10405

10405

Diagram 1284-2

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-10-15-91

Registery No. H-10405

LOCALITY

State Texas

General Locality Matagorda Bay

Sublocality Greens Bayou to Halfmoon Reef

19 91

CHIEF OF PARTY
LT T.R. Waddington

LIBRARY & ARCHIVES

DATE Ocotber 6, 1992

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

CD-5
11316

NOAA FORM 77-28 (11-72)

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

REGISTER NO.

H-10405

HYDROGRAPHIC TITLE SHEET

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

AHP-10-15-91

State: Texas

General locality: Matagorda Bay

Locality: Greens Bayou to Halfmoon Reef

Scale: 1:10,000 Date of survey: (DN281) October 8 - (DN344) December 10, 1991

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

Vessel: NOAA Launch 0519

Chief of party: Thomas R. Waddington, LT, NOAA

Surveyed by: RWR, RRR

Soundings taken by echo sounder, ~~hand lead, pole~~: Innerspace model 448

Graphic record scaled by: RWR, RRR, CDN

Graphic record checked by: RWR

Verification by: ~~Protracted by~~: J. Griffin, R. Davies Automated plot by: PHS Xynetics Plotter

Evaluation by: ~~Verification by~~: C.R. Davies

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

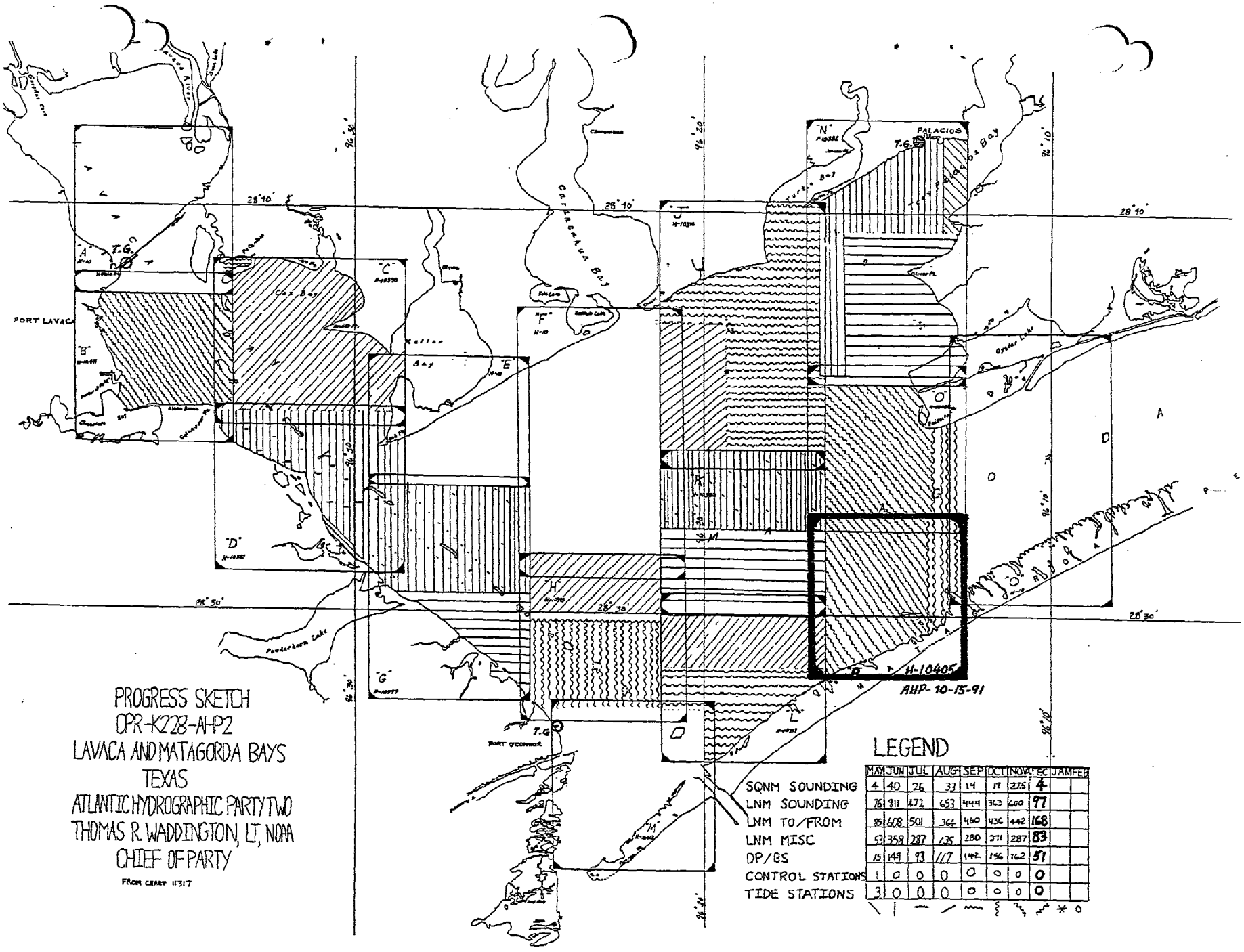
REMARKS: Time in UTC. Revisions and marginal notes in black were generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential

AWOIS/SURF 10/13/92 SJV

RWW 8/8/94

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

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



PROGRESS SKETCH
OPR-K228-AHP2
LAVACA AND MATAGORDA BAYS
TEXAS
ATLANTIC HYDROGRAPHIC PARTY TWO
THOMAS R. WADDINGTON, LT, NOAA
CHIEF OF PARTY

FROM CHART 11317

LEGEND

	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
SQNM SOUNDING	4	40	26	33	14	17	275	4		
LNM SOUNDING	76	311	472	653	444	363	600	97		
LNM TO/FROM	85	608	501	364	460	436	442	168		
LNM MISC	53	358	287	135	280	271	287	83		
DP/BS	15	149	93	117	142	156	162	57		
CONTROL STATIONS	1	0	0	0	0	0	0	0		
TIDE STATIONS	3	0	0	0	0	0	0	0		

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10405
Field No. AHP-10-15-91
Scale:1:10,000
Atlantic Hydrographic Party
Chief of Party: Lt. Thomas R. Waddington, NOAA
1991

A. PROJECT ✓

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

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

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

B. AREA SURVEYED ✓ See Evac Report, section I

The area surveyed for H-10405 is Matagorda Bay, from Greens Bayou to Halfmoon Reef. The geographic limits are as follows:

North	- Latitude	28°32'24"N
South	- Latitude	28°28'12"N
East	- Longitude	096°13'~~00~~15"W
West	- Longitude	096°17'00"W

This survey was conducted from October 8, 1991 (DN 281) to December 10, 1991 (DN 344).

