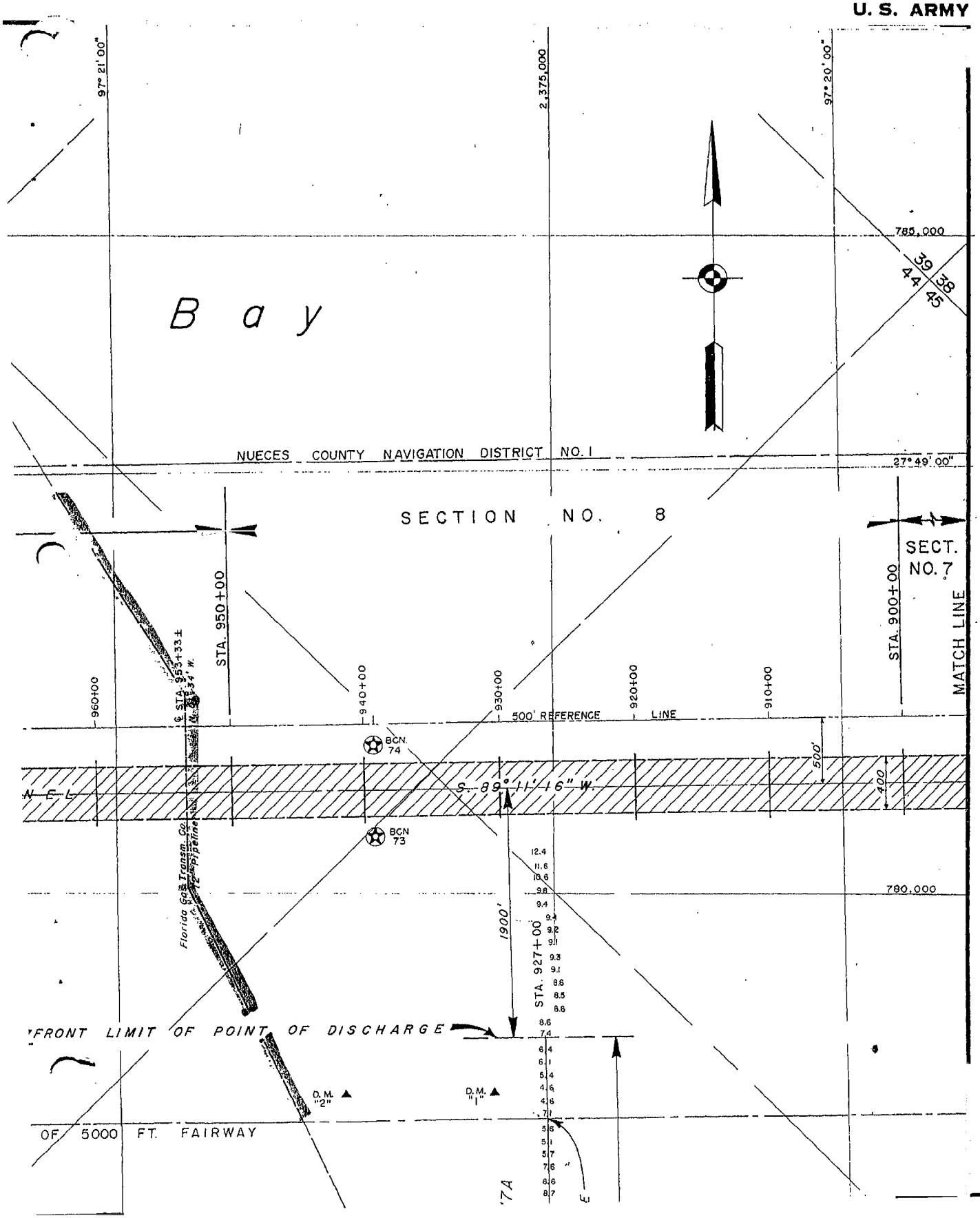
The position of the seven-foot shoal was incorrectly reported at latitude 27°48'01.6"N, longitude 097°20'26.1"W. This position was based on the North American Datum of 1983. The correct position for the North American Datum of 1927 is at Latitude 27°48'00.6"N, Longitude 097°20'25.1"W.

