

H10586

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-10-14-94
Registry No. H-10586

LOCALITY

State TEXAS
General Locality..... GALVESTON BAY
Sublocality BACLIFF TO RED BLUFF

19 96

CHIEF OF PARTY

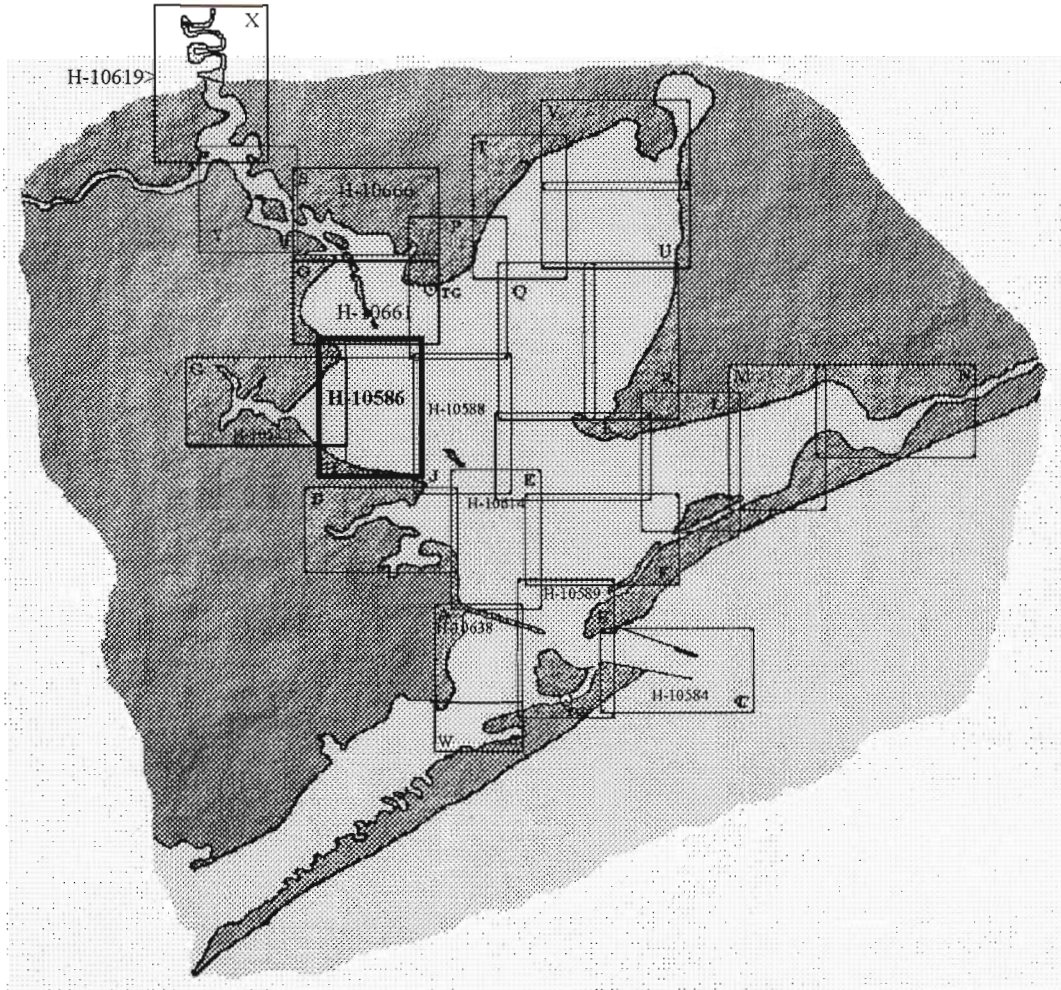
LT. J. A. ILLG, NOAA

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NOAA FORM 77-28 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION HYDROGRAPHIC TITLE SHEET	REGISTER NO. H-10586
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 10-14-94
State <u>Texas</u> General Locality <u>Galveston Bay</u> Locality <u>Bacliff to Red Bluff</u> Scale <u>1:10,000</u> Date of Survey <u>December 14, 1994 - June 5, 1996</u> Instructions Dated <u>September 16, 1994</u> Project No. <u>OPR-K204</u> Vessel <u>NOAA Launch Nos. 1292</u> Chief of Party <u>James A. Illg, Lieutenant, NOAA</u> Surveyed By <u>Atlantic Hydrographic Party</u> Soundings taken by echo sounder <u>Innerspace 448</u> Graphic record scaled by <u>GDH, RTB, SAS, CEP **</u> Graphic record checked by <u>GDH, RTB, SAS, CEP **</u> Protracted by <u>HDAPS</u> Automated plot by <u>CalComp TechJET Color GT plotter (AHB)</u> <u>Bruning ZETA 824A (Field)</u> Verification by <u>Atlantic Marine Center Hydrographic Branch Personnel</u> Soundings in ^{FT} meters at <u>MLLW</u>	
REMARKS: <u>** GDH - Glenn D. Hendrix</u> <u>RTB - Rick T. Brennen</u> <u>SAS - Scot A. Shaulis</u> <u>CEP - Castle E. Parker</u> <u>Notes in Descriptive Report were made in red during</u> <u>office processing</u> <u>4wais/SURF 2/22/98</u> <u>mcr</u>	

Atlantic Hydrographic Party
Galveston Bay
OPR-K204-AHP
Index of Sheets



DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10586
FIELD NO. AHP-10-14-94
SCALE: 1:10,000
1994-96
ATLANTIC HYDROGRAPHIC PARTY
CHIEF OF PARTY: LT James A. Illg

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K204-AHP, Galveston Bay, Texas dated September 16, 1994, change No. 1, dated June 6, 1995, change No. 2 dated October 26, 1995, and change No. 3 dated April 3, 1996. This survey is designated as Sheet "H" on the sheet layout dated September 6, 1994.

Project OPR-K204-AHP is in response to requests from the Houston Pilots Association, Houston/Galveston Navigation Safety Advisory Committee, West Gulf Maritime Association, Houston Safe Boating Council, Inc., and the U. S. Coast Guard, for updated hydrographic and bathymetric data of this area for use in proposed studies and in the creation of new charts. Prior surveys in this area were conducted in the years between 1962-1965.

B. AREA SURVEYED

The area surveyed for H-10586 covers Galveston Bay offshore of the Clear Lake entrance and from Bacliff to the south, northward to Red Bluff. The approximate survey limits are:

North	-	Latitude	29°36'26"N
South	-	Latitude	29°29'51"N
West	-	Longitude	094°59'58"W
East	-	Longitude	094°55'17"W

This survey was conducted from December 14, 1994 (DN 348) to June 5, 1996 (DN 157).

C. SURVEY VESSELS

Vessel 1292, (EDP No. 1292), a 21-foot MonArk was the vessel used to collect all survey data. There were no unusual vessel configurations nor problems encountered.

D. AUTOMATED DATA ACQUISITION AND PROCESSING *See also Evaluation Report*

The Hydrographic Data Acquisition and Processing System (HDAPS) was used to process all hydrographic data for this survey. PC-DAS version 4.03 was used for on-line data acquisition until October 1995 and thereafter Coastal Oceanographics, Inc. Hypack for Windows version 5.9 was used to collect all remaining hydrographic data for this survey. A listing of HDAPS programs used for data processing and their corresponding version numbers is appended to this report. *

The "assign fix" function of the program QUICK EDIT, was used to assign position numbers to the beginning or ending of a line as needed.

The following non-HDAPS computer programs were used:

VELOCITY (IBM PC)	Ver. 2.0 (12/18/92)
NADCON (IBM PC)	Ver. 1.01
WordPerfect (IBM PC)	Ver. 6.0

E. SONAR EQUIPMENT

Side scan sonar (SSS) operations were conducted using an EG&G model 260 slant-range corrected SSS recorder, S/N 11443 and an EG&G 272-T dual-channel, single frequency towfish, S/N 10696. The towfish was operated on the 100-kHz frequency and was configured with a 20° beam depression. The side scan was used for AWOIS items and charted feature investigations only

On launch 1292 the towfish was deployed using a solid pipe to mount the towfish off the starboard side of the launch. The towfish cable was threaded through the end of the pipe and secured to the launch cleat with a line. The towfish was towed with vinyl-coated Kevlar cable and was connected to the recorder via a slip ring assembly.

Side scan sonar data were collected utilizing the 25-meter range scale. In order to acquire the required 200% SSS coverage, each 100% of coverage was run at 40-meter line spacing with a 20-meter line offset used on the second 100%. Adequate coverage was determined by producing two separate swath plots and ensuring 100% coverage on each plot. All side scan sonar data was designated as Not for Smooth Plot (NSP). A side scan sonar swath plot is included with the field sheets.

The towfish was maintained at a constant depth of 1 meter by the way it was mounted. Confidence checks were performed on a routine basis, primarily by noting changes in bottom texture on

the outer edges of the sonargram, and on the aids to navigation in the survey area.

All significant contacts were measured off the sonargrams, scaled manually and then hand plotted. Contacts were not investigated nor least depths determined because of time constraints and equipment failures.

F. SOUNDING EQUIPMENT

An Innerspace model 448 depth sounder, serial number 188, was used to collect soundings from day 348 (1994) through day 102 (1995). Serial number 187 was used for the remainder of the survey, day 338 (1995) through day 157 (1996).

A standard lead line calibrated in meters, serial number 1292, was used during this survey for comparison readings with the echo sounder. A 5-meter long wooden sounding pole, marked according to Hydrographic Survey Guideline (HSG) No. 69, was used to obtain any pole soundings.

G. CORRECTIONS TO SOUNDINGS

The Innerspace model 448 depth sounder 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 Sea-Bird Electronics, Inc. SeaCat, serial number 192276-0287. Data quality assurance tests were performed in accordance with Field Procedures Manual (FPM) 2.1.3.2, prior to each cast. Program VELOCITY, version 2.0, was used to compute speed of sound through water corrections. Copies of the velocity tables and cast data are in the "Survey Separates." * Data filed with original field records

Correctors for the velocity of sound through water were determined from the casts listed below:

<u>Velocity Table No.</u>	<u>Cast No</u>	<u>Actual/Deepest Depth (m)</u>	<u>Applicable DN</u>	<u>Cast Position</u>	<u>Day</u>
<u>1995</u>					
1	1	4.1/5.3	348-020	29°35'00"N 094°56'20"W	010
2	2	13.9/18.1	024-025	29°33'32"N 094°54'55"W	026

3	3	14.0/18.2	030-034	29°34'50"N 094°55'59"W	032
4	4	7.8/10.1	038-040	29°31'47"N 094°53'37"W	040
5	5	14.1/18.4	047-052	29°31'50"N 094°53'40"W	052
6	6	14.6/19.0	058-062	29°34'34"N 094°55'41"W	058
7	7	13.4/17.4	079-083	29°33'58"N 094°55'15"W	080
8	8	3.2/4.1	093-102	29°33'00"N 094°59'59"W	102
15	15	10.1/13.1	338-348	29°31'10"N 094°53'08"W	340

1996

16	16	14.0/18.2	009-029	29°33'00"N 094°54'30"W	011
19	19	14.2/18.4	036-037	29°42'03"N 095°00'25"W	038
20	20	14.3/18.6	044-046	29°42'09"N 095°00'47"W	043
21	21	13.5/17.6	051-053	29°42'02"N 095°00'15"W	051
24	24	3.0/3.9	100-117	29°34'00"N 094°56'00"W	115
25	25	3.0/3.9	121-157	29°33'06"N 094°53'27"W	124

The Innerspace model 448 depth sounder does not require adjustments for the tides, launch draft, or speed of sound. Changes to the gain and/or chart speed were noted on the echogram. Digitized soundings agreed with the analog trace

within 0.1 meter. Necessary corrections were made while scanning the echogram.

Weather permitting, lead line comparisons were conducted each day in accordance with FPM 2.1.3.1. No instrument error was detected from these comparisons. The lead line comparison form can be found in the "Survey Separates." *

A static draft of 0.3 meter was applied to the on-line data. The draft was measured by subtracting the difference from a punch mark on the side of Launch 1292, 0.6 meters above the transducer, to the water surface.