C. SOUNDING VESSEL ✓

NOAA launch 0519 (EDP No. 0519), a 21-foot Mon Ark, was used to collect all data on this survey. No problems were encountered with this vessel.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

A list of all Hewlett-Packard HDAPS Programs used can be found in Appendix VI.*

Version 3.6 of the PC-DAS suite of programs was used for on line data acquisition on the survey vessel. In addition to the HDAPS, the following non-HDAPS computer programs were used:

VELOCITY (IBM PC) 1.11	3/9/90
MTEN3 with enhancements (IBM PC)	6/88

E. SONAR EQUIPMENT

Not applicable.

F. SOUNDING EQUIPMENT

An Innerspace model 448 depth sounder, serial number 186 was used to collect all echo soundings on this survey.

A standard lead line calibrated in meters, serial number 0519, was used during this survey for comparison readings with the echo sounder.

No problems were encountered with any of the sounding equipment. Depths encountered in the survey area range from 0.6 meter to 5.0 meters.

G. CORRECTIONS TO ECHO SOUNDINGS

Corrections for the speed of sound through the water column were computed from data obtained with an Odom Hydrographic Systems Inc., Digibar Model DB1100 speed of sound probe, serial number 155. This instrument was calibrated by the manufacturer on May 14, 1991. A copy of this calibration may be found in the Separates, section IV.* Additionally, simultaneous velocity casts were performed on May 29, 1991 with Digibar serial numbers 154 and 155 to ensure the units were operating properly.

Program "Velocity" was used for computing the speed of sound correctors. Speed of sound corrections were applied to the final field sheet soundings using the HDAPS "Reapply Depth Correctors" function of the "Post-Survey" program as required by the "Field Procedures Manual". Copies of the tables and support documentation are in the "Separates to be Included With Survey Data", section VI.*

* Filed with the hydrographic data.

The following speed of sound casts were taken on this survey:

Cast #	DATE	Latitude	Longitude	Depth
1**	10/9/91	28°32.0'N	096°15.0'W	3m
2	10/17/91	28°30.7'N	096°15.0'W	4m
3	11/6/91	28°30.0'N	096°16.0'W	4.5m
4	11/21/91	28°30.2'N	096°20.0'W	4m

** CAST #1 was extended to 5 meters with the PHS Velocity program.

Survey records were scanned by AHP-2 employees in accordance with the Hydrographic Manual. With the digital reading taking precedence over the analog trace, significant peaks and deeps which occurred between selected soundings, missed depths, incorrectly digitized soundings, and effects of sea and swell action were inserted or corrected, as appropriate, while scanning.

Lead line comparisons were taken daily to determine instrument error. No instrument error was observed. The lead line comparison log is included in the Separates* section IV. The lead line was calibrated on May 14, 1991 with a steel tape. No corrections were necessary. A copy of the calibration form can be found in the Separates* section IV.

A static draft of 0.3 meters was applied to the final field sheet soundings using the HDAPS "Reapply Depth Correctors" function of the "Post-Survey" program as required by the "Field Procedures Manual". The draft was measured by subtracting the difference from a punch mark on the side of launch 0519, 0.6 meters above the transducer, to the water surface.

Settlement and squat measurements for vessel 0519 were performed on November 8, 1990. The level method was used. Settlement and squat correctors were applied to the final field sheet soundings using the HDAPS "Reapply Depth Correctors" function of the "Post-Survey" program as required by the "Field Procedures Manual". Data from the settlement and squat test are included in the "Separates* to be Included With Survey Data", section IV. Settlement and squat correctors were recompiled during office processing as they were compiled wrong. See FVAC Report, section 1.

The final field sheet was plotted using predicted tides determined from Port O'Connor, Texas and correctors designated in zone "I" from section 5.9 of the project instructions. The values were applied direct in accordance with these instructions. It was noted that wind conditions during this survey (i.e., speed and direction), had a notable effect on the true water levels. These weather factors resulted in high water levels on down-wind shores and low water levels on lee shores.

* Filed with the hydrographic data.

Approved water levels were requested from the Sea and Lake Levels Branch, N/OMA12, in a letter dated 20 December, 1991. A copy is included in Appendix V.*

H. CONTROL STATIONS

The horizontal control datum for this project is the North American Datum of 1983. A signal list and a copy of the HDAPS Control Station Table is included in ~~Appendix III~~ this report.

The Coastal Surveys Unit from Norfolk, Virginia used the Global Positioning System (GPS) to establish horizontal control for this project. The horizontal control report titled "Matagorda Bay and Approaches Texas, GPS Survey, R. W. Daniel, Chief of Party. March 1991", was written and submitted by the Coastal Surveys Unit for OPR-K228-AHP.

I. HYDROGRAPHIC POSITION CONTROL

Survey Methods

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

The following Falcon Mini-Ranger equipment was used:

VESNO	EQUIPMENT	S/N	CODE
0519	RPU	E0146	
	R/T	E2951	
	R/S	C2067	0
	R/S	E2911	7
	R/S	F3237	8
	R/S	F3298	9
	R/S	C2075	A

Critical System Checks

When using three or four lines of position (LOP), a critical system check is being obtained each second by observing the error circle radius and residual values which are computed by the survey computer. For a 1:10,000 scale survey, the critical residual value is 5.0 meters and the critical error circle radius value is 15.0 meters. Position data exceeding these values were edited.

* Filed with the hydrographic data.

Mini-Ranger Falcon Calibrations ✓

Baseline calibrations were performed on June 18, 1991(DN 168), and August 12, 1991 (DN 224); baseline correctors were incorporated into the Comflex C-O table number two and applied directly to all "on-line" data. During final field office review of this survey, we discovered that the corrector for station 031 was erroneously entered as -1.30 instead of +1.30.** A point recomputation check of sample positions showed the positional error to be less than 1.2m. Data to which this error applies can be determined from the "Daily Header Abstract". All records of these calibrations and the "Daily Header Abtracts" are included in the "Separates to be Included with Survey Data"*, section III. A closing baseline calibration was not performed since the survey was conducted in less than a six month period from the opening baseline.

** Concur: Error not significant at survey scale.

J. SHORELINE See Final Report, section 2

Shoreline shown on the final field sheet was transferred by hand from TP-01646. This shoreline manuscript was compiled on NAD 1983. The shoreline manuscripts were compiled at 1:20,000 scale. They were enlarged to 1:10,000 scale for use with this survey. The shoreline that appears on the final sheet was drawn in blue ink as it was not accessible by the survey launch during hydrography. A visual inspection of the shoreline from the top of range lights in and near the survey area indicates the shoreline shown on TP-01646 to be accurate, and should supersede charted shoreline in all common areas, with the exception noted below.

The island that appears at latitude 28°28'50"N, longitude 096°15'50"W on TP-01646 could not be verified or disproved by lines of hydrography during this survey. The island was not seen visually during periods of low water and is therefore drawn in red as a shoreline change on the Final Sheet; it is recommended for charting as an uncovers area, in tint "a", section "C", page 17, of publication Chart No.1, dated Jan/90. Do not concur This feature was not drawn on the smooth sheet because the whole area is shallow, remove from chart

Field notes are located on the field sheets, the graphic records, and in the Daily Log, included as part of this survey.