Unrevised Retained as reported

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

Attachment

Refer to discussion in section R



APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-K229-AHP2
AHP-10-17-89
H-10325
1989-1990

This basic hydrographic 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 daily surpervision. All boat sheets and final field sheets were reviewed in their entirety and all supporting records were also checked.

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

V. Dale Ross
LCDR, NOAA
Chief, Atlantic Hydrographic Party Two

APPROVAL SHEET

ADDITIONAL WORK
OPR-K229-AHP2
AHP-10-17-89
H-10325
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 surpervision. The final field chartlet was reviewed in its entirety and all supporting records were also checked.

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

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

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Charting & Geodetic Services
Atlantic Hydrographic Party Two
439 W. York St.
Norfolk, Va. 23510-1114
22 January 1991

Memorandum For The Record

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

Subject: Survey transmittal

A family emergency necessitated my protracted absence from work. Hence, the transmittal of this survey was late.

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-10325

LOCALITY: Corpus Christi Bay, two miles east of Alta Vista Reef, TX

TIME PERIOD: November 30, 1989 - April 4, 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.

for Richard A. Cicon

CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10325

Name on Survey	A ON CHART NO. 11309, 11311	B ON PREVIOUS SURVEY NO. 5694, T-9183	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 Previous Survey 5612	
TEXAS, CORPUS CHRISTI BAY TWO MILES EAST OF ALTA VISTA REEF										
ALTA VISTA REEF	X			X					X	1
CORPUS CHRISTI BAY	X	X		X	X		X	X	X	2
CORPUS CHRISTI CHANNEL	X	X		X	X		X	X	X	3
TEXAS (TITLE)	X									4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
				Approved:						19
										20
				Charles E. Harrington						21
				Chief Geographer — NCG2x5						22
				JUL 19 1990						23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27(H) (9-83) | U.S. DEPARTMENT OF COMMERCE | REGISTRY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-10325

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET		SMOOTH OVERLAYS: POS., ARC, EXCESS	8
DESCRIPTIVE REPORT		FIELD SHEETS AND OTHER OVERLAYS	2

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

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	27		27
VERIFICATION OF SOUNDINGS	106		106
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	48		48
COMPARISON WITH PRIOR SURVEYS AND CHARTS		6	6
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		51	51
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	181	57	

Pre-processing Examination by M. Brown	*Beginning Date* 6/22/90	*Ending Date*
Verification of Field Data by R.N. Mihailov	*Time (Hours)* 181	*Ending Date* 12/06/90
Verification Check by J.S. Green	*Time (Hours)* 36	*Ending Date* 3/11/91
Evaluation and Analysis by R.N. Mihailov	*Time (Hours)* 57	*Ending Date* 3/19/91
Inspection by D. Hill	*Time (Hours)* 4	*Ending Date* 4/23/91

EVALUATION REPORT

H-10325

1. INTRODUCTION

Survey H-10325 is a basic hydrographic survey accomplished by the NOAA 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

This survey occurred in Texas and covers the western central portion of Corpus Christi Bay, centered approximately two miles east of Alta Vista Reef. The survey area extends from latitude 27°45'00"N to latitude 27°49'07"N and longitude 97°17'53"W to longitude 97°21'18"W. There is no shoreline within the limits of this survey. The bottom consists of mud and sand. Depths range from 5 feet to 55 feet.

Additional field work, diver investigations, were performed on Day 288 for AWOIS item 4844 and a suspicious fathometer trace. The results of these item investigations are included in the attached 1991 Additional Work Descriptive Report. The positional data for these investigations has been added to the digital records. There are no soundings associated with this additional work that are pertinent to this survey.