Settlement and squat measurements were performed on March 31, 1993 (DN 090), at Pensacola, Florida and on June 14, 1995 (DN 165), at Annapolis, Maryland using Zeiss level S/N 08754. Settlement and squat correctors and the static draft corrector were applied on-line through the offset tables. Copies of the field data, the graphs of the settlement and squat correctors vs. speed, and the offset table are included in the "Survey Separates." *

The Galveston Pier 21 tide station (877-1450) served as control for datum determination. This station is also the reference station for the predicted tides which were applied to the final field sheet. This survey required time correctors of +3 hr 00 min at high water, +4 hr 30 min at low water and a range ratio of x0.71 to be applied to the predicted tides.

The final field sheet was plotted after reapplying the correctors to each data record using the HDAPS program REAPPLY.

Approved tides were requested from the Sea and Lake Levels Branch, N/OES231, in a letter dated November 11, 1996. A copy of the letter is appended to this report. *Approved tides and zoning were applied during office processing.*

H. CONTROL STATIONS *See also Evaluation Report*

The horizontal control datum for this project is the North American Datum of 1983. One station, the USCG Differential GPS (DGPS) Beacon at Galveston, Texas (029°19'45.092"N, 094°44'10.484"W) was used to control this survey.

I. HYDROGRAPHIC POSITION CONTROL

Differential GPS was used as the method of positioning for all hydrographic data on this survey. The Galveston Beacon Transmitter at Galveston, Texas was used in conjunction with MBX-1 Beacon Data Receiver, model s/n X-1085 and antenna s/n MBA-

** Data filed with original field records.*

M1028, for the reference station. An Ashtech sensor, s/n 700417B1207, was used as the remote station on vessel 1292. This equipment met or exceeded third-order, class I standards. Performance checks were conducted daily by resting the launch alongside station CAL 1 1994. The raw record and the abstract of these checks are included in the "Survey Separates." * The calibration point was established by measuring a single GPS baseline, between a third-order, class I station and the calibration point. The computations for CAL 1 1994, are included in the "Survey Separates." *

Occasionally, a good position misplotted on the raw track plot. This problem was attributed to good DGPS data following a period of questionable DGPS data. These positions were reviewed, then edited or rejected as necessary.

J. SHORELINE *See also Evaluation Report*

Shoreline shown on the boat sheets was transferred by hand from shoreline manuscript CM-9210 - Galveston Bay, TX, DM-10232. This manuscript was compiled using NAD 1983 at 1:20,000 scale and enlarged to 1:10,000.

Shoreline shown on the final sounding plots was plotted by the Bruning Zeta using the HDAPS plotting program. The digital shoreline was supplied by the Hydrographic Surveys Division Operations Section (N/CS31). The source document was CM-9210. This manuscript was compiled using NAD 1983 at 1:20,000 scale and enlarged to 1:10,000.

Shoreline verification was conducted using main scheme hydrography that junctioned at shore, detached positions, or by visual inspection. Verified shoreline is shown in black ink on the field sheet. Existing piers and other shoreline features which agreed with the shoreline manuscript were given reference numbers, while piers and other shoreline features not shown were located by detached positions and are shown in red on the field sheet. A complete list of all detached positions by day is included in the accordion file for this survey.

The hydrographer recommends that details seaward of the HWL from this survey be used to supersede DM-10232 in the common area.

The following features were identified on this survey and did not appear on the T-Map.

<u>Position</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Description</u>
466	29°30'01.36"N	094°55'44.12"W	pier ruins - retain as charted
467	29°30'01.51"N	094°55'45.80"W	pier ruins - retain as charted

* Data filed with original field records

468	29°30'01.58"N	094°55'46.34"W	pier ruin - retain as charted
469	29°30'01.39"N	094°55'50.01"W	pier ruins
897	29°30'14.08"N	094°56'33.98"W	pier ruins
902	29°30'19.07"N	094°56'54.54"W	pier ruins - retain as charted
1301	29°30'31.29"N	094°57'58.10"W	groin chart groin
1302	29°30'31.37"N	094°57'56.74"W	groin chart groin
1782	29°30'46.43"N	094°58'33.43"W	pier ruins - retain as charted
1795	29°30'44.36"N	094°58'43.85"W	boat ramp - chart ramp
1802	29°31'00.00"N	094°59'15.68"W	ruins - retain as charted
1804	29°30'58.42"N	094°59'14.65"W	pier - chart pier
1806	29°30'57.12"N	094°59'10.55"W	pier chart pier
1810	29°31'12.78"N	094°59'35.40"W	pier chart pier
2352	29°31'22.32"N	094°59'46.16"W	pier - retain as charted
2356	29°31'15.00"N	094°59'44.74"W	breakwater
2358	29°31'13.93"N	094°59'42.83"W	breakwater } retain as charted
2359	29°31'12.67"N	094°59'40.94"W	breakwater } retain as charted
2360	29°31'12.10"N	094°59'39.50"W	brkwater ruins retain as charted ^{charted}
2361	29°29'58.24"N	094°55'35.89"W	pier ruins retain as charted
2364	29°29'56.74"N	094°55'33.46"W	pier - chart pier
2366	29°29'56.05"N	094°55'28.48"W	pier ruins retain as charted
2367	29°29'55.80"N	094°55'26.59"W	Pier/ boathouse ruins -
2368	29°29'56.17"N	094°55'24.88"W	pier ruins -
2370	29°29'55.38"N	094°55'21.81"W	pier ruins - retain as charted
2371	29°29'54.43"N	094°55'22.57"W	pier ruins - show ruins
2373	29°29'53.65"N	094°55'17.65"W	pier ruins retain as charted
2376	29°29'53.91"N	094°55'15.53"W	pier ruins
2377	29°29'54.05"N	094°55'16.13"W	pier ruins retain as charted
2566	29°35'17.89"N	094°59'37.35"W	boat ramp
2569	29°35'04.79"N	094°59'50.85"W	boat ramp } chart ramps

The following are features shown on the T-Map as piers but identified as pier ruins.

<u>Position</u>	<u>Latitude</u>	<u>Longitude</u>	
478	29°30'07.26"N	094°56'10.77"W	- concur - chart ruins
1297	29°30'34.44"N	094°58'01.55"W	- chart ruins retain as ^{charted}
1776	29°30'38.55"N	094°58'26.35"W	retain as charted
2357	29°31'16.02"N	094°59'41.90"W	chart ruins
2362	29°30'00.44"W	094°55'33.89"W	} retain as charted
2372	29°29'53.11"N	094°55'17.42"W	
2375	29°29'55.79"N	094°55'20.86"W	

The following are results from the investigation of T-map features:

The obstruction shown at 29°35'¹⁶48"N, 094°59'¹⁷01"W is a charted pile. Detached position number 148 was taken on day 020 and the pile should be charted at that location. *concur - Retain as charted*

The obstruction shown at 29°30'22"N, 094°57'18"W does not exist. Detached position number 909 was taken in the vicinity of the obstruction and the survey launch was aground at this point. The water was very shallow from that point to shore. Nothing was seen in this area. Do not chart. *concur Delete 0*

The obstructions shown at 29°30'18"N, 094°57'07"W and 29°30'18.5"N, 094°57'03"W are concrete rip-rap along shore. The water was too shallow to get anywhere near the obstructions for a detached position. Chart rip-rap at the locations shown on the T-Map. *concur Delete 0 Add --- rip rap*

The obstruction shown at 29°30'^{20.5}24"N, 094°57'^{02.6}03"W does not exist. A 50- meter radius area was visually searched from 0.8 meter of water to near shore with good visibility of the bottom, nothing was found. The area was searched during investigation of shoreline features in the area. Do not chart. *concur. Delete 0 - Add --- ruins*

The obstruction shown at 29°30'17"N, 094°56'49"W is the offshore end of a pier in ruins. Detached position number 905 was taken on day 032. The ruins should be charted. *concur Delete 0 chart --- ruins*

The obstruction shown at 29°30'15"N, 094°56'38"W is a boathouse in ruins. Detached position number 894 was taken on day 032. This feature should be charted. *concur Delete 0 - chart --- ruins*

The obstruction shown at 29°30'12"N, 094°56'36"W is the offshore end of a pier in ruins. Detached position number 895 was taken on day 032. This feature should be charted. *concur Delete 0 chart --- ruins*

The obstruction shown at 29°30'34"N, 094°57'34"W is a three pile dolphin. Detached position number 907 was taken on day 032. This feature should be charted. *Retain as charted - add notation Dol*
concur

The obstruction shown at 29°30'29"N, 094°57'22"W is a three pile dolphin. Detached position number 908 was taken on day 032. This feature should be charted. *concur - Retain as charted - Add notation Dol*

The obstruction shown at 29°30'10"N, 094°56'17"W is the offshore end of a pier in ruins. Detached position number 483 was taken on day 026. This feature should be charted. *concur Delete 0*
Add --- ruins

The obstruction shown at 29°30'06.5"N, 094°56'13"W is a breakwater. Detached position numbers 480 and 481 were taken on day 026. This feature should be charted. *Concur Delete Chart - bkW*

The obstruction shown at 29°30'05"N, 094°56'06"W is the offshore end of a pier in ruins. Detached position number 476 was taken on day 026. This feature should be charted. *Delete Chart Retain ruins as Concur*

The obstruction shown at 29°30'58"N, 094°59'15.5"W does not exist. A 50-meter radius area was visually searched from near shore out to 0.8 meter of water with good visibility of the bottom and nothing was found. The area was searched during the investigation of shoreline features in that area. A detached position was not taken. Do not chart. *Delete - Concur*

The obstruction shown at 29°30'43"N, 094°58'35"W is a concrete breakwater. Detached position number 1781 was taken on day 059. This feature should be charted. *Concur Chart - bkW Delete*

The obstruction shown at 29°30'27.5"N, 094°57'42"W does not exist. A 50-meter radius area was visually searched from near shore out to 0.8 meter of water with good visibility of the bottom and nothing was found. The area was searched during investigation of shoreline features in the area. A detached position was not taken. Do not chart. *Concur Delete*

The obstructions shown at 29°30'30"N, 094°57'52"W are groins. Detached position numbers 2570 and 2571 were taken on day 102. These features should be charted. *Concur Chart - ** Groins Delete*

The obstruction shown at 29°30'34"N, 094°58'01"W is the offshore end of a pier in ruins. Detached position number 1299 was taken on day 040. This feature should be charted. *Concur NO change in charting necessary*

The obstruction shown at 29°30'34"N, 094°58'00"W is the offshore end of a pier in ruins. Detached position number 1300 was taken on day 040. This feature should be charted. *Concur - NO change in charting*

^{rep PA}
The obstruction shown at 29°34'02", 094°59'¹⁵46"W does not exist. A 50-meter radius area was searched visually and with the echo sounder and nothing was found. Detached position number 2544 was taken on day 102 in the search area. Do not chart. *See AWO15#9219*

The obstruction shown at 29°34'37.5"N, 094°59'42"W does not exist. A 50-meter radius area was searched visually and with the echo sounder and nothing was found. Detached position number 2545 was taken in the search area on day 102. Do not chart. *Concur Delete*

The obstruction shown at 29°34'44"N, 094°59'42"W does not exist. A 50-meter radius area was searched visually and with the echo

sounder and nothing was found. Detached position number 2546 was taken in the search area on day 102. Do not chart. *No Dev. Run in this area*
DP incorrect area. Retain 0 Add ED notation

The obstruction shown at 29°35'25"N, 094°59'37"W consists of many stakes near shore. The survey launch could not get close to the stakes because the water was too shallow. Detached position number 2567 was taken on day 102 using the bearing and range of the DP function for the on-line program. This feature should be charted. *Concur - Retain 0 - Add stakes notation*

The obstruction shown at 29°35'31"N, 094°59'27"W is metal rubble. Detached position number 2565 was taken on day 102. This feature should be charted. *Retain 0 Add notation Obstr*