K. CROSSLINES ✓

A total of 22 linear nautical miles of channel and cross-lines were run on H-10405. This is equivalent to 9.5% of the main scheme hydrography. Agreement is ≤0.3 meter when compared with the main scheme soundings, with occasional 0.5 meter variances noted; these are thought to be caused by discrepancies between actual and predicted tides as noted in section "G" of this report.

* Filed with the hydrographic data

L. JUNCTIONS See Final Report, section 5

This survey junctions with surveys H-10406 (Sheet O from OPR-K228) to the north, with H-10397 (Sheet L from OPR-K228) and H-10380 (Sheet K from OPR-K228) to the west and will junction with sheet Q from OPR-K228, scheduled for completion in 1992, to the east. These surveys are all 1:10,000 scale surveys from 1991-1992. Sheet K (H-10380, 1991) and L (H-10397, 1991) were recently conducted by the same survey vessel (launch 0519) within the same survey year and therefore have no 200 meter overlap. The near shore isobaths between this survey and H-10397 were found to agree well; there were no other common isobaths for comparison.

M. COMPARISON WITH PRIOR SURVEYS See Final Report, section 6

The present survey was compared to the following prior survey:

Survey NO.	Scale	Year
H-5866	1:20,000	1934-35

The following was noted during comparison:

- There are no AWOIS items on this survey originating from the prior survey. concur
- Bottom samples acquired on this survey agreed well with the prior survey. concur
- In general soundings acquired during H-10405 were found to be ≤0.3 meter shallower than the prior survey. concur
- As H-5866 was surveyed in feet and H-10405 was surveyed in meters there were no common isobaths for comparison.
- Neither the I.C.W. nor the Palacios channel existed on H-5866.
- Half Moon Reef Day Beacon (1934) on H-5866, is now charted as Fl R "2" (LL#34547), Halfmoon Reef Light, and is located at latitude 28°32'20.7"N, longitude 096°15'30.9"W. The shoalest depth recorded on Half Moon Reef on this survey was 2.1m at latitude 28°32'22.4"N, longitude 096°15'30.0"W versus 0.3m on the prior survey at this location. Bottom composition is broken shell.
- Shoreline shown on H-5866 is notably different than that presently existing; the shoreline depicted on TP-01646 appears to accurately represent existing shoreline.

► H-10405 revealed large shoal areas along Matagorda Peninsula, most notably in the general area of latitude ~~028°30.5~~ 28°29'30"N'N, longitude ~~096°14.0~~ 96°14'30"W to lat. 28°31'00"N, long. 96°12'00"W.

N. COMPARISON WITH THE CHART See Evnr Report, section 7

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

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

Three AWOIS items, numbers 5482, 5483, and 5484 were assigned as part of this survey. These are discussed in section VI of the "Separates to be Included with Survey Data". The discussions are attached to this report.

The following two uncharted features, considered dangers to navigation were identified on this survey.

► A submerged concrete buoy anchor was located at latitude 28°30'58.8"N, longitude 096°14'22.2"W. The least depth on this obstruction was 3.~~8~~4 meters at MLLW, corrected by ~~predicted~~ approved tides, in depths of 4.2 meters. The anchor is from a temporary buoy which originally served as the Matagorda Range "H" Front Light. A permanent structure has since replaced the buoy. The USCG was contacted regarding this obstruction, and confirmed it's existence. A local notice to mariners was not previously issued.

► An exposed wreck was located at latitude 28°31'06.6"N, longitude 096°12'36.4"W. The wreck, which lies in less than one meter of water, ~~bares~~ uncovers ~~1~~ 2.9 meters at MLLW, corrected with ~~predicted~~ approved tides, and is 3 meters long by 1 meter wide, with a destroyed wreck buoy nearby. The USCG was contacted; they had no knowledge of the wreck or the buoy marking it.

A copy of the danger to navigation report for these features is ~~in Appendix I of~~ attached to this report.

In general, charted soundings were found to be ≤0.3 meter shallower than this survey. This, in the hydrographers opinion, is caused from the scouring by prevailing winds, with the material being deposited along the Matagorda Peninsula. Conflicts with the statement in section m. See Evnr Report, sections 6 and 7.

The least depth found in the Intracoastal Waterway with a 3.6m (12 foot) controlling depth, was 4.2 meters at latitude 28°30'15.9"N, longitude 096°15'49.8"W. The course of the waterway, as it crosses sheet "P", is controlled by two ranges. They are the Matagorda Bay Range H and Range L, discussed in section "P" of this report.

A "shl to 9 ft 1981" note, charted at latitude 28°30'45"N, longitude 096°15'15", on chart 11317, 20th edition, but not shown on the small craft chart 11319 22nd edition should be deleted. Hydrography from this survey shows no evidence of shoaling in this area, with least depths of ~~4.0~~ 3.7 meters (~~13.1~~ 12.0 ft.) found in this area. Also see Expr Report, section 7.a. for additional discussion. Concur

The shoreline on the compared charts has not been updated to reflect the shoreline appearing on TP-01646, which visually appears to represent a more accurate depiction of presently existing shoreline. (See section J. for details and recommendations).

~~A~~ Two discontinued spoil areas charted 150-200 meters northwest of the Intracoastal Waterway between longitude 096°13'30"N and longitude 096°17'00"N, were developed with 50 meter line spacing. The charted spoil areas should be deleted, and representative soundings from this survey should be charted in these areas. Concur

Bottom samples agreed with those characteristics charted. Concur

There are no common isobaths for comparison as this survey was acquired in meters and the present charts are produced with soundings in feet. The coordinates and descriptions of all positioned items can be found in the Daily Log, which is included with the survey data*; it summarizes daily activity and includes photographs, and other useful information.

O. ADEQUACY OF SURVEY ✓

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

P. AIDS TO NAVIGATION ✓

Twelve floating aids to navigation are charted within the sheet limits of this survey. Eleven of these aids were located by detached positions. Matagorda Bay Intracoastal Waterway (ICW) Buoy GC "43" was noted missing on DN 282. This poses no danger to navigation. The local US Coast Guard Aids to Navigation Team was notified on 11 October 1991 about the missing buoy and informed the hydrographer that the buoy would be re-established. The buoy was still missing by the close of this survey. ICW Buoy GC"37" was inadvertently located as part of this survey, but was later found north of the sheet limits. This buoy will be plotted and discussed as part of survey H-10406, using the position obtained by launch 0519 on this survey. This buoy, C"37", is shown on this survey.

* Filed with hydrographic data.