Predicted tides for Galveston Channel, Texas, were used for the reduction of soundings during field processing. Approved hourly heights zoned from the Port Ingleside 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. The TRA and sound velocity correctors are adequate. An accompanying computer printout contains the parameters and correctors. The electronic control correctors have been determined according to established procedures and are adequate.

A digital file has been generated for this survey that includes categories of information required to comply with Hydrographic Survey Guidelines 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 information.

2. CONTROL AND SHORELINE

Sections F and G of the 1989-90 hydrographer's report and sections H and I of the additional work report contain adequate discussions of hydrographic control and hydrographic positioning. The Horizontal Control Report for ORP-K229-AHP2 referenced in section S of the hydrographer's report does not exist. Additional detailed information on horizontal control is located 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 field and published values based on NAD 83. 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: 1.097 seconds (33.8 meters)
Longitude: 0.971 seconds (26.6 meters)

The year of establishment of control stations shown on the smooth sheet originates with the horizontal control records and published NGS data.

The quality of several positions exceeds limits in terms of error circle radius and residual. A review of the data indicates that there is no significant plotting difference between these fixes and adjacent positions. The review also indicates that the located features or soundings are consistent with surroundings. None of the fixes are used to position dangers to navigation. These fixes are considered acceptable.

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

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change 3; the Hydrographic Survey Guidelines; and the Field Procedures Manual, August 1988 Edition (The additional work conforms to the requirements of the Field Procedures Manual, April 1990 Edition), except:

The Approval Sheet for the additional work performed on October 15, 1990 was not signed by the chief of party.

5. JUNCTIONS

Survey H-10325 junctions with the following surveys.

Survey	Year	Scale	Area
H-10326	1990-91	10,000	east
H-10330	1990	10,000	southwest
H-10361	1990-91	10,000	south
H-10362	1990-91	10,000	northwest
H-10369	1990-91	10.000	north

The junctions with surveys H-10326 and H-10330 are complete and the soundings are in good agreement.

The remaining junction surveys were accomplished during the 1990-91 field season and have been recently received for processing. These junction surveys are in a preliminary stage of processing and will be discussed in the reports for these surveys. The charted soundings in the area of the incomplete junctions are in agreement.

6. COMPARISON WITH PRIOR SURVEYS

H-5612	(1934)	1:10,000
H-5694	(1934-35)	1:20,000

Prior survey H-5612 covers the western portion of the present survey. Periodic dredging has occurred along Corpus Christi Channel since the prior survey was accomplished. Taking into consideration the differences in the scales of the surveys and the methods of surveying, agreement with this prior survey is good. Some minor discrepancies between the two surveys were noted, however, and are discussed in section K of the hydrographer's report.

Prior survey H-5694 covers the eastern portion of the present survey. Taking into consideration the differences in the scales of the surveys and the methods of surveying, comparison with this prior survey is good, generally, the present survey soundings agreeing within one to four feet.

Survey H-10325 is adequate to supersede these prior surveys within the common area.

T-9183 (1951) 1:20,000

Shoreline map T-9183 covers the entire survey area of the present survey. There is no shoreline common to the present survey. The hydrographer's report states that the numerous piles shown on T-9183 have been removed. The piles are no longer charted and have not been carried forward to the smooth sheet.

Survey H-10325 supersedes these prior shoreline maps as a source for charted hydrography.

There are no AWOIS items originating from the prior surveys applicable to the present survey.

7. COMPARISON WITH CHART

Chart 11309, 29th edition, dated November 15, 1986; scale 1:40,000
Chart 11309, 30th edition, dated December 2, 1989; scale 1:40,000
Chart 11311, 15th edition, dated September 13, 1986; scale 1:10,000

The 29th edition and 30th edition of chart 11309 are identical except for being on different datums, some minor revisions to the shoreline and added notations for new aids to navigation.

a. Hydrography

Charted hydrography originates with surveys H-5612, H-5694, and miscellaneous sources.

Except for the three items listed below, which should be retained as charted, this survey is adequate to supersede the charted hydrography for the area of common coverage.