The obstruction shown at 29°35'46"N, 094°59'07"W does not exist. A 50-meter radius area was searched visually and with the echo sounder and nothing was found. Detached position number 2560 was taken in the search area on day 102. Do not chart. *Concur - Delete 0*

The obstruction shown at 29°35'48"N, 094°59'06.6"W is a section of a pier in ruins. Detached position number 2561 was taken on day 102. This feature should be charted. *Concur Delete 0 Chart -- 10/17*

The obstruction shown at 29°35'49.5"N, 094°59'09"W is a wooden breakwater in ruins. Detached position number 2562 was taken on day 102 at the offshore end of the breakwater. This feature should be charted. *Concur - Delete 0 Chart -- bkw ruins*

The obstructions shown at 29°35'48"N, 094°59'12"W do not exist. The water was too shallow for the survey launch to get close to the obstructions. A visual search was performed with the survey launch as close as possible and nothing was seen. Do not chart. *Concur + Delete 00*

The obstruction shown at 29°35'49.5"N, 094°59'07.5"W is a steel tank and concrete rubble. Detached position number 2564 was taken on day 102. This feature should be charted. *Concur - Retain 0*
Add notation obstr

The obstruction shown at 29°35'55"N, 094°56'42"W does not exist. The obstruction is shown on the T-map in the deep water of the Houston Ship Channel, which unless it was near the water surface could not have been seen on aerial photographs. There have been no reports of anyone hitting anything in the heavily trafficked Houston Ship Channel. The hydrographer believes the origin of this T-map obstruction is from a printing problem which caused numerous black blotches to appear, either on the original photograph or compilation media, which were subsequently labeled as obstructions. A 50-meter radius search was performed using the echo sounder in this area with negative results. The area was also passed with side scan sonar while searching for items

along the east side of the channel. Nothing was found. This obstruction should not be charted. *Concur - Delete*

The obstruction shown at 29°36'24"N, 094°56'36"W does not exist. The obstruction is located in a spoil area and has the same irregular characteristic as the numerous black blotches seen throughout the T-maps of this survey area. These appear to be caused by a printing problem either on the original photograph or compilation media, which were subsequently labeled as obstructions. A 50-meter radius search was performed using the echo sounder, and the area was covered visually with 1 to 2 ft. of visibility below the surface and nothing was found. This obstruction should not be charted. *Concur - Delete*

The ^{subm pile} obstructions shown at 29°35'21"N, 094°56'12"W and 29°34'09"N, 094°55'18"W do not exist. The area of the obstructions was covered during side scan sonar operations along the Houston Ship Channel and nothing was found in these areas. Do not chart. *Concur Delete*

The small ^{shoal} islet shown at 29°34'54"⁶N, 094°55'54"⁴³W no longer exists. The area was covered with main scheme hydrography and no islet was visible. Do not chart. *Concur - Delete Danger curve*

Verified shoreline features are shown in black ink on the field sheet. The reference numbers were hand plotted on the field sheet. Field notes and explanations of new shoreline features are located on the graphic record. Photographs of the features are in the "Survey Separates." * A complete list of all detached positions by day is included in the accordion file. * It lists the position of each feature or item number.

The hydrographer recommends that shoreline changes from this survey be used to supersede prior shoreline information. *Concur*

K. CROSSLINES

A total of 28.7 nautical miles of crosslines were run, representing 11.6% of the main scheme hydrography. Crossline soundings agree to within 0.4 meter of the main scheme soundings.

L. JUNCTIONS - ^{also} See *Evaluation Report*

This survey junctions with H-10585 to the west, H-10588 to the east and H-10661 to the north. Junction sounding agreements are:

with H-10585 - 0.4m
with H-10588 - 0.5m
with H-10661 - 0.3m

* Data filed with original field records.

M. COMPARISON WITH PRIOR SURVEYS

See Evaluation Report

This survey will be compared with prior surveys H-5142 (WD/1931), H-5222 (1932) and BP-36906 COE/43 by the Atlantic Hydrographic Branch. *- NOT used -*

N. ITEM INVESTIGATION REPORTS - *See EU*

Thirty-five AWOIS items, numbers 9212-9223, ~~9299-9314~~, 9317, and ~~9319-9324~~ were investigated as part of this survey. Because of time, weather and equipment constraints, AWOIS items 9299, 9300, 9303, and 9306 were not investigated. Item investigation reports are appended to this report. *and 9323*

9301-9302, 9304-9305, 9307-9314, 9319-9322

O. COMPARISON WITH THE CHART - *See Evaluation Report*

Comparisons were made with chart 11327, ^{27th} Edition, ~~October 16, 1993~~ ^{March 15, 1997}. In charted depths from 1 ft (0.3m) to 9 ft (2.7m), surveyed soundings were 0.5 ft (0.2m) to 3.2 ft (1.0m) deeper. In charted depths of 10 ft (3.0m), surveyed soundings were 0.5 ft (0.2m) to 0.8 ft (0.24m) deeper. In charted depths of 11 ft (3.4m), surveyed soundings were 0.2 (0.06m) to 0.5 ft (0.2m) shallower. In charted depths of 12 ft (3.7m), surveyed soundings were 1 ft (0.3m) deeper. In charted depths from 13 ft (4.0m) to 14 ft (4.3m), surveyed soundings were 1.2 (0.4m) to 3.5 (1.1m) ft shallower.

Discrepancies with the chart are as follows:

The charted pier at 29°35'04"N, 094°59'48"W no longer exists. There was no pier visible during main scheme hydrography in the area. A visual search was performed from near shore out to 1 meter of water with good visibility of the bottom and no ruins or submerged ruins were found. This feature should be removed from the chart. *Concur - Re: Delete pier.*

The charted pile at 29°30'52.5"N, 094°58'48"W no longer exists. A 50-meter radius chain drag was performed on day 079, positions 1834-1855, at 10-meter line spacing and nothing was found. The pile should be removed from the chart. *Concur - Delete pier*

The charted submerged pipe at 29°30'54"N, 094°58'32"W no longer exists. A 50-meter long rectangular shaped chain drag was performed on day 079, positions 1880-1921, at 10-meter line spacing and nothing was found. The submerged pipe should be removed from the chart. *Concur - Delete pier*

The charted stake at 29°31'21"N, 094°59'05"W no longer exists. A 50-meter radius chain drag was performed on day 079, positions 1923-1946, at 10-meter line spacing and nothing was found. The stake should be removed from the chart. *Concur Delete stake*

The charted pipe at 29°31'^{46.5}56.5"N, 094°59'57"W no longer exists. A 50-meter radius chain drag was performed on day 047, positions 1460-1483, at 10-meter line spacing and nothing was found. The pipe should be removed from the chart. *Concur Delete pipe*

The charted submerged pile at 29°34'37"N, 094°59'36"W no longer exists. A 50-meter radius chain drag was performed on day 081, positions 2067-2088, at 10-meter line spacing and nothing was found. The submerged pile should be removed from the chart. *Concur Remove submerged pile*

The charted ruins at 29°34'48"N, 094°59'46"W no longer exists. A 50-meter radius chain drag was performed on day 081, positions 2089-2114 at 10-meter line spacing and nothing was found. The ruins should be removed from the chart. *Concur Delete ruins*

The main scheme hydrography over the two spoil areas at 29°30'42"N, 094°57'48"W was split to 50-meter line spacing. The soundings ranged from 0.6 meter near shore to 2.5 meters offshore. There is no indication of the spoil areas. The spoil areas should be removed from the chart and survey soundings charted. *Retain as charted - concur w/conditions*

A 50-meter wide rectangular shaped chain drag was performed on the charted stakes at 29°30'46"N, 094°58'28"W on day 079, positions 1856-1879, at 10-meter line spacing. A hang occurred during the chain drag. Detached position number 1869 was taken on day 079 at the hang site. The intent was to have divers return to further investigate this hang, however, divers never became available before the completion of this survey. The charted stakes should be removed from the chart and a submerged obstruction should be charted at the position of the hang. A least depth was not determined. *Concur w/conditions - Retain charted stakes - Revise notation to subm stakes*

A 50-meter wide rectangular shaped chain drag was performed on the charted piles at 29°30'50"N, 094°58'33"W on day 079, position 1880-1921, at 10-meter line spacing. A hang occurred during the chain drag. Detached position number 1922 was taken on day 079 at the hang site. The intent was to have divers return to further investigate this hang, however, divers never became available before the completion of this survey. The charted piles should be removed from the chart and a submerged obstruction should be charted at the position of the hang. A least depth was not determined. *Concur w/conditions. Retain charted piles - Revise notation to subm piles*

The charted pier ruins at 29°35'02"N, 094°59'36"W no longer exist. The area of the pier ruins was covered during the chain drags for AWOIS items 9221 and 9222 and nothing was found. The pier ruins should be removed from the chart. *Concur - Delete - ruins*

The charted light and submerged pile at 29°31'00"N, 094°57'50"W no longer exist. An area 250 meters by 400 meters was covered with 200% side scan sonar on day 137, positions 17299-17406 and nothing was found. These features should be removed from the chart. *Concur Remove light and pile*

The charted stake at 29°31'26"N, 094°59'24"W no longer exists. An area 100 meters by 150 meters was covered with 200% side scan sonar on day 155, positions 17792-17819 and nothing was found. The stake should be removed from the chart. *Concur - Delete stake*

The charted ruins and piles at 29°35'20"N, 094°59'17"W no longer exist. An area 200 meters by 200 meters was covered with 200% side scan sonar on day 155, positions 17820-17869 and nothing was found. These features should be removed from the chart. *Concur - Remove ruins and pile from chart*

The charted marker (lighted) at 29°34'20"N, 094°56'31"W no longer exists. There was no marker visible during main scheme hydrography. The area was visually searched for any obstructions just below the surface, nothing was found. Due to the lack of divers and the time limit for the the completion of this project the area of the marker was not covered with side scan sonar for any submerged obstructions. The marker should be replaced by a submerged pile on the chart. *Concur with conditions. Revise marker to subm pile*

The charted ruins at 29°35'29"N, 094°59'15"W no longer exist. A visual search was performed over the area from 1.1 meters to 1.4 meters of water with good visibility and nothing was found. A line of main scheme hydrography crossed over the charted ruins, nothing was seen on the echogram to indicate any submerged obstruction. The charted ruins are recommended for removal from the chart. *Concur - Remove ruins*

The following uncharted items were found on this survey. Because of their proximity to shore, they are not considered dangers to navigation:

<u>Dn/Pos.</u>	<u>Item</u>	<u>Surveyed Position</u>	
020/150	piles	29°35'37.62N 094°59'15.49"W	<i>Chart piles</i>
026/470	pile	29°29'59.12"N 094°56'05.14"W	<i>Chart pile Do Not Chart See Fix 471.</i>

026/471	pile	29°29'59.58"N 094°56'05.04"W	Chart pile
026/472	fountain	29°29'58.51"N 094°56'04.98"W	Chart obstn
026/475	obst	29°30'04.52"N 094°56'04.51"W	Chart obstn
026/477	pile	29°30'06.29"N 094°56'07.59"W	Chart pile
026/479	obst	29°30'07.92"N 094°56'13.01"W	Chart obstn
026/482	pile	29°30'09.29"N 094°56'16.85"W	Chart pile
026/484	pile	29°30'10.76"N 094°56'17.48"W	Chart pile
032/889	pile	29°30'10.15"N 094°56'23.02"W	Chart pile
032/896	pile	29°30'13.31"N 094°56'37.25"W	Chart pile
032/899	pile	29°30'12.73"N 094°56'32.07"W	Chart pile
032/906	pile	29°30'14.81"N 094°56'44.33"W	Chart pile
040/1298	pile	29°30'34.93"N 094°58'02.10"W	Chart pile
059/1773	platform	29°31'47.32"N 094°59'00.03"W	Chart platform
059/1774	platform	29°31'46.52"N 094°58'59.70"W	Chart platform
059/1777	stake	29°30'39.12"N 094°58'26.12"W	Chart stake

059/1786	pipe	29°30'44.93"N 094°58'28.52"W	Chart priv marker
059/1794	piles	29°30'45.40"N 094°58'44.46"W	Chart piles
093/2353	pile	29°31'21.18"N 094°59'46.58"W	Chart pile
093/2378	platform	29°34'00.44"N 094°56'05.84"W	Chart platform see #11 Rept O.a.10.
093/2379	dolphin	29°34'00.24"N 094°56'05.67"W	Chart dolphin
093/2380	dolphin	29°34'01.08"N 094°56'06.04"W	Chart dolphin

A foul area at 29°36'09"N, 094°59'00"W was located on this survey. Detached positions 142-144, 146, 258⁵ and 258⁹ outline this foul area. The foul area consists of piles, submerged piles and concrete rubble. The foul area is shown in dashed black ink on the field sheet. Chart as shown on present survey.