All floating aids were found to serve the apparent purpose for which they were established. Geographic positions for the floating aids may be found in the "Daily Log" included as part of this survey* A comparison of their relative position between charted and surveyed is shown in the following table:

NAVAID	USCG LL Number	Distance and Direction from Charted Location
GC "39"	34530	330 meters northeast
GC "41"	34535	150 meters north northeast
GC "45"	34545	25 meters northeast
GC "47"	34565	70 meters southeast
GC "49"	34570	70 meters south
GC "53"	34575	30 meters south southwest
GC "57"	34580	50 meters southeast
GC "61"	34585	On Charted Station
GC "65"	34590	On Charted Station
GC "69"	34595	On Charted Station
GC "37"	34525	500 meters southeast

None of the buoys found off station pose a danger to navigation, as they are off station parallel to the axis of the channel, and still adequately mark it.

There are four non-floating aids charted within the limits of this survey. One, Matagorda Bay Range H Rear Light, USCG Light List number 34555, was located to Third Order, Class I standards by the Coastal Mapping Unit for use as control on this survey. The position for this light can be found as station 049 on the Control Station List in ~~Appendix III of~~ this report.

Matagorda Bay Range "H" Front Light was marked by a temporary buoy during first reconnaissance of the area in May, 1991. This buoy has been removed and a new structure has been built. The new structure was located by detached position number 008 at latitude 28°30'57.16"N, longitude 096°14'22.94"W (see photograph number 2 in the "Daily Log"). This aid will be positioned to third order, class I standards using GPS during the survey of sheet "Q"** The GPS equipment is presently in Rockville, Maryland for testing. See Func Report section 2

Likewise, Halfmoon Reef Light and Matagorda Bay Leading Light "J", both located by detached position only, will be positioned to third order, class I standards using GPS during the survey of sheet "Q"** See Func Report Section 2

** Sheet "Q" is H-10414

* Filed with the hydrographic data.

A comparison between the USCG Light List positions and surveyed positions is in the following table:

Non-Floating Aid	Survey Position	USCG LL Position
Half Moon Reef Lt LL# 34547 C.C. #139	28°32'20.67"N 096°15'30.88"W	28°32.3'N 096°15.5'W
Leading Lt "J" C.C. #200 LL#34560	28°31'38.12"N 096°13'39.40"W	28°31.7'N 096°13.7'W
Range "H" Front Lt C.C. #139 LL#34550	28°30'57.16"N 096°14'22.94"W	28°31.0'N 096°14.3'W
Range "H" Rear Lt C.C. #250 LL#34555	28°29 45.812"N 096°15 16.339"W	None Listed

No NOAA form 76-40's were submitted with this survey for the detached positions taken on the fixed aids to navigation. These forms will be submitted when the third order class I positions are obtained.

Form 76-40's not included with subsequent survey.

The light list shows Matagorda Range H Rear Light being 213.5° azimuth, 2935 yards (2684 meters) from the front light versus 213.5° azimuth, 2633 meters from an inverse computation using the survey positions above. The light list shows Matagorda Range K Rear Light being 235.0° azimuth, 2794 yards (2555 meters) from the front light versus 234.7° azimuth, 2558 meters from an inverse computation using the survey positions above.

There were no bridges, overhead cables, overhead pipelines, apparent submerged pipelines, or ferry routes within the limits of this survey. Correct

Q. STATISTICS ✓

Description	Quantities
Total Positions	1890
Total Nautical Miles of Hydrography	232
Sq. Nautical Miles of Hydrography	15.4
Days of Production	16
Detached Positions	18
Bottom Samples	36
Tide Stations	3
Current Stations	0
Velocity Casts	4

R. MISCELLANEOUS

Bottom samples were taken and submitted to the Smithsonian Institution as directed in Section 6.7 of the project instructions. 36 bottom samples were transmitted on October 10, 1991. Bottom sample positions and descriptions are plotted on the overlays submitted with this survey, and are listed on the Oceanographic Log Sheet-M, NOAA Form 75-44, which is included in Separates II.*

It should be noted that the sounding vessel used for this survey is limited by draft to approximately 0.6 meters on the keel line and is therefore limited in its ability to acquire sounding data in areas shallower than 0.6 meters.

S. RECOMMENDATIONS ✓

Specific recommendations concerning this survey are made in sections "J" and "N" of this report. With the exception of the positioning requirements for the three navaids discussed in section "P", no inadequacies, additional work, nor further investigations were identified after field work was completed.

T. REFERRAL TO REPORTS

Titles	Transmittal Information
(1991)Horizontal Control Report for OPR-K228-AHP2	Field Photogrammetry Section Norfolk, VA, N/CG233
(1991)Descriptive Report to Accompany Survey H-10380	Pacific Hydrographic Section N/CG 245, Seattle, WA
(1991)Descriptive Report to Accompany Survey H-10397	Pacific Hydrographic Section N/CG 245, Seattle, WA
(1992)Descriptive Report to Accompany Survey H-10406	Pacific Hydrographic Section N/CG 245, Seattle, WA

Submitted By: ATLANTIC HYDROGRAPHIC PARTY

* Filed with the hydrographic data.

AWOIS NO:5482

Item Description: WANDA,subm wreck in 3ft, existence doubtful

Source: CL1198/60--COE // CL1251/75--USPS

AWOIS Position: Lat - 28/30/25.99N Lon - 096/14/17.89W

Required Investigation: VS, BD, DI, SD----200m search radius

Affects Charts: 11316, 11317, 11319

INVESTIGATION

Date(s)/DN(s): 12-4-91/338 & 12-10-91/344
Position Numbers:1845-1848 // 1849-1890 Launch Number:0519

Investigation Used: VS, BD, ES Water Visibility: 2m

Position Determined By: Falcon Multiple Range (R/R)

Investigation Summary: A detached position was taken at the reported position of this item with no contact encountered. Main scheme sounding lines run in the area during the survey revealed no evidence of the reported item. A bottom chain drag conducted over the required search area revealed no snags or other contacts. The chain drag was conducted at no greater than 20 meter line spacing, with 40 feet of tow line deployed and 20 meters of chain between the trawl doors, at 1500rpm's.

CHARTING RECOMMENDATION

It is recommended that this item be deleted from the affected charts. Concur

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

Recommended Least Depth:

****

COMPILATION NOTES

Chart	Applied As

AWOIS NO: 5483

Item Description: Hulk of old Tugboat, in 5ft of water w/1ft above water. Not found at later date.
Source: CL1198/60--COE // CL1251/75--USPS

AWOIS Position: Lat - 28/30/25.99N Lon - 096/14/23.89W

Required Investigation: VS, BD, DI, SD -----200m search radius

Affected Charts: 11316, 11317, 11319

INVESTIGATION

Date(s)/DN(s): 12-4-91/338 & 12-10-91/344

Position Numbers: 1845-1848 /1849-1890 Launch Number: 0519

Investigation Used: VS, BD, ES Water Visibility:2m

Position Determined By: Falcon Multiple Range (R/R)

Investigation Summary: This item was addressed in a combined search with AWOIS item No. 5482, with the same results (See report for AWOIS No.5482).