Feature	Latitude (N	Longitude (W)	AWOIS No.
Subm wreck	27°48'34.03"	97°19'34.97	4838
Subm pile PA	27°48'28.53"	97°18'12.47	4843
3-foot sndg	27°48'17"	97°20'28"	none

b. AWOIS

All AWOIS positions listed in the hydrographer's and this report have been converted to NAD 83.

All AWOIS items assigned and addressed in this survey originate with miscellaneous sources.

Refer to section L of the hydrographer's report and additional work attached to the same report for the disposition of AWOIS items, supplemented as follows:

AWOIS item 4841, reported as a visible pile by the NOAA Ship WHITING in 1986 at latitude 27°48'44.03"N, longitude 97°19'18.97"W, is charted 90 meters northeast of a charted platform in ruins (AWOIS item 4840). The platform was reported in 1982 as a single pile visible. The single pile, now submerged 6-feet, was found during the investigation of AWOIS 4840. It is believed that this pile is the same as that reported by the NOAA Ship WHITING in 1986. This, supported by the 30-meter dive investigation with negative results at the position of the charted PA visible pile, disproves the existence of this pile. It should be removed from the chart.

c. Controlling Depths

The soundings obtained by this survey are consistent with the charted controlling depths found on charts 11309 and 11311.

d. Aids to Navigation

There are nine fixed aids to navigation, within the limits of survey H-10325, located along Corpus Christi Channel. There are no floating aids to navigation located within the limits of survey H-10325.

Corpus Christi Channel Light 62 is located 120 meters east of its charted position. Corpus Christi Channel Light 67 is located 60 meters to the west of its charted position. Refer to the NOAA Form 76-40 which is attached to this report for the third order positions for these aids. The remaining aids to navigation were located by hydrographic survey methods and are listed in section N of the hydrographer's report.

Corpus Christi Channel Pipeline Crossing Light A (Light List No. 27355) and Corpus Christi Channel Pipeline Crossing Light B (Light List No. 27360) no longer exist and should be removed from the charts.

Except for the Corpus Christi Channel Cut B West Range Rear and Front Lights, which can not be aligned from a small vessel, the fixed aids applicable to this survey area 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 six shoals and one pipe as dangers to navigation to the USCG and DMAHTC. Two amendments to these dangers were also reported to the USCG and DMAHTC. Copies of the reports are attached to this report. No additional dangers were discovered during office processing.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10325 adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. Additional field work to investigate AWOIS items 4838, 4843 and the 3-foot sounding charted at latitude 27°48'17N", longitude 97°20'28W", should be scheduled on a low priority basis.

R.N. Mihailov

Robert N. Mihailov
Cartographic Technician

APPROVAL SHEET
H-10325

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 Hill Date: 4-23-91

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.