A foul area at 29°38'³⁶18"N, 094°59'09"W was located on this survey. The foul area limits are from the inshore end of the main scheme lines of hydrography to shore. The foul area consists of concrete rubble and large rubber tires. The foul area is shown in dashed black ink on the field sheet. Chart as shown on present survey.

Sounding discrepancies with the chart are as follows:

<u>Charted Depth</u>	<u>Survey Location</u>	<u>Least Depth</u>	<u>Charting Recommendation</u>
6ft contour	29°34'33"N 094°59'27"W	⁸⁷ 7.9 ft 2.4 m	Survey soundings Concur
6ft	29°34'32"N 094°59'20"W	^{9.19} 8.5 ft 2.6 m	Survey soundings Concur
6ft	29°34'24"N 094°58'56"W	⁸⁴ 9.2 ft 2.8 m	Survey soundings Concur
6ft	29°32'48"N 094°59'46"W	¹⁹ 9.5 ft 2.9 m	Survey soundings Concur

6ft	29°32'00"N 094°59'00"W	^{8.6} 8.5 ft 2.6 m	Survey soundings	<i>concur</i>
6ft	29°31'40"N 094°57'54"W	^{8.3} 8.9 ft 2.7 m	Survey soundings	<i>concur</i>
6ft	29°31'33"N 094°59'15"W	8.2 ft 2.5 m	Survey soundings	<i>concur</i>
6ft	29°36'22"N 094°55'58"W	^{5.91} 6.0 ft 1.8 m	Survey Soundings	<i>concur</i>
6ft	29°30'21"N 094°55'39"W	^{8.2} 7.9 ft 2.4 m	Survey Soundings	<i>concur</i>

The charted "2 ft rep 1973" at 29°35'15"N, 094°59'42"W no longer exists. The area was too shallow for the vessel to approach. The notation should be removed from the chart. *Concur - No charting changes recommended - changes already made to chart.*

The positions listed below are charted buoys used for marking oyster leases. The buoys no longer exist. The area was visually inspected during main scheme hydrography. There were no buoys in the area. The buoys should be removed from the chart. *concur*

29°31'57"N	094°56'03"W
29°32'05"N	094°55'29"W
29°31'26"N	094°55'34"W
29°31'31"N	094°56'20"W
29°31'03"N	094°56'12"W
29°30'48"N	094°55'40"W

Changes have already been made. No charting changes are recommended.

The dike bounded by the following points no longer exists:

NW Corner	-	29°36'25"N,	094°57'00"W
NE Corner	-	29°36'26"N,	094°56'10"W
SE Corner	-	29°35'22"N,	094°55'22"W
SW Corner	-	29°35'00"N,	094°55'54"W

There was no dike visible during main scheme hydrography in the area and no indication of any submerged obstructions on the echograms. The dike should be removed from the chart. *concur. Dike has already been removed from chart - No charting changes recommended.*

The charted features just east of and parallel to the Houston Ship Channel were investigated using 200% side scan sonar coverage on day 121 (positions 16221-16643), day 155 (positions 17870-17985), and day 156 (positions 17986-18501). The data were scanned and several contacts were found. Due to the lack of divers and the time limit for completion of this project, these

contacts were not investigated and no least depths were ^{scaled} determined. The positions of the contacts were ~~scanned~~ from the side scan sonar records. The positions of the charted features and contacts are listed below with charting recommendations.

Charted Features

<u>Description</u>	<u>Position</u>	<u>Charting Recommendations</u>
subm sign	29°36'18"N 094°56'58"W	remove from chart <i>CONCUR</i> <i>See AWOIS # 9313</i>
Bulkhead Reef	29°36'12"N 094°56'51"W	remove from chart <i>-CONCUR w/ condition</i> <i>Not authority to Remove Geo Names</i>
subm pile	29°36'09"N 094°56'51"W	remove from chart <i>CONCUR</i> <i>See AWOIS 9313</i>
subm pile	29°36'00"N 094°56'45"W	remove from chart <i>-CONCUR</i> <i>See AWOIS 9313</i>
subm pile	29°35' ² 51"N 094°56'38"W	remove from chart <i>-CONCUR</i> <i>See AWOIS 9313</i>
subm pile	29°35' ³ 43"N 094°56' ^{31.5} 01"W	remove from chart <i>CONCUR</i> <i>See AWOIS 9313</i>
subm pile	29°35'34"N 094°56'24"W	remove from chart <i>CONCUR</i> <i>See AWOIS 9313</i>
subm pile	29°35'32"N 094°56'23"W	remove from chart <i>CONCUR</i> <i>See AWOIS 9313</i>
piles	29°35'26"N 094°56'18"W	remove from chart <i>CONCUR</i>
subm platform (ruins)	29°35' ⁴¹ 42"N 094°56' ²³ 24"W	remove from chart <i>CONCUR</i>
subm pile	29°35' ^{20.8} 21"N 094°56' ^{10.8} 10"W	remove from chart <i>CONCUR</i>
subm pile	29°35'18"N 094°56'13"W	remove from chart <i>CONCUR</i> <i>See AWOIS 9313</i>

platform	29°35'00"N 094°55'53"W	remove from chart <i>concur</i>
subm pile	29°34'52"N 094°55'50"W	remove from chart <i>concur</i>
subm pile	29°34' ⁴³ 44"N 094°55'40"W	remove from chart <i>concur</i>
subm pile	29°34' ³⁵ 38"N 094°55'34"W	remove from chart <i>concur</i>
subm pile	29°34' ^{27.8} 27"N 094°55' ^{27.2} 27"W	remove from chart <i>concur</i> <i>See AWOIS 9313</i>
platform ruins	29°34'18"N 094°55'21"W	remove from chart <i>concur</i>
subm bulkhead	29°36'00"N 094°56'42"W	remove from chart <i>Do not concur</i>
subm bulkhead	29°35'39"N 094°56'27"W	remove from chart <i>Retain as charted</i> <i>Existence verified by Side Scan Sonar records</i> <i>Do not concur</i>

Side Scan Sonar Contacts

<u>Description</u>	<u>Position</u>	<u>Charting Recommendations</u>
subm obst ⁷	29°36' ⁰⁸ 02"N 094°56' ^{49.4} 44"W	chart <i>Do not concur</i> <i>Surrounding snags same depths as strn depth</i>
subm obst ⁹	29°35'06"N 094°55' ⁵⁷ 55"W	chart <i>Do not concur</i> <i>Inside spoil area</i>
subm obst ⁹	29°35'02"N 094°55'52"W	chart <i>Do not concur</i> <i>Inside spoil area</i>
subm obst ⁸	29°35'41"N 094°56'24"W	chart <i>Do not concur</i> <i>Same as surrounding depths</i>
subm obst ⁹	29°34'54"N 094°55'46"W	chart <i>Do not concur</i> <i>Same as surrounding soundings</i>
subm obst ⁹	29°34' ⁴⁷ 48"N 094°55' ⁴¹ 40"W	chart <i>Do not concur</i> <i>Same as surrounding soundings</i>

subm obst *b*

^{42.5}
29°34'44"N
094°55'35"W
_{32.3}

chart Do NOT concur
surrounding swpa same
depth as obstn depth

subm obst *b*

29°34'38"N
094°55'28"W

chart Do NOT concur
same depth as surrounding
depths

The submerged pipe, ruins and catwalk at 29°30'34"N, 094°57'45"W no longer exist. These charted features were not visible during main scheme hydrography in the area. Due to the time limitation for the completion of this project, these items were not investigated. According to local information, the piers and buildings belonged to Humble Oil Co. When Humble Oil sold the property they removed all of the items. These features are recommended for deletion from the chart. *concur*

The ruins charted at 29°30'02"N, 094°55'36"W no longer exist. There were no ruins visible during main scheme hydrography in the area. A visual search was conducted over the area from 0.5 meter to 1 meter of water with good visibility and nothing was found. The ruins should be removed from the chart. *concur*

None of the spoil areas located just east of and parallel to the Houston Ship Channel were developed. According to Denise Sloan, (phone 409-766-6311) of the U. S. Army Corp of Engineers, these spoil areas are still active. *concur*

The hydrographer recommends sounding data from this survey be used to update the chart. *concur*

P. ADEQUACY OF SURVEY *See also Evaluation Report*

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

Q. AIDS TO NAVIGATION *See also Evaluation Report*

There are five floating aids and seven non-floating aids to navigation in the survey area. These aids were compared with the U.S.C.G Light List, Volume IV, Gulf of Mexico, 1995.

Detached positions were taken on all aids to navigation for comparison with the light list and charted positions. The comparisons are listed below.

<u>Houston Ship Channel Light "76" (L. L. No. 23210)</u>	
Light List Position	Not listed
Surveyed Position (11)	29°36'25.68"N 094°57'05.60"W
Agrees with chart.	

Houston Ship Channel Light "75" (L. L. No. 23205)
Light List Position Not listed
Surveyed Position (12) 29°36'21.33"N 094°57'12.02"W
Agrees with chart.

Houston Ship Channel Green Can Buoy "73" (L. L. No. 23195)
Light List Position Not listed
Surveyed Position (13) 29°35'47.17"N 094°56'45.90"W
40 meters South of charted position.

Houston Ship Channel Red Nun Buoy "74" (L. L. No. 23200)
Light List Position 29°35.9'N 094°56.6'W
Surveyed Position (14) 29°35'54.21"N 094°56'39.45"W
40 meters North of charted position.

Morgans Pt. Outer Range Front Light (L. L. No. 23215)
Light List Position 29°35.6'N 094°56.8'W
Surveyed Position (15) 29°35'34.80"N 094°56'49.44"W
Agrees with charted position.

Houston Ship Channel Green Can Buoy "71" (L. L. No. 23185)

Note: This aid is charted and listed in the light list as a fixed aid. The U. S. Coast Guard Aids to Navigation Team located in Galveston, TX informed us by phone conversation (409-744-5031) *Not in Service* that this aid was destroyed and temporarily replaced with a buoy. The pile was never recovered. The Coast Guard searched the area to make sure that the pile did not break off just below the water surface. They informed us that when a single pile is hit by traffic they usually break off at the bottom. Telephone conversation with Petty Officer Thompson (phone 504-589-6234) of the 8th District Aids to Navigation Office informed AHP that Light 71 had been rebuilt, however, the rebuild date was not readily available. The rebuilt aid was not positioned by this survey. *See also Evaluation Report*

Houston Ship Channel Light "72" (L. L. No. 23190)
Light List Position Not listed
Surveyed Position (17) 29°35'17.41"N 094°56'12.25"W
Agrees with charted position.

Morgans Pt. Outer Range Rear Light (L. L. No. 23220)
Light List Position Not listed
Surveyed Position (18) 29°34'49.70"N 094°56'31.85"W
Agrees with charted position.

Houston Ship Channel Green Can Buoy "69" (L. L. No. 23175)
Light List Position Not listed
Surveyed Position (19) 29°34'38.57"N 094°55'52.39"W
30 meters South of charted position.