CHARTING RECOMMENDATION

Recommend removal of this item from the chart as no contacts were encountered within the required search area. Concur

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

Recommended Least Depth:

****

COMPILATION NOTES

Chart	Applied As

AWOIS NO: 5484

Item Description: Subm 2 inch diameter pipe in 1 ft of water

Source: CL1198/60--COE // CL1251/75---USPS

AWOIS Position: Lat - 28/30/08.99N Lon - 096/14/13.89W

Required Investigation: BD, DI, SD -----100m search radius

INVESTIGATION

Date(s)/DN(s): 12-4-91/338

Position Numbers:None Launch Number: 0519

Investigation Used:M/S Water Visibility:

Position Determined By: Falcon Multiple Range (R/R)

Investigation Summary: This item was found to be inaccessible while running the main scheme hydrography in this area because of shallow water. No visual identification could be made of the reported item, nor are any other search methods possible. The hydrographer believes the pipe no longer exists because of age (31 years) and resulting deterioration. The submerged pipe is located in less than 0.5 meters of water. It does not present any danger to navigation. However, the subm. pipe has not been disproved. It should be retained as charted.

CHARTING RECOMMENDATION

Recommend this item be removed from the chart. Do not concur
Retain as charted

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

Recommended Least Depth:

****

COMPILATION NOTES

Chart Applied As

CONTROL STATIONS as of 8 Oct 1991

No	Type	Latitude	Longitude	H Cart	Freq	Vel	Code	MM/DD/YY	Station Name
001	F	028:39:08.751	096:33:48.618	0 250	0.0	0.0		05/08/91	ALCOA 1990
002	F	028:40:17.832	096:38:14.547	0 250	0.0	0.0		05/08/91	BLUF 1990
003	F	028:39:44.602	096:34:56.482	0 250	0.0	0.0		05/08/91	CAUS 1990
004	F	028:34:59.695	096:36:29.911	0 250	0.0	0.0		05/08/91	CHOC 1990
005	F	028:33:23.435	096:31:27.214	0 250	0.0	0.0		05/08/91	INDI 1990
006	F	028:30:25.466	096:28:47.523	0 250	0.0	0.0		05/08/91	IOLA 1990
007	F	028:41:53.224	096:34:34.010	0 250	0.0	0.0		05/08/91	LAVACA RIVER LIGHT 3
008	F	028:34:07.670	096:33:55.900	0 250	0.0	0.0		05/08/91	MAGNOLIA 1934
009	F	028:35:58.915	096:34:14.622	0 250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG C FRT LT
010	F	028:36:35.748	096:35:07.087	0 250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG C R LT
011	F	028:35:46.234	096:34:02.389	0 250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG D FRT LT
012	F	028:35:26.693	096:34:02.933	0 250	0.0	0.0		05/08/91	MATAGORDA SHIP CH RNG D R LT
013	F	028:38:45.468	096:33:40.338	0 250	0.0	0.0		05/08/91	MITCHELL 2 1956
014	F	028:38:23.410	096:36:38.092	0 250	0.0	0.0		05/08/91	NOLE 1990
015	F	028:39:26.182	096:35:09.367	0 250	0.0	0.0		05/08/91	PIER PK 1990
016	F	028:36:57.750	096:30:48.192	0 250	0.0	0.0		05/08/91	RHOD 1990
017	F	028:34:12.754	096:29:19.106	11 250	0.0	0.0		05/08/91	SAND 1990
018	F	028:43:17.942	096:36:36.067	0 250	0.0	0.0		05/08/91	VEDO 1990
019	F	028:38:37.047	096:33:47.871	0 250	0.0	0.0		05/08/91	ZEPP 1989
020	F	028:26:10.962	096:20:01.576	0 250	0.0	0.0		05/08/91	TEMP 01
021	F	028:27:39.775	096:17:46.171	0 250	0.0	0.0		05/08/91	OSGOOD 2 1906
022	F	028:35:28.458	096:11:22.074	2 250	0.0	0.0		10/04/91	LAKE 2 1906
023	F	028:40:34.424	096:16:14.007	0 250	0.0	0.0		05/08/91	TURT 1991
024	F	028:36:26.854	096:24:20.046	0 250	0.0	0.0		05/08/91	DUNG 1991
025	F	028:35:13.036	096:26:49.243	0 250	0.0	0.0		05/08/91	VACA 1991
026	F	028:23:56.880	096:24:25.771	0 250	0.0	0.0		05/08/91	RUIN 1991
027	F	028:32:20.572	096:18:44.039	0 250	0.0	0.0	0	05/08/91	PLAT PK 1991
028	F	028:41:52.040	096:12:37.980	0 250	0.0	0.0		05/08/91	PALA 1991
029	F	028:38:33.080	096:14:06.707	0 250	0.0	0.0		05/08/91	INDY 1991
030	F	028:35:08.620	096:17:11.588	10 250	0.0	0.0		05/08/91	CHAN PK 1991
031	F	028:34:45.983	096:13:33.884	0 250	0.0	0.0	A	05/08/91	EROD 1991
032	F	028:36:02.270	096:14:05.710	0 250	0.0	0.0		05/08/91	BULL 1991
033	F	028:26:58.573	096:24:12.880	0 250	0.0	0.0		05/08/91	EARL 1991
034	F	028:27:04.927	096:24:15.672	0 250	0.0	0.0		05/08/91	3701 E 1989
035	F	028:26:44.592	096:23:42.326	0 250	0.0	0.0		05/08/91	IW MB PORT O CONNOR LT 2
036	F	028:27:29.803	096:21:39.302	0 250	0.0	0.0		05/08/91	MATAGORDA SHIP CH N DREDGE LT
037	F	028:27:15.806	096:21:29.032	0 250	0.0	0.0		05/08/91	MATAGORDA SHIP CH S DREDGE LT
038	F	028:26:50.319	096:25:20.875	39 250	0.0	0.0	7	05/08/91	PORT O CONNOR MUN TANK
039	F	028:28:50.457	096:17:17.626	0 250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE L REAR LT
040	F	028:28:23.779	096:18:36.611	0 250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE L FRONT LT
041	F	028:27:50.192	096:19:46.085	0 250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE K FRONT LT
042	F	028:27:02.189	096:21:02.812	20 250	0.0	0.0	9	05/08/91	MATAGORDA BAY RANGE K REAR LT
043	F	028:27:01.247	096:21:11.033	0 250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE A REAR LT
044	F	028:26:33.966	096:20:41.967	0 250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE A FRONT LT
045	F	028:26:27.481	096:26:34.785	0 250	0.0	0.0		05/08/91	PORT O CONNOR CABLE TV MAST
046	F	028:25:18.493	096:19:05.925	0 250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE B REAR LT
047	F	028:25:50.351	096:20:07.986	0 250	0.0	0.0		05/08/91	MATA 1934
048	F	028:25:40.636	096:19:37.260	0 250	0.0	0.0		05/08/91	MATAGORDA BAY RANGE B FRONT LT
049	F	028:29:45.812	096:15:16.339	20 250	0.0	0.0	B	05/08/91	MATAGORDA BAY RANGE H REAR LT
050	F	028:38:33.045	096:19:19.991	0 250	0.0	0.0		05/08/91	TRULL SAT
051	F	028:43:28.302	096:15:09.749	0 250	0.0	0.0		05/08/91	PALAPORT
052	F	028:28:36.296	096:15:07.070	0 250	0.0	0.0		05/08/91	SMYTH SAT
053	F	028:30:56.832	096:10:21.410	0 250	0.0	0.0		05/08/91	POE 1934
054	F	028:39:16.000	096:13:41.524	0 250	0.0	0.0		05/24/91	COON 1991
055	F	028:31:52.769	096:18:43.190	0 0	0.0	0.0		00/00/00	