Date: 4/25/91

Commander Pamela Chelgren-Koterba, NOAA
Chief, Pacific Hydrographic Section

****

Final Approval

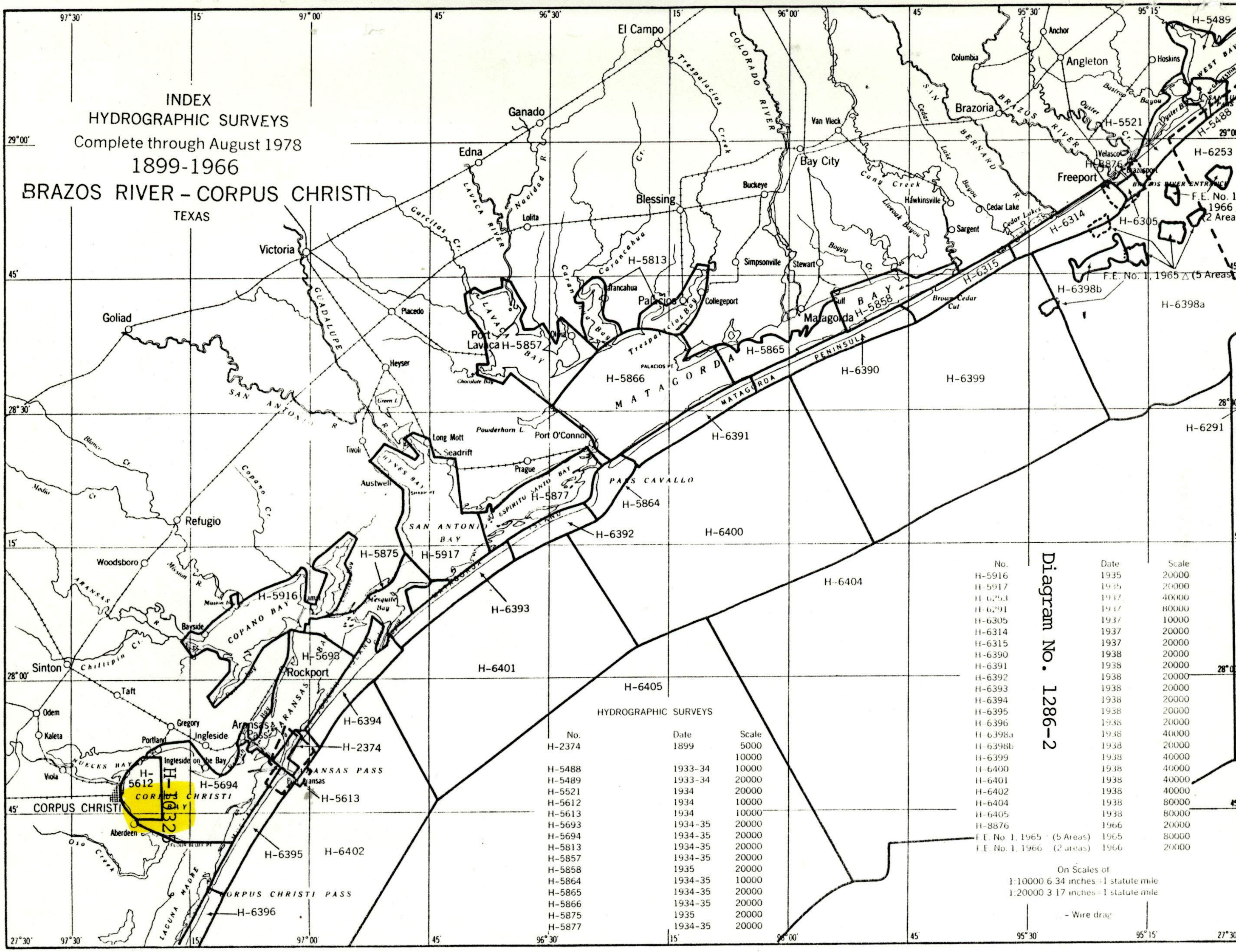
Approved: J. Austin Yeager Date: 6/21/91

J. Austin Yeager
Rear Admiral, NOAA
Director, Charting and Geodetic Services

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

Hydrographic Index No. 90 C

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



HYDROGRAPHIC SURVEYS

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

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

On Scales of
1:10000 6.34 inches=1 statute mile
1:20000 3.17 inches=1 statute mile

- Wire drag

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10325

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
11309	11/5/90	R.U. Mihailov	Full ~~Part Before~~ After Marine Center Approval Signed Via Partial application
			Drawing No. of sndgs from 55
11307	11/15/90	R.N. Mihailov	Full ~~Part Before~~ After Marine Center Approval Signed Via Full application
			Drawing No. thru 11309, no sndgs applied.
11309	6/24/92	L. ARKENAN	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 51, THRU H-DW6
11311	5-10-91	R.N. Mikailov	Full ~~Part Before~~ After Marine Center Approval Signed Via Fully appld at
			Drawing No. PMC - 7-30-92
			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.
			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.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10325

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
			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.
			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.
			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.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.