Houston Ship Channel Red Nun Buoy "70" (L. L. No. 23180)
 Light List Position Not listed
 Surveyed Position (20) 29°34'40.99"N 094°55'44.42"W
 20 meters west of charted position.

Clear Lake Channel Green Daybeacon "1" (L. L. No. 25065)
 Light List Position 29°33.1'N 094°59.5'W
 Surveyed Position (1292) 29°33'06.86"N 094°59'32.43"W
 Agrees with charted position.

Clear Lake Channel Light "2" (L. L. No. 25070)
 Light List Position 29°33.2'N 094°59.2'W
 Surveyed Position (1294) 29°33'09.94"N 094°59'33.13"W
 Agrees with charted position.

All of the aids to navigation serve their intended purpose but should be re-charted using the surveyed positions. *concur*

There were no overhead cables located in the survey area. One pipeline crossing sign was located by detached position 2365 on day 093. There were no bridges located in the survey area. *concur*
DP in Lat 29-29-55.438N, Lon 94-55-34.296W and is onshore. No changes in charting are recommended

R. STATISTICS

<u>Description</u>	<u>Quantity</u>
Total Number of Positions	17983
Total Lineal Nautical Miles of Hydrography	543.3
Square Nautical Miles of Hydrography	22.0
Days of Production	61
Detached Positions	174
Bottom Samples	83
Tide Stations	1
Velocity Casts	15

S. MISCELLANEOUS *See also evaluation Report*

No anomalous currents or tides were observed during this survey.

Eighty-three bottom samples were taken throughout the survey area to check existing bottom characteristics. The sample was brought to the surface and described, then discarded. Oceanographic Log Sheet-M, NOAA Form 75-44 was submitted to the Smithsonian Institution in accordance with the Project Instructions. Bottom sample positions are plotted on the field sheet overlay and listed on the Oceanographic Log Sheets, which are in the "Survey Separates." ** Data filed with original Field Records*

T. RECOMMENDATIONS

No additional field work was identified after field office processing was completed. Specific recommendations are made on the Item Investigation Reports appended, and in sections J., O., and Q. of this report.

U. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report to Accompany Survey H-10585	Atlantic Hydrographic Branch N/CS331, Norfolk, VA 23510 November 1996
Descriptive Report to Accompany Survey H-10588	Atlantic Hydrographic Branch N/CS331, Norfolk, VA 23510 November 1996
Descriptive Report to Accompany Survey H-10661	Atlantic Hydrographic Branch N/CS331, Norfolk, VA 23510 November 1996
Coast Pilot Report for OPR-K204-AHP	Atlantic Hydrographic Branch N/CS331, Norfolk, VA 23510 August 1996

Submitted by:

Glenn D. Hendrix
Launch Hydrographer-In-Charge

AWOIS NO: 9212

Item Description: Katie J (wreck)

Source: LNM43/78--8th CGD

AWOIS Position: Lat - 29°32'00.82"N, Lon - 94°59'30.73"W

Required Investigation: BD, ES, SD Radius: 400m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): March 23, 1995/082
March 24, 1995/083
April 07, 1995/097

Position Numbers: 2154-2243 Launch Number: 1292
 2244-2350
 2381-2533

Investigation Used: BD

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 400-meter radius chain drag at 10-meter line spacing was performed on the days and positions listed above and nothing was found. Fifteen meters of line was deployed with 18 meters of chain between the otter boards.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (H) PA

AWOIS NO: 9213

Item Description: Wreck

Source: LNM/85--8th CGD

AWOIS Position: Lat - 29°32'06.82"N, Lon - 94°59'30.73"W

Required Investigation: BD, ES, SD Radius: 300m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): March 23, 1995/082
March 24, 1995/083
April 07, 1995/097

Position Numbers: 2154-2243 Launch Number: 1292
2244-2350
2381-2533

Investigation Used: BD

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 300-meter radius chain drag at 10-meter line spacing was performed on the days and positions listed above and nothing was found. Fifteen meters of line was deployed with 18 meters of chain between the otter boards.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Removal (H) PA

AWOIS NO: 9214

Item Description: Wreck

Source: LNM24/81--8th CGD, LNM33/81--8th CGD, wreck cannot be found

AWOIS Position: Lat - 29°32'10.82"N, Lon - 94°59'10.73"W

Required Investigation: BD, ES, SD Radius: 300m.

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): May 17, 1996/138
June 3, 1996/155

Position Numbers: 17407-17648 Launch Number: 1292
17685-17749

Investigation Used: Side Scan Sonar

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: A 200% side scan sonar survey was performed over the required area on the days listed above. The data were scanned on line and then checked scanned in the office. No significant contacts were found. Refer to section E. of the Descriptive Report for H-10586 for details on the operation of the side scan equipment.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove

(+)+ PD

AWOIS NO: 9215

Item Description: OBSTRUCTION

Source: LNM47/92--8th CGD,

AWOIS Position: Lat - 29°32'58.00"N, Lon - 94°59'37.00"W

Required Investigation: BD Radius: 200m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): February 16, 1995

Position Numbers: 1347-1459 Launch Number: 1292

Investigation Used: BD

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: A 200-meter radius chain drag at 10-meter line spacing was performed on the day and positions listed above. Nothing was found. Fifteen meters of line was deployed with 18 meters of chain between the otter boards.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (C) Obstr ED

AWOIS NO: 9216

Item Description: OBSTRUCTION

Source: LNM/85--8th CGD

AWOIS Position: Lat - 29°33'03.82"N, Lon - 94°59'15.73W

Required Investigation: BD Radius: 200m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): March 21, 1995/080

Position Numbers: 1947-2066 Launch Number: 1292

Investigation Used: BD

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 200-meter radius chain drag at 10-meter line spacing was performed on the day and positions listed above. Nothing was found. Fifteen meters of line was deployed with 18 meters of chain between the otter boards.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (C) Obstr ED

AWOIS NO: 9217

Item Description: OBSTRUCTION - *Subm Stake PA*

Source: Unknown

AWOIS Position: Lat - 29°33'08.00"N, Lon - 94°59'47.00"W

Required Investigation: BD Radius: 150m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): January 24, 1995/024

Position Numbers: 322

Launch Number: 1292

Investigation Used: BD

Position Determined By: DGPS USCG Beacon (Galveston, Tx.)

Investigation Summary: A chain drag was performed on day 024, positions 291-321. A hang occurred during the drag. Detached position number 322 was taken at the hang site. No other hangs were encountered during the drag.

CHARTING RECOMMENDATION

Due to the lack of divers the hang was not investigated, nor was a least depth determined. The hydrographer recommends that the charted item ~~obstruction~~ *Subm Stake PA* be revised to the location recommended below. *La snag at*

Recommended Position: 029°33'05.14"N, 094°59'52.60"W

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove O Subm Stake PA

Add O Snag

AWOIS NO: 9218

Item Description: Wreck

Source: LNM36/80--8th CGD

AWOIS Position: Lat - 29°33'30.82"N, Lon - 94°59'42.73"W

Required Investigation: BD, ES, SD Radius: 250m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): May 13, 1996/134

Position Numbers: 16672-16930

Launch Number: 1292

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 200% coverage side scan survey was conducted over the required area on the day listed above. The data were scanned on line and then checked scanned in the office and no significant contacts were found. Refer to section E. of the Descriptive Report for H-10586 for details on the operation of the side scan equipment.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *cancel*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (H); PA

AWOIS NO: 9219

Item Description: OBSTRUCTION

Source: LNM28/74--8th CGD

AWOIS Position: Lat - 29°34'00.82"N, Lon - 94°59'14.73"W

Required Investigation: BD, ES Radius: 300m

Charts Affected:11327

INVESTIGATION

Date(s)/DN(s): May 13, 1996/134
 May 14, 1996/135
 May 16, 1996/137

Position Numbers: 16931-17037 Launch Number: 1292
 17038-17121
 17122-17298

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 200% coverage side scan survey was performed over the required area on the days listed above. The data were scanned on line and then checked scanned in the office and no significant contacts were found. Refer to section E. of the Descriptive Report for H-10586 for details on the operation of the side scan equipment.

CHARTING RECOMMENDATION

The hydrographer recommends that the item be removed from the chart. *Concur*

Recommended position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (;) Obsth rep PA

AWOIS NO: 9220

Item Description: OBSTRUCTION, (submerged pipe)

Source: CL1386/66--USPS

AWOIS Position: Lat - 29°34'35.00"N, Lon - 94°59'48.00"W

Required Investigation: BD Radius: 150m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): January 24, 1995/024

Position Numbers: 213-290 Launch Number: 1292

Investigation Used: BD

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 150-meter radius chain drag at 10-meter line spacing was performed on the day and positions listed above and nothing was found. Fifteen meters of line was deployed with 18 meters of chain between the otter boards.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged pipe be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove a subm pipe PA

AWOIS NO: 9221

Item Description: Wreck (Prowler)

Source: LNM77/71--8th CGD

AWOIS Position: Lat - 29°35'00.82"N, Lon - 94°59'42.73"W

Required Investigation: BD, ES, VS, SD Radius: 100m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): January 19, 1995/019

Position Numbers: 135

Launch Number: 1292

Investigation Used: BD, DI

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 100-meter chain drag at 10-meter line spacing was performed on day 011, positions 46-40, 52-76, day 012, positions 77-86, 90-119 and day 013, positions 120-131. A hang occurred during the drag. A dive investigation was performed at the hang site on day 019 and detached position 135 was taken. No other hangs were encountered during the drag.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck be revised to a submerged wreck at the recommended position below. *Concur*

Recommended Position: lat. 29°34'59.19"N, long. 094°59'46.29"W

Recommended Least Depth: 0.1 m (0.3 ft)
6 (2 ft)

COMPILATION NOTES

Chart

Applied As

Charta (2) Wk at present survey location.

Remove (H) ED

AWOIS NO: 9222

Item Description: Wreck

Source: LNM5/83--8th CGD

AWOIS Position: Lat - 29°35'00.82"N, Lon - 94°59'30.73"W

Required Investigation: BD, ES, SD Radius: 200m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): January 11, 1995/011
January 12, 1995/012
January 13, 1995/013
January 20, 1995/020

Position Numbers: 46-50 Launch Number: 1292
77-86, 90-119
120-131
152-212

Investigation Used: BD

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 200-meter radius chain drag at 10-meter line spacing was performed on the days and positions listed above and nothing was found. Fifteen meters of line was deployed with 18 meters of chain between the otter boards.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *Concur. The obstruction charted in Lat 29-35-03.5N Lon. 94-59-33W was also dispised by this development.*
Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (H+): PA

Remove 0 PA

AWOIS NO: 9223

Item Description: OBSTRUCTION

Source: CL1768/68--USPS

AWOIS Position: Lat - 29°35'03.00"N, Lon - 94°59'24.00"W

Required Investigation: ES Radius -

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): February 27, 1995/058

Position Numbers: 1707-1714 Launch Number: 1292

Investigation Used: ES

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: The main scheme hydrography was split to 50 meters in the area of this AWOIS item. The depths ranged from 4.9ft(1.5m) to 8.5ft(2.6m).

CHARTING RECOMMENDATION

The hydrographer recommends that the "Spoil reported" notation and limit line be removed from the chart and the present survey soundings be charted. *concur*

Recommended Position: AWOIS position above

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove

(Spoil Reported)

AWOIS NO: 9299

Item Description: Wreck

Source: LNM26/77--8th CGD

AWOIS Position: Lat - 29°32'48.82"N, Lon - 94°59'00.73"W

Required Investigation: BD, ES, SD Radius: 400m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 1292

Investigation Used:

Position Determined By:

Investigation Summary: This item was not investigated because of the time limits for the completion of this project.

CHARTING RECOMMENDATION

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Retain as charted

AWOIS NO: 9300

Item Description: Wreck

Source: LNM35/66--8th CGD

AWOIS Position: Lat - 29°32'45.82"N, Lon - 94°58'30.73"W

Required Investigation: BD, ES, SD Radius: 400m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 1292

Investigation Used:

Position Determined By:

Investigation Summary: This item was not investigated because of the time limits for the completion of this project.