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Atlantic Hydrographic Party
439 W. York St.
Norfolk, VA 23510-1114

January 13, 1991

ADVANCE INFORMATION

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

Dear Sir:

While conducting basic hydrographic survey H-10405 to update nautical charts of Matagorda Bay, Texas, the following two uncharted features, considered dangers to navigation, were identified.

- A submerged concrete buoy anchor was located at latitude 28°30'58.8"N, longitude 096°14'22.2"W. The least depth on this obstruction was 12.5 feet (3.8 meters) at MLLW, corrected by predicted tides, in depths of 13.8 feet (4.2 meters). The anchor is from a temporary buoy which originally served as the Matagorda Range "H" Front Light. A permanent structure has since replaced the buoy.

- An exposed wreck was located at latitude 28°31'06.6"N, longitude 096°12'36.4"W. The wreck, which lies in less than 3.2 feet (1 meter) of water, bares 3.2 feet (1 meter) at MLLW, corrected by predicted tides, and is 10 feet (3 meters) long by 3 feet (1 meter) wide.

The geographic positions are in the North American 1983 Datum. These features were located by four lines of position from Motorola Falcon Mini-Ranger electronic positioning system units set up on third order, class 1, ground control stations. Depths were corrected for predicted tides at Port O'Connor, Texas. This information affects charts 11317, 20th edition, March 23, 1991, chart 11319, 22nd edition, February 10, 1990, and chart 11316, 33rd edition, January 1991.

Attached is a copy of the affected section of chart 11317.

Questions regarding this letter can be directed to me or CDR. Christopher B. Lawrence at telephone (804)441-6746.

Sincerely,

Thomas R. Waddington

Thomas R. Waddington, LT, NOAA
Chief, Atlantic Hydrographic Party

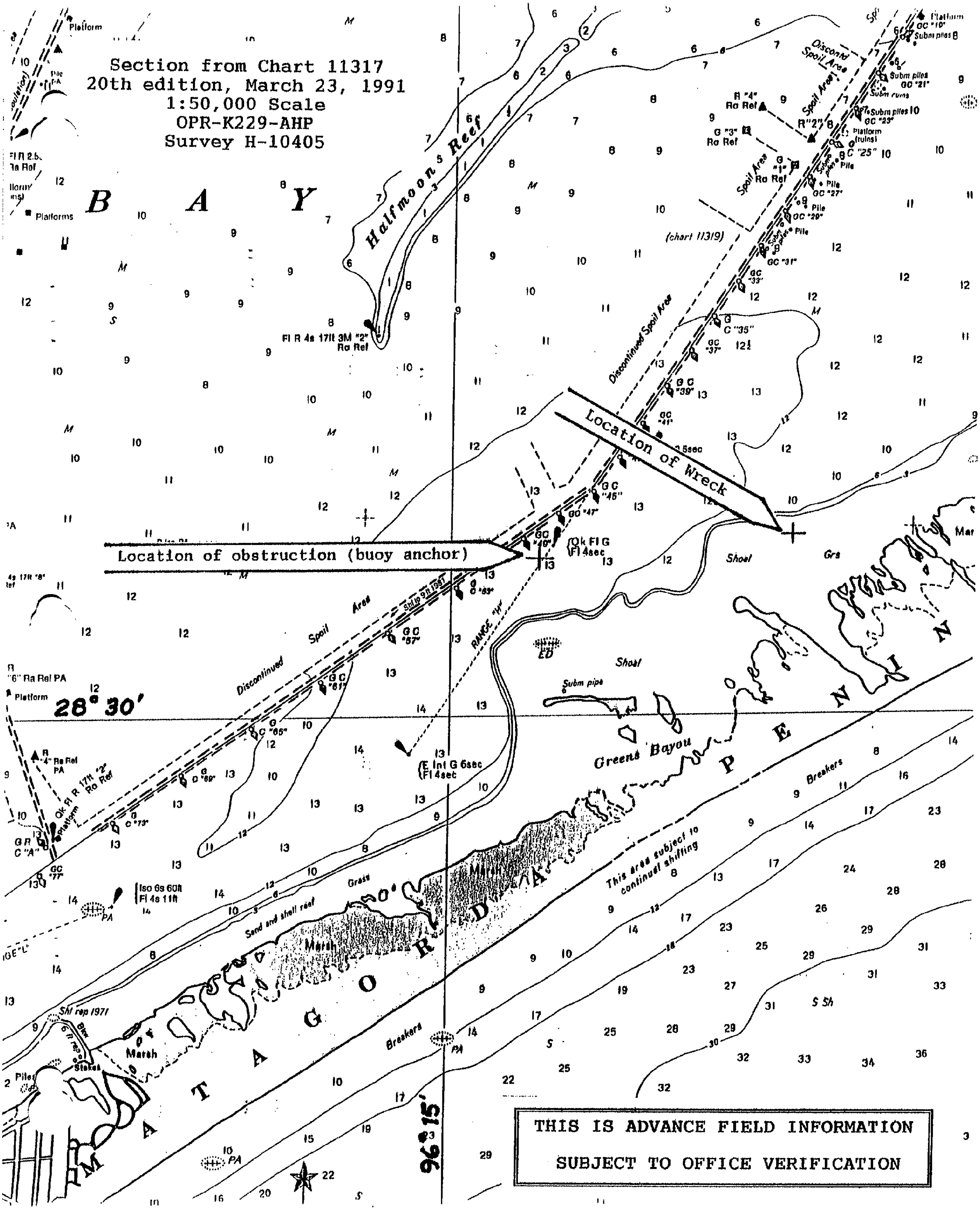
Enclosure

cc: N/CG241
N/CG221
N/CG2441
DMAHTC

THIS IS ADVANCE FIELD INFORMATION

SUBJECT TO OFFICE VERIFICATION

ADVANCE
INFORMATION



Section from Chart 11317
20th edition, March 23, 1991
1:50,000 Scale
OPR-K229-AHP
Survey H-10405
Location of Wreck
Location of obstruction (buoy anchor)
THIS IS ADVANCE FIELD INFORMATION
SUBJECT TO OFFICE VERIFICATION
B A Y
Halfmoon Reef
Discontinued Spoil Area
Discontd Spoil Area
Spoil Area
(chart 11319)
Greens Bayou
Shoal
Subm pipe
Sand and shell reef
Marsh
Breakers
This area subject to continual shifting
M A T A G O R D A
P E N I N
28° 30′
96° 15′