CHARTING RECOMMENDATION

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Revise to ~~(H)~~ ED

AWOIS NO: 9301

Item Description: Obstruction (Piling)

Source: LNM48/79--8th CGD

AWOIS Position: Lat - 29°32'30.82"N, Lon - 94°58'30.73"W

Required Investigation: VS, BD Radius: 400m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): June 3, 1996/155

Position Numbers: 17750 -17791 Launch Number: 1292

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: Side scan sonar was conducted on day 155, (positions 17750-17785) and a contact was located between positions 17773 and 17774. Due to the lack of divers the contact was investigated with the echo sounder on day 155, (positions 17786-17791). The spike was located 120 meters north northeast of the position of the item. The sounding line where the spike was located is plotted on the field sheet. The remaining sounding lines were designated not for smooth plotting.

CHARTING RECOMMENDATION

The hydrographer recommends that the piling be removed from the chart and a submerged obstruction be charted with a least depth at the position listed below. *Concur*

Recommended Position: 29°32'34.98"N, 094°58'29.53"W

Recommended Least Depth: 2.⁴ meters (8.^{7.9} ft) Corrected for draft, velocity and ~~predicted~~ tides. *actual*

COMPILATION NOTES

Chart

Applied As

*Chart ~~0~~ Snag (8) obstn
Remove 0 piling PA.*

AWOIS NO: 9302

Item Description: Wreck

Source: LNM36/85--8th CGD

AWOIS Position: Lat - 29°32'16.82"N, Lon - 29°58'48.73"W

Required Investigation: BD, ES, SD Radius: 200m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): March 23, 1995/082

Position Numbers: 2153

Launch Number: 1292

Investigation Used: BD

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: A chain drag was performed on day 082, (positions 2133-2152) at 10 meter line spacing. A hang occurred during the drag. Detached position number 2153 was taken at the hang site. Due to the lack of divers the hang was not investigated, nor was a least depth determined.

CHARTING RECOMMENDATION

The hydrographer recommends that the item be removed from the chart and a submerged obstruction be charted at the position listed below with no least depth. *CONCUR*

Recommended Position: 29°32'20.426"N, 094°58'45.078"W

Recommended Least Depth: ~~least depth not determined.~~ *OK*
3.0m (9.8ft)

COMPILATION NOTES

Chart

Applied As

*Chart 0 snag
Remove (+H) PA*

AWOIS NO: 9303

Item Description: Obstruction (9 piles reported)

Source: CL1261/79--USPS

AWOIS Position: Lat - 29°30'46.20"N, Lon - 94°58'09.20"W

Required Investigation: VS, BD Radius: 50m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers: Launch Number: 1292

Investigation Used:

Position Determined By:

Investigation Summary: This item was not investigated because of the time limits for the completion of this project.

CHARTING RECOMMENDATION

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Retain 0 as charted

Revise notation to subm piling PA

AWOIS NO: 9304

Item Description: Sounding, (4 ft reported)

Source: CL1222/74--USPS

AWOIS Position: Lat - 29°30'41.00"N, Lon - 94°57'50.00"W

Required Investigation: ES Radius

Charts Affected: 11327,

INVESTIGATION

Date(s)/DN(s): February 27, 1995/058

Position Numbers: 1751-1764 Launch Number: 1292

Investigation Used: ES

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: The main scheme hydrography was split to 50 meters in the area of the AWOIS item. The depths ranged from 2.6ft (0.8m) near shore to 8.2ft (2.5m) offshore.

CHARTING RECOMMENDATION

The hydrographer recommends that the 4 ft reported notation be removed from the chart and that the present survey soundings be charted. *Concur w/conditions*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Revise note to 2ft 1996

AWOIS NO: 9305

Item Description: Obstruction (*pole rep*)

Source: CL1222/74--USPS

AWOIS Position: Lat - 29°30'50.00"N, Lon - 94°57'44.00"W

Required Investigation: VS, BD Radius: 25m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): January 19, 1995/019

Position Numbers: 141 Launch Number: 1292

Investigation Used: DI

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 40-meter radius diver circle search investigation was performed on the day and position listed above and nothing was found.

CHARTING RECOMMENDATION

The hydrographer recommends that the ^{*pole rep*} ~~obstruction~~ be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove 0 pole rep

AWOIS NO: 9306

Item Description: Wreck

Source: LNM35/85--8th CGD

AWOIS Position: Lat - 29°30'22.82"N, Lon - 94°57'21.73"W

Required Investigation: BD

Radius: 75m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 1292

Investigation Used:

Position Determined By:

Investigation Summary: This item was not investigated because of the time limits for the completion of this project.

CHARTING RECOMMENDATION

Recommended Position:

Recommended Least Depth

COMPILATION NOTES

Chart

Applied As

Retain as charted

AWOIS NO: 9307

Item Description: Carol A, (wreck)

Source: LNM52/65--8th CGD

AWOIS Position: Lat - 29°33'00.00"N, Lon - 94°57'15.00"W

Required Investigation: BD, ES, SD Radius: 750m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): December 4, 1995/338; April 24, 1996/115

Position Numbers: 3646-3647 and 15554-15660 Launch Number: 1292

Investigation Used: ES

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: An insert was found while scanning the echogram for the main scheme hydrography near the position of this AWOIS item. Due to the time limits for the completion of this project side scan sonar was not conducted over the area. A development was run at 10-meter line spacing on day 115 (positions 15554-15660) over the area. The sounding lines with no evidence of the wreck were designated not for smooth plotting. The sounding lines that showed evidence of the wreck are plotted on the final field sheet. *Concur*

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck PA be removed from the chart and a submerged wreck be charted with the least depth at the position listed below.

Recommended Position: 29°32'59.²⁴81"N, 094°57'14.^{15.65}83"W

Recommended Least Depth: 2.2¹ meters, (7.2⁵ ft.) Corrected for draft, velocity and ~~predicted~~ tides. *approved*

COMPILATION NOTES

Chart

Applied As

*Chart (7) Wk at present survey location
Remove (H)*

AWOIS NO: 9308

Item Description: Wreck

Source: LNM30/74--8th CGD

AWOIS Position: Lat - 29°33'00.82"N, Lon - 94°56'00.73"W

Required Investigation: BD, ES, SD Radius: 600m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): February 13, 1996/044
February 14, 1996/045
February 15, 1996/046
February 20, 1996/051
February 22, 1996/053
April 9, 1996/100

Positions Numbers: 13650-13993 Launch Number: 1292
 13994-14195
 14196-14360
 14361-14526
 14427-14806
 14807-15124

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: A 200% coverage side scan sonar survey was performed over the required area on the days listed above. The data were scanned on line and then check scanned in the office. No significant contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (H) PA

AWOIS NO: 9309

Item Description: Wreck

Source: LNM2/78--8th CGD

AWOIS Position: Lat - 29°33'55.82"N, Lon - 94°56'55.73"W

Required Investigation: VS, BD, SD Radius: 300m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): April 09, 1996/100
April 24, 1996/115

Position Numbers: 15125-15295 Launch Number: 1292
15696-15870

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: The required area was surveyed with 200% side scan sonar coverage on the days listed above. The data were scanned on line and then check scanned in the office. No significant contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (H): PA

AWOIS NO: 9310

Item Description: Five Brothers (wreck)

Source: LNM3/81--8th CGD

AWOIS Position: Lat - 29°34'12.82"N, Lon - 94°55'42.73"W

Required Investigation: VS, BD, SD Radius: 200m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): April 24, 1996/115
April 26, 1996/117

Position Numbers: 15871-15952 Launch Number: 1292
15953-16037

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: The required area was surveyed with 200% side scan sonar coverage on the days listed above. The data were scanned on line and then check scanned in the office. No significant contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (H+) PD

AWOIS NO: 9311

Item Description: Obstruction (Unknown Object)

Source: LNM18/85--8th CGD

AWOIS Position: Lat - 29°34'05.82"N, Lon - 94°55'24.72"W

Required Investigation: BD, DI Radius: 100m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers: Launch Number: 1292

Investigation Used:

Position Determined By:

Investigation Summary: This item is located in the Houston Ship Channel and according to Mr. Lewis Petite of the U. S. Army Corp of Engineers Galveston (phone 409-766-6308), this obstruction and any other hazard to navigation were removed from the channel.

CHARTING RECOMMENDATION

The hydrographer recommends that the item be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove

Obstns PA

REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1229
GALVESTON, TEXAS 77553-1229

February 13, 1996

Technical Support Branch

Mr. Castle Eugene Parker
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Atlantic Hydrographic Party
P.O. Box 854
Seabrook, Texas 77586

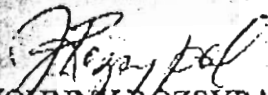
Dear Mr. Parker:

This is in reference to your 12 December 1995 letter, concerning salvage documentation on features along the Houston Ship Channel charted on Chart No. 11327.

We have completed our review of the highlighted items provided on the Chart No. 11327 and found no salvage documentation on file. It is believed that these AWOIS items still charted along the Houston Ship Channel were surveying reference stakes and markers used for channel surveys and dredging. Use of this method was the practice during the 1960's and 1970's. The stakes were normally wooden ranging from 2"x2" to 4"x4" with varying lengths and should no longer be in existence. At best they were temporary markers which normally did not last beyond the period of surveys or the dredging contract period due to traffic and vandalism.

If you have other information that you would like for us to consider regarding these items of concern, please feel free to contact Mr. Felix Castaneda, Technical Support Branch, (409) 766-3926.

Sincerely,


JOHNNY ROZSYPAL
Chief, Technical Support Branch

AWOIS NO: 9312

Item Description: Obstruction (Stakes)

Source: CL64/65--COE

AWOIS Position: Lat - 29°34'08.50"N, Lon - 94°55'18.00"W

Required Investigation: BD Radius: 50m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 1292

Investigation Used:

Position Determined By:

Investigation Summary: During a meeting with Mr. Lewis Petite of the U. S. Army Corp of Engineers, (phone 409-766-6308), he informed us that the stakes no longer exist. They were 2" x 2" survey or dredge stakes pushed into the bottom by hand. These stakes are usually washed away by ship wake or they are removed after a job is completed. Per phone conversation with Mike Riddle from N/CS31, HSD Operations Branch (301-713-2702), no further investigation is needed.

CHARTING RECOMMENDATION

The hydrographer recommends that the stakes be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Chart	Lat(N)	Lon(W)	Applied As	Lat(N)	Lon(W)
	29-34-08.5	94-55-18.0 ✓		29-34-58	94-55-56.2 ✓
	29-34-16.5	94-55-24.5 ✓		29-35-06	94-56-03 ✓
	29-34-24.7	94-55-31 ✓		29-35-14.2	94-56-09.5 ✓
	29-34-33.2	94-55-37.5 ✓		29-35-25.5	94-56-15.5 ✓
	29-34-41.0	94-55-44 ✓			
	29-34-49.7	94-55-50 ✓			

MCE 3-5-98
disproved on Awois 9313
Remove "o" subm stake

AWOIS NO: 9313

Item Description: Obstruction

Source: BP68549/65--COE

AWOIS Position: Lat - 29°34'27.80"N, Lon - 94°55'27.20"W

Required Investigation: BD Radius: 50m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 4-30-96/121, 6-3-96/155, 6-4-96/156

Position Numbers: 16221-16643 Launch Number: 1292
 17870-17985
 17986-18501

Investigation Used:

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: The area of this item was covered during side scan sonar investigations on day 121 (pos. 16221-16643), day 155 (pos. 17870-17985) and day 156 (pos. 17986-18501), while looking for the charted features along the Houston Ship Channel. The data were scanned on line and then check scanned in the office. No contacts were found in the area of the item.