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-K228/91-3
AHP-10-15-91
H-10405
1991

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

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

Thomas R. Waddington
Lieutenant, NOAA
Chief, Atlantic Hydrographic Party

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

ORIGINAL

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: February 4, 1992

MARINE CENTER: Pacific

OPR: K228

HYDROGRAPHIC SHEET: H-10405

LOCALITY: Matagorda Bay, Greens Bayou to Halfmoon Reef, TX

TIME PERIOD: October 8 - December 10, 1991

TIDE STATIONS USED: 877 3701 Port O'Connor, TX
Lat. 28° 27.2'N Lon. 96° 24.3'W

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

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.9 foot

REMARKS: RECOMMENDED ZONING

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

NOTE: Hourly heights are tabulated on Central Standard Time.

CHIEF, DATUMS SECTION

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-10405

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO. H-5866	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 TP-01646	
FENCE BAYOU	(b)								X	1
GREENS BAYOU	(ab)								X	2
HALFMOON REEF	(ab)									3
HILBERTS BAYOU	(b)								X	4
MATAGORDA BAY	(ab)	X							X	5
MATAGORDA PENINSULA	(ab)	X						X		6
TEXAS (TITLE)										7
*(a) 11317, 20th Ed										8
(b) 11319, 22nd Ed										9
										10
										11
										12
										13
										14
										15
				Approved:						16
				Charles C. Hartington						17
				Chief Geographer - NOS/CGS						18
										19
				MAR 20 1992						20
										21
										22
										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-10405

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	6
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	4

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	1					
ENVELOPES						
VOLUMES						
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			1890
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	36		36
VERIFICATION OF SOUNDINGS	69		69
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	10		10
COMPARISON WITH PRIOR SURVEYS AND CHARTS		6	6
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		14	14
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	115	20	135

Pre-processing Examination by D. Hill	*Beginning Date* 1/29/92	*Ending Date* 2/7/92
Verification of Field Data by J. Griffin, R. Davies	*Time (Hours)* 115	*Ending Date* 8/4/92
Verification Check by J. Green, B. Olmstead	*Time (Hours)* 21	*Ending Date* 7/22/92
Evaluation and Analysis by R. Davies	*Time (Hours)* 20	*Ending Date* 8/4/92
Inspection by D. Hill	*Time (Hours)* 4	*Ending Date* 9/23/92

EVALUATION REPORT

H-10405

1. INTRODUCTION

Survey H-10405 is a basic hydrographic survey accomplished by the Atlantic Hydrographic Party 2 under the following Project Instructions.

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

This survey was conducted in Texas and covers the area from Greens Bayou to Halfmoon Reef. The surveyed area is bounded by latitude 28/28/12N to the south, latitude 28/32/24N to the north, longitude 96/12/15W to the east and longitude 96/17/00W to the west. The near shore area is gently sloping with the shoreline consisting of marsh areas and the entrance to several bayous. The bottom consists of mud and sand. Depths generally range from 0.6 meters to 4.8 meters.

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

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The electronic control correctors are adequate. Velocity table 11 had a maximum depth of 3.9 meters and was extended to 5 meters with the PHS velocity program. The TRA correctors were changed during office processing because of wrong settlement and squat correctors. An accompanying computer printout contains the parameters and the correctors.

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

2. CONTROL AND SHORELINE

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

GPS and Terrestrial Survey, San Antonio and Lavaca Bays, Texas, October 1990;
Field Report, Matagorda Bay, Texas and vicinity , January 23, 1989 to March 13, 1989;
Fixed Aids to Navigation and Landmark Features, Photogrammetric Survey CM-8715, Matagorda Bay and Vicinity.

In addition to these reports refer to the memorandum, Third-Order NAVAID Positions for OPR-K228-AHP, dated July 23, 1992 (copy filed with the survey records). This report

contains position information for various aids to navigation throughout the project area. The positions are considered to be of preliminary Third-Order quality which have not been office reviewed. The following aids were located during this survey and their geographic positions have been revised in the H-10405 digital record to the value noted below.

	Latitude(N)	Longitude(W)
Matagorda Bay Range H Front Light	28/30/57.10	96/14/22.86
Half Moon Reef Light 2	28/32/20.56	96/15/30.86

Positions of horizontal control stations used during hydrography are 1989, 1990 and 1991 field values based on NAD 83. These values were used during office processing for the computation of positions. The smooth sheet and accompanying overlays are annotated with NAD 27 adjustment ticks based on values determined with NGS program NADCON. Geographic positions based on NAD 27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: 0.997 seconds (30.682 meters)
Longitude: 0.891 seconds (24.233 meters)

The year of establishment of control stations shown on the smooth sheet originates with the above mentioned horizontal control reports and the hydrographer's signal list.

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

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

	Photo Date	Class	Scale
TP-01646	Feb., Mar. 1989	III	1:20,000

3. HYDROGRAPHY

Except where noted below and elsewhere in this report, hydrography is adequate to:

a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;

b. reveal there are no significant discrepancies or anomalies requiring further investigation; and

c. show the survey was properly controlled and soundings are correctly plotted.

The hydrographer was apparently unable to define the zero depth curve due to shallowness which prevented an approach by boat. This area ranged from 200 to 700 meters offshore of the Matagorda Peninsula.

A brown depth curve was drawn on survey H-10405 to emphasize the 3 meter depth curve in the vicinity of Half Moon Reef. The channel of the Intracoastal Waterway was also delimited by a brown depth curve at the 4.5 meter depth.

4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, and the Field Procedures Manual, April 1990 Edition.

5. JUNCTIONS

Survey H-10405 junctions with the following surveys.

Survey	Year	Scale	Area
H-10380	1991	1:10,000	West
H-10397	1991	1:10,000	West
H-10406	1991-92	1:10,000	North
H-10414	1992	1:10,000	East

The junction the survey H-10397 is complete.

The junction with survey H-10380 could not be formally completed since this survey was previously processed and forwarded for charting. The junction comparison was made using an office copy. The soundings are in good agreement.

The junction with surveys H-10406 and H-10414 could not be accomplished because these surveys are still in office processing. The junctions with these two surveys will be addressed in the Evaluation Report for these surveys. A comparison with this survey and the charted depths reveals good agreement.

6. COMPARISON WITH PRIOR SURVEYS

H-5866 (1934-35) 1:20000

Generally soundings acquired during survey H-10405 are 0.4 meters shoaler close to shore and 0.2 meters deeper offshore than the prior survey. The bottom samples agreed well with the description of those of the prior survey. The shoreline of survey H-5866 is notably different north of latitude 28/29/30N, than the present survey. This difference has likely been caused by natural accretion and erosion through storms over the years. The shoreline of TP-01646 appears accurate.

There are no AWOIS items which originate from the prior survey.

Survey H-10405 is adequate to supersede this prior survey within the common area.

7. COMPARISON WITH CHART

Chart 11317, 20th edition, dated March 23, 1991; scale 1:50,000
Chart 11319, 23rd edition, dated November 30, 1991; scale 1:40,000

a. Hydrography

Charted hydrography originates with survey H-5866 and miscellaneous sources.

A note, Shl to 9 ft 1981, charted at latitude 28/30/45N, longitude 96/15/15W, should be deleted. Hydrography from this survey shows a least depth of 4.0 meters (13.1 ft) in that area.

However, there are some 3.0 to 3.3 meter (9.8 to 10.8 ft) depths southwest of the charted note. The adjacent Intracoastal Waterway is clear to depths in excess of the 12-foot project depth.

Survey H-10405 is adequate to supersede charted hydrography within the common area, except for a submerged pipe charted at latitude 28/30/08.99N, longitude 96/14/13.89W. This submerged pipe, AWOIS item 5484, should be retained.

b. AWOIS

All AWOIS items within the survey area originate with miscellaneous sources. Refer to the hydrographer's report, for the discussions and disposition of these features.

c. Controlling Depths

The Intracoastal Waterway is a federally maintained channel located within the area of this survey. The depths found during this survey are consistent with or deeper than the charted controlling depths.

d. Aids to Navigation

With the exception of Matagorda Bay Range H Rear Light and Half Moon Reef Light 2, all aids to navigation were located using hydrographic methods. The positions of these aids can be found in the hydrographer's report, section P. These aids serve their intended purpose. Matagorda Bay Intracoastal Waterway Buoy GC "43" was noted missing and this information was forwarded to the USCG.

There are no landmarks within the area of this survey.

e. Geographic Names

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

f. Dangers to Navigation

The hydrographer reported two dangers to navigation to the USCG and N/CG222. A copy of the report is attached. No additional dangers were generated during office processing.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10405 adequately complies with the Project Instructions except where noted in this report.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. No additional field work is recommended.

Charles R. Davies

C. R. Davies
Cartographer

APPROVAL SHEET
H-10405

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: 9-23-92

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

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

Douglas G. Hennick Date: 9/23/92

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

****

Final Approval

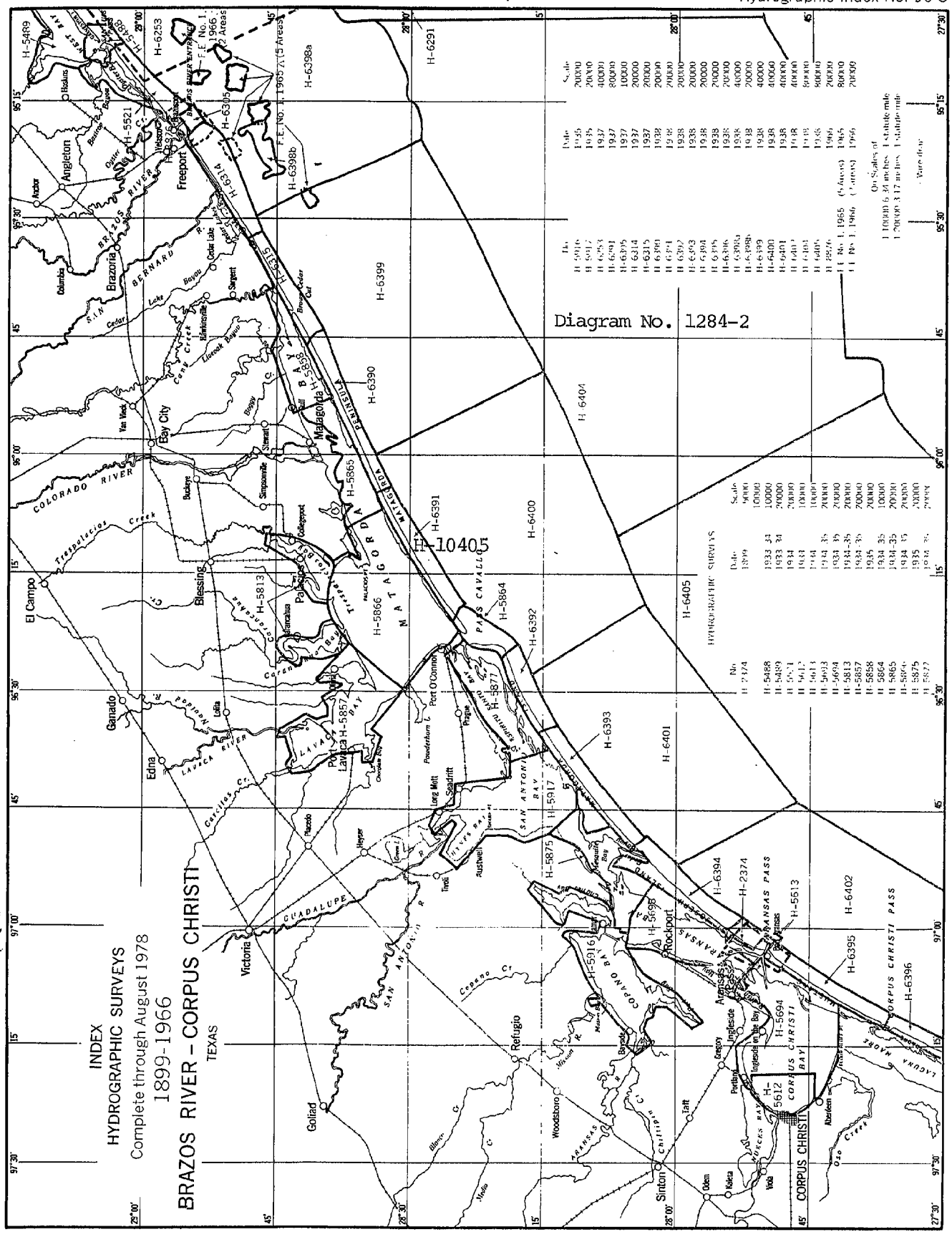
Approved:

J. Austin Yeager Date: 8/8/94

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

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

Hydrographic Index No. 90 C



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- 10405

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
11319B	10/22/92	John Barber	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. ~~23~~ 24 in full
11317	5/12/93	L. Ackerman	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 22 Thru chT 11319
11316	6/23/93	L. Ackerman	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 50, Thru chT 11317
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.