Significant

CHARTING RECOMMENDATION

The hydrographer recommends that the item be remove from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Lat(N)	Lon(W)
29-34-27.8	94-55-27.2
29-35-18	94-56-13
29-35-32	94-56-23.2
29-35-34	94-56-25
29-35-43	94-56-31.5
29-35-51.7	94-56-38

Remove 0 Subm pile

Lat(N)	Lon(W)
29-36-00.5	94-56-45
29-36-09.5	94-56-52
29-36-18	94-56-58.5
29-36-25.7	94-57-04

Remove 0 Subm sign

AWOIS NO: 9314

Item Description: Wreck

Source: LNM26/81--8th CGD

AWOIS Position: Lat - 29°34'30.82"N, Lon - 94°55'30.72"W

Required Investigation: BD, ES, SD Radius: 150m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 4-30-96/121, 6-3-96/155, 6-4-96/156

Position Numbers: 16221-16643 Launch Number: 1292
17870-17985
17986-18501

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: The area of the item was surveyed with 200% side scan sonar coverage on days 121, (pos. 16221-16643), 155, (pos.17870-17985) and 156, (pos.17986-18501). Two contacts were found within the search area of the item. Due to time limits for the completion of the project these contacts were not investigated nor were least depths determined.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart and submerged obstructions be charted at the positions listed below, scaled from the sonargram. *Concur w/ conditions **

Recommended Position: 29°34'35"N, 094°56'00"W
29°34'32"N, 094°55'57"W

Recommended Least Depth: least depths were not determined.

COMPILATION NOTES

Chart

Applied As

Remove the 'H' PA

** 2/23/98 update from D. Bland: Do not chart contact obstns. The contacts are no shallower than present surrounding depths.*

AWOIS NO: 9317

Item Description: Obstruction (Pole Reported)

Source: CL1645/78--USPS

AWOIS Position: Lat - 29°36'17.82"N, Lon - 94°55'54.73"W

Required Investigation: VS, BD Radius: 100m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): April 26, 1996/117

Position Numbers: 16122-16173 Launch Number: 1292

Investigation Used: Side Scan Sonar

Position Determined By: DGPS USCG Beacon (Galveston, Tx)

Investigation Summary: The required area was surveyed with 200% side scan sonar coverage on the day listed above. The data were scanned on line and then check scanned in the office, no significant contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the pole reported be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove 0 pole rep

AWOIS NO: 9319

Item Description: Obstruction (Pipe)

Source: CL611'93--USPS

AWOIS Position: Lat - 29°34'30.00"N, Lon - 94°56'00.00"W

Required Investigation: VS, BD Radius: 200m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): January 10, 1995/010

Position Numbers: 21 Launch Number: 1292

Investigation Used: VS

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: A visual search was performed over the area of the AWOIS item and nothing was seen. A 100% coverage side scan sonar search was performed over the required area on April 26, 1996/117, (positions 16038-16121), and no significant contacts were found. A pipe matching this AWOIS description was located about 600 meters south of the AWOIS position. Per telephone, conversation with Mike Riddle, N/CS31 (301-713-2702), AHP was given permission to extend the search radius to include the pipe that was located.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted pipe be removed from the chart and that a pipe be charted at the position recommended below. *Concur*

Recommended Position: 29°34'10.63"N, 094°56'01.15"W

Recommended Least Depth: 7.9⁴ft, (2.4⁶m) above the water surface, corrected by ~~predicted~~ *actual* tides.

COMPILATION NOTES

Chart

Applied As

*Remove 0 pipe RA
Add 0 pipe*

AWOIS NO: 9320

Item Description: Obstruction (Piling Reported)

Source: LNM75/72--8th CGD

AWOIS Position: Lat - 29°35'16.00"N, Lon - 94°56'20.00"W

Required Investigation: BD, ES, SD Radius: 30m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): April 26, 1996/117

Position Numbers: 16174-16181 Launch Number: 1292

Investigation Used: Side Scan Sonar

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: The required area was covered with 200% side scan sonar on the day listed above. The data were scanned on line and then check scanned in the office. No significant contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the piling reported be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove 0 subm piling rep

AWOIS NO: 9321

Item Description: Wreck

Source: LNM/71--8th CGD

AWOIS Position: Lat - 29°35'51.28"N, Lon - 94°56'49.73"W

Required Investigation: S2, BD, ES, SD Radius: 75m

Charts Affected: 12364, 12367

INVESTIGATION

Date(s)/DN(s): April 26, 1996/117 and June 5, 1996/157

Position Numbers: 16182-16201
18502-18537

Launch Number: 1292

Investigation Used: Side Scan Sonar

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: A 200% side scan coverage was performed over the required area on the days listed above. The data were scanned on line and then checked in the office, no significant contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Remove (H) PA

AWOIS NO: 9322

Item Description: Obstruction (9 Sets of Dolphins)

Source: CL412/80--USPS

AWOIS Position: Lat - 29°35'20.00"N, Lon - 94°57'21.30"W

Required Investigation: BD Radius: 300m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 1292

Investigation Used:

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: During a meeting with Mr. Lewis Petite of the U. S. Army Corps of Engineers, (phone 409-766-6308), he informed AHP that the set of nine dolphins were removed by a private contractor hired by the Corps of Engineers. The area was then covered with 100 per-cent side scan sonar by the Corps of Engineers to make sure that all of the dolphins were removed.

CHARTING RECOMMENDATION

The hydrographer recommends that the dolphins be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

*Remove 0 0 0
Subm Dols PA*

AWOIS NO: 9323

Item Description: Obstruction (Pipe)

Source: LNM38/82--8th CGD

AWOIS Position: Lat - 29°35'00.82"N, Lon - 94°58'00.73"W

Required Investigation: VS, BD, SD Radius: 500m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 1292

Investigation Used:

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: This item was not investigated because of the time limits for the completion of this project.

CHARTING RECOMMENDATION

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

Revise to 0 subm pipe PA

AWOIS NO: 9324

Item Description: Obstruction (~~Abandoned Platform~~)^{OK}
Charted as piles PA

Source: CL/42--NOS

AWOIS Position: Lat - 29°35'42.92"N, Lon - 94°58'24.03"W

Required Investigation: VS, BD Radius 50m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): March 11, 1995/011

Position Numbers: 20-43

Launch Number: 1292

Investigation Used: BD

Position Determined By: USCG DGPS Beacon (Galveston, Tx)

Investigation Summary: A 50-meter radius chain drag at 10-meter line spacing was performed on the day listed above and nothing was found.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction be removed from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

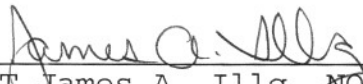
Applied As

Remove 0 piles PA


APPROVAL SHEET
Basic Hydrographic Survey
OPR-K204-AHP
AHP-10-14-94
H-10586
1994-1996

This basic hydrographic survey was conducted in accordance with the Project Instructions for OPR-K204-AHP, the Hydrographic Manual, the Hydrographic Survey Guidelines, and the Field Procedures Manual. All reports, records, and survey sheets were reviewed by Mr. Glenn D. Hendrix, hydrographer in charge of daily operations. The descriptive report and other survey reports were also reviewed Mr. Brian A. Link, Assistant Chief of Party. The survey sheets and records were also periodically reviewed during the course of acquisition by Brian Link. The chief of party did not directly supervise any part of this survey. LT Kevin N. Harbison was chief of party at the time this survey was conducted, but transferred before the survey was submitted.

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



LT James A. Illg, NOAA
Chief, Atlantic Hydrographic Party (acting)



Glenn D. Hendrix
Hydrographer-in-charge of daily operations



TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 28, 1997

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-K204-AHP

HYDROGRAPHIC SHEET: H-10586

LOCALITY: Galveston Bay, Texas, Bacliff to Red Bluff

TIME PERIOD: December 14, 1994 - April 12, 1995
December 4, 1995 - June 5, 1996

TIDE STATION USED: 877-0613 Morgans Point, Tx.
Lat. 29° 40.9'N Lon. 94° 59.1'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.00 feet
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.2 feet

TIDE STATION USED: 877-1013 Eagle Point, Tx.
Lat. 29° 28.8'N Lon. 94° 55.1'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.00 feet
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.1 feet

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: GB84, GB106, GB109, GB112 & GB120

Refer to attachment(s) for zoning information.

Note: Provided time series data are tabulated in English units (feet) and on Greenwich Mean Time.

Note: Tidal phase progressions are inconsistent in this tidal regime. The best available time corrections are provided for both high and low water times. An average of the high and low water time corrections are provided for each zone for survey applications.



Note: Relative sea level trends show that the Galveston Bay, Texas area is undergoing substantial land subsidence. The relative sea level trend observed at the site for the control station, Galveston, Pier 21, for the time period 1950 through 1993 is +0.025 ft./yr. with a standard error of 0.002 ft./yr. As a result of high rate of sea level change, the 1960 to 1978 Tidal Epoch value of Mean Lower Low Water (MLLW) used as chart datum and reference datum for NOS tidal predictions does not reflect present conditions. The data are under review to determine an updated value of MLLW. Even though the 1960-78 Epoch value of MLLW is not the most current, the change is in the direction that is safe for navigation purposes.



CHIEF, TIDAL ANALYSIS BRANCH

Final tide zone correctors and node point locations for OPR
K204-AHP. Sheet H-10586.

Format: Longitude in decimal degrees (negative value denotes
Longitude West),
Latitude in decimal degrees
Tide Station (in recommended order of use)
Average Time Correction (in minutes)
Range Correction

		Tide Station Order	AVG Time Correction	Range Correction
Zone GB84				
-94.912115	29.49494	877-1013	0	1.00
-94.933667	29.499074			
-94.894222	29.520928			
-94.853754	29.532773			
-94.810436	29.535296			
-94.777866	29.52909			
-94.779108	29.513058			
-94.823084	29.511613			
-94.861474	29.502241			
-94.893579	29.488103			
-94.925424	29.47237			
-94.912115	29.49494			
Zone GB106				
-94.965002	29.506346	877-1013	12	1.04
-94.907294	29.542906	877-0613	-48	0.88
-94.874446	29.56085			
-94.841137	29.576204			
-94.810436	29.535296			
-94.853754	29.532773			
-94.894222	29.520928			
-94.933667	29.499074			
-94.954845	29.504573			
-94.965002	29.506346			
Zone GB109				
-94.965002	29.506346	877-1013	24	1.08
-95.000717	29.514514	877-0613	-36	0.91
-95.011273	29.525865			
-94.97929	29.552671			
-94.931651	29.581928			
-94.869904	29.615248			
-94.841137	29.576204			
-94.874446	29.56085			
-94.907294	29.542906			
-94.965002	29.506346			
Zone GB112				
-94.97929	29.552671	877-1013	30	1.12

-95.011273	29.525865	877-0613	-24	0.94
-95.017311	29.546834			
-95.016733	29.557514			
-95.013385	29.568704			
-94.999816	29.590316			
-94.987435	29.60139			
-94.955797	29.629003			
-94.946074	29.631713			
-94.902708	29.656925			
-94.869904	29.615248			
-94.931651	29.581928			
-94.97929	29.552671			

Zone GB120

-94.987435	29.60139	877-0613	-12	0.97
-95.02613	29.606029	877-1013	42	1.15
-95.030133	29.620524			
-95.005764	29.66289			
-94.982082	29.677124			
-94.918321	29.666686			
-94.902708	29.656925			
-94.946074	29.631713			
-94.955797	29.629003			
-94.987435	29.60139			

H-10586

GEOGRAPHIC NAMES

Name on Survey	ON CHART NO. 11327 → 11326		ON PREVIOUS SURVEY NO.		ON U.S. QUADRANGLE MAPS		FROM LOCAL INFORMATION		ON LOCAL MAPS		P.O. GUIDE OR MAP		RAND McNALLY ATLAS		U.S. LIGHT LIST	
	A	B	C	D	E	F	G	H	K							
BACLIFF (pp1)	X		X													1
BAYVIEW	X		X													2
BULKHEAD REEF	X		X													3
CLIFTON BEACH	X		X													4
EL JARDIN DEL MAR (pp1)	X		X													5
GALVESTON BAY	X		X													6
HOUSTON SHIP CHANNEL	X		X													7
MORGANS POINT	X		X													8
PINE GULLY	X		X													9
RED BLUFF (cliff)	X		X													10
SAN LEON	X		X													11
SURF OAKS	X		X													12
TEXAS (title)	X		X													13
																14
																15
																16
																17
																18
																19
																20
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																23
																24
																25

Approved:

Christa Co. Loy
Chief Geographer

MAY 30 1997

N/CS33-12-98

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY
(Check):

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- GBL (Give number) _____

TO:

[CHIEF, DATA CONTROL GROUP, N/CS3x1]
 NOAA/NATIONAL OCEAN SERVICE
 STATION 6815, SSMC3
 1315 EAST-WEST HIGHWAY
 SILVER SPRING, MARYLAND 20910-3282]

DATE FORWARDED

FEB 12, 1998

NUMBER OF PACKAGES

ONE TUBE AND ONE ENVELOPE

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

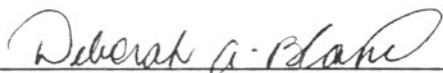
H-10586

TEXAS, GALVESTON BAY, BACLIFF TO RED BLUFF

- 1 (ONE) TUBE CONTAINING THE FOLLOWING:
 - 1 SMOOTH SHEET (H-10586)
 - 1 COMPOSITE DRAWING FOR NOS CHART 11327
 - H-DRAWING FOR NOS CHART 11327
- 1 (ONE) ENVELOPE CONTAINING THE FOLLOWING:
 - 1 ORIGINAL DESCRIPTIVE REPORT
 - 1 DRAWING HISTORY FORM #76-71 FOR NOS CHART 11327

FROM: (Signature)

Deborah A. Bland



RECEIVED THE ABOVE

(Name, Division, Date)

Return receipted copy to:

[ATLANTIC HYDROGRAPHIC BRANCH]
 N/CS33
 439 WEST YORK STREET
 NORFOLK, VA 23510-1114]

02/13/98

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10586

NUMBER OF CONTROL STATIONS		2
NUMBER OF POSITIONS		17983
NUMBER OF SOUNDINGS		17983
	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	42	03/21/97
VERIFICATION OF FIELD DATA	324	10/31/97
QUALITY CONTROL CHECKS	0	
EVALUATION AND ANALYSIS	119	
FINAL INSPECTION	35	12/02/97
COMPILATION	76	02/11/98
TOTAL TIME	596	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		01/16/98

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H-10586 (1994)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

Hydrographic Processing System
NADCON, version 2.10
QUICKSURF, version 5.1
MicroStation 95, version 5.05
I/RAS B, version 5.01

The smooth sheet was plotted using a CalComp TechJET Color GT plotter.

H. CONTROL STATIONS

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). Office processing of this survey is based on these values. The smooth sheet has been annotated with ticks showing the computed mean shift between the NAD 83 and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27, move the projection lines 0.825 seconds (25.413 meters or 2.54 mm at the scale of the survey) north in latitude, and 0.734 seconds (19.750 meters or 1.97 mm at the scale of the survey) west in longitude.

J. SHORELINE

The shoreline originates with unreviewed digital shoreline manuscript DM-10232 (1993). All shoreline revisions originating with the present survey are shown in red on the smooth sheet. The following should be noted:

1. Uncharted pier ruins were found in Latitude 29°30'21.575"N, Longitude 94°57'02.385"W. It is recommended that the ruins be charted in the above present survey location.
2. A row of submerged piles charted in Latitude 29°35'45.5"N, Longitude 94°59'01.0"W originate with an unknown source. This row of submerged piles was verified by the

present survey. A 2 foot (0⁶m) fathometer least depth was obtained on the offshore end of the row of piles. It is recommended that a 2 foot sounding with a danger curve and the note submerged piles be added to the chart in the present survey location.

L. JUNCTIONS

H-10585(1996)	1:10,000	to the west
H-10588(1996)	1:10,000	to the east
H-10661(1996)	1:10,000	to the north

A standard junction was effected between the present survey and surveys H-10585 (1996), H-10588 (1996) and H-10661 (1996).

M. COMPARISON WITH PRIOR SURVEYS

H-8694 (1962)	1:10,000
H-8695 (1962)	1:12,500
H-8742 (1962-63)	1:10,000
H-8743 (1962-65)	1:20,000

a. Prior survey depths from H-8694 (1962) covers the southwestern portion of the present survey. Prior survey depths compare favorably and show a general trend of being 1-2 ft (0³-0⁶ m) shallower than the present survey soundings.

b. Prior survey depths from H-8695 (1962) covers the southeastern corner of the present survey. Prior survey depths compare favorably and show a general trend of being 1-2 ft (0³-0⁶ m) shallower than the present survey soundings.

c. Prior survey depths from H-8742 (1962-63) covers the northern portion of the present survey. Prior survey depths compare favorably and show a general trend of being 2-3 ft (0⁶-0⁹ m) shallower than the present survey soundings. The following should be noted:

1. Shoreline in the vicinity of Latitude 29°35'00"N, Longitude 95°00'00"W, to Latitude 29°36'15"N, Longitude 94°59'00"W originating with the prior survey has migrated to the west approximately 200 to 300 meters. It is recommended that the soundings and shoreline features be charted as shown on the present survey.

d. Prior survey depths from H-8743 (1962-65) covers the

northeastern portion of the present survey. Prior survey depths compare favorably and show a general trend of being 1-2 ft (0³-0⁶ m) shallower than the present survey soundings. The deeper soundings within the Houston Ship Channel show a general trend of being 3-6 ft (0⁹-1⁸ m) shallower than the present survey soundings.

The differences between the prior surveys and the present survey can be attributed to natural changes, cultural development, and improved hydrographic surveying methods and equipment.

Except as noted above the present survey is adequate to supersede the above prior surveys within the common area.

O. COMPARISON WITH CHART 11327 (27th Edition, Mar. 15/97)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in Sections N. and O. of the Descriptive Report. The following should be noted:

1. AWOIS Item #9312, originating with Chart Letter 64 of 1965 (CL64/65), consists of thirteen items, of which, nine charted submerged stakes and one charted pile are located within the limits of the present survey. The submerged stakes and pile were disproved by the present survey. During the investigation of this AWOIS Item several side scan sonar contacts were detected. Further investigation in the office revealed that none of these contacts were significant when compared with surrounding present survey soundings. It is recommended that the pile and submerged stakes be removed from the chart.

2. AWOIS Item #9313, originating with Blue Print 68549 of 1965 (BP68549/65), consists of thirteen charted submerged piles and submerged signs, of which eight submerged piles and two submerged signs are located within the limits of the present survey. The submerged piles & submerged signs were disproved by the present survey. During the investigation of this AWOIS Item several side scan sonar contacts were detected. Further investigation in the office revealed that none of these contacts were significant when compared with surrounding present survey soundings. It is recommended that the submerged piles & submerged signs be removed from the

chart.

3. A submerged bulkhead charted from Latitude 29°36'21"N, Longitude 94°57'00"W to Latitude 29°35'25.8"N, Longitude 94°56'17.9"W originates with an unknown source and was neither verified nor disproved by the present survey. It is recommended that the submerged bulkhead be retained as charted.

4. A stake charted in Latitude 29°35'23.00"N Longitude 94°56'16.00"W originates with an unknown source and was not investigated by the present survey but it is in an area that was covered by 200% side scan sonar. No indication of the stake was found. It is recommended that this stake be removed from the chart.

5. A row of submerged piles charted in Latitude 29°35'45.5"N, Longitude 94°59'01.0"W originate with an unknown source. This row of submerged piles was not verified by the present survey. A 2 foot (0⁶m) fathometer depth was obtained a pile in Latitude 29°35'44.44"N, Longitude 94°59'00.06"W. This pile is at the offshore end of the charted row of piles. It is recommended that the submerged piles remain as charted, and that a 2 foot sounding with a danger curve and the note submerged piles be added to the chart in the present survey location.

6. The following charted obstructions originate with unknown sources and were neither verified nor disproved by the present survey.

<u>Latitude (N)</u>	<u>Longitude (W)</u>
29°34'38"	95°00'00"
29°35'02.5"	94°59'57"
29°35'08.5"	94°59'42"
29°35'30.2"	94°56'07.5"
29°35'32"	94°59'09"

It is recommended that these obstructions be retained as charted.

7. A submerged pile PA charted in Latitude 29°33'24"N Longitude 94°59'14"W originates with an unknown source and was neither verified nor disproved by the field. It is recommended that this item be retained as charted.

8. A pipe PA charted in Latitude 29°33'54.6"N Longitude 94°55'58.7"W originates with an unknown source and was neither

verified nor disproved by the field. It is recommended that this item be retained as charted and that the note be revised to submerged pipe PA.

9. Ruins charted in Latitude 29°35'25.3"N Longitude 94°59'08.7"W originate with an unknown source and were investigated by the present survey. No indication of the ruins were found. It is recommended that these ruins be removed from the chart.

10. A lighted marker charted in Latitude 29°34'01"N Longitude 94°56'06"W originates with an unknown source and is no longer there. A dolphin is now in this location. Further, a lighted platform in Latitude 29°34'00.44"N, Longitude 94°56'05.84"W and another dolphin in Latitude 29°34'00.24"N, Longitude 94°56'05.67"W were found by the present survey. It is recommended that the lighted marker be deleted from the chart. It is also recommended that the platform be charted in the present survey location and that the new dolphins be added to the chart in the present survey locations. It is also recommended the labels dolphins and platform be added to the chart in the present survey location.

11. Shoals charted in Latitude 29°35'17"N Longitude 94°55'59"W, Latitude 29°35'27"N Longitude 94°56'07.5"W and Latitude 29°34'45"N Longitude 94°55'35"W originate with unknown sources and were disproved by the present survey. There are no indications of any shoals in these areas. It is recommended that the shoal symbols be removed from the chart.

12. A note charted in Latitude 29°36'09"N Longitude 94°56'54"W originates with an unknown source and reads shl (7 ft rep 1995) PA. Present survey soundings are from 36 to 50 feet in the area of the reported shoal. It is recommended that the note be removed from the chart.

13. A charted obstruction in Latitude 29°30'57.6"N Longitude 94°59'15.7"W originates with an unknown source. A pier was found by the present survey in this location. It is recommended that a pier be charted in this location, as shown on the present survey and the obstruction be removed from the chart.

14. An uncharted platform and three dolphins were found by the field in the vicinity of Latitude 29°33'19"N Longitude 94°57'35"W. There is no indication of this platform or the dolphins on the chart. It is recommended that a platform be

charted in Latitude 29°33'19.53"N, Longitude 94°57'35.28"W and that the dolphins be charted in Latitude 29°33'18.33"N, Longitude 94°57'35.108"W and Latitude 29°33'19.96"N, Longitude 94°57'34.66"W.

Except as noted above the present survey is adequate to supersede the charted hydrography within the common area.

P. ADEQUACY OF SURVEY

This is an adequate hydrographic/side scan sonar survey. No additional work is recommended.

Q. AIDS TO NAVIGATION

1. Houston Ship Channel Light "71" was destroyed and was replaced with a green can temporary buoy. Subsequent to the completion of the present survey it was confirmed by the 8th Coast Guard District's Aids to Navigation Office that the light was rebuilt and positioned in Latitude 29°35'01.047"N, Longitude 94°56'16.897"W on 21 March 1997. It is recommended that the light be charted in the new position after confirmation of the geographic position with the 8th Coast Guard District's Aids to Navigation Office.

S. MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

WHITING Processing Team

Robert Snow

Robert Snow

Cartographic Technician
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET
H-10586

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disapproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Deborah A. Bland
Deborah A. Bland
Cartographer,
Atlantic Hydrographic Branch

Date: 1-16-98

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.

Nicholas E. Perugini
Nicholas E. Perugini,
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Date: 1-16-98

Final Approval:

Approved: Gerald B. Mills
for Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

Date: 3/13/98

Final Planning for OPR K204-AHP Galveston Bay, TX

