

H10588

NOAA FORM 78-35A

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

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
Field No. AHP-10-1-95
Registry No. H-10588

LOCALITY

State TEXAS
General Locality GALVESTON BAY
Sublocality RED FISH BAR TO
..... EAGLE POINT
..... 19 96
..... CHIEF OF PARTY
..... LT. K. N. HARRISON, NOAA

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DATE APR 27 1998

NOAA FORM 77-28
(11-72)

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

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10588

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

FIELD NO.

AHP-10-1-95

State Texas

General locality Red Fish Bar to Eagle Point

Locality Galveston Bay

Scale 1:10,000

Date of survey January 26, 1995 to May 6, 1996

Instructions dated September 16, 1995

Project No. OPR-K204

Vessel NOAA Survey Vessel 518 and 770

Chief of party Lt Kevin Harbison

Surveyed by CEP, Lt KH, BAL, GDH, Lt RR, Lt SS, RWR, PW, DBE

Soundings taken by: (echo sounder, hand lead, pole) Innerspace 448

Graphic record scaled by CEP, Lt RR, Lt SS

Graphic record checked by CEP, Lt RR, Lt SS

Protracted by N/A

Automated plot by Bruning 824 (Field) Hewlett Packard Design Jet 350C Plotter/CHB

Verification by Hydrographic Surveys Branch Personnel

Soundings in (fathoms, feet, or meters at MLW or MLLW) Feet meters at MLLW

REMARKS: CEP= Castle E. Parker

Lt Scott Shaulis

Lt KH= Lt Kevin Harbison

Robert W. Ramsey

BAL= Brian A. Link

Phil Wolf

GDH=Glen D. Hendrix

David B. Elliott

Lt Ric Ramos

SURE/AWOS mCR
4/7/98

All Times recorded in UTC. Notes in the Descriptive Report were made in red during office processing.

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10588
FIELD NO. AHP-10-1-95
SCALE: 1:10,000
1995-96
ATLANTIC HYDROGRAPHIC PARTY
CHIEF OF PARTY: LT James A. Illg, NOAA

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 AJ@ 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-10588 covers the west central portion of Galveston Bay from Redfish Bar to Eagle Point, including the Houston Ship Channel from light 49 to light 68. The approximate survey limits are as follows:

North: 29°35'24"N
South: 29°28'47"N
West: 094°55'24"W
East: 094°50'39"W

This survey was conducted from January 26, 1995 (DN 026) to May 6, 1996 (DN 127).

C. SURVEY VESSELS

NOAA launches 770 and 518, both 21-foot MonArks, were used to collect all survey data. No problems were encountered with either of the vessels. Vessel 518 was used on day numbers 031, 032, 033, 034, 037, 038, 040, 041, 047, 052, and 053 (1995).

Vessel 770 was used for data acquisition on the remainder of the survey, day numbers 026, 058, 059, 060, 061, 062, 079, 080, 081, 082, 083, 116, 129, 291, 299, 313, 317, 319, 334, 338, 340, 346, and 348 (1995), and 005, 123, 124, and 127 (1996).

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

Version 5.01 of the PC-DAS programs and Hypack Version 5.9 were used for on-line data acquisition. Hypack software operated in the Windows 3.1 environment. HDAPS was used for all post processing. *A list of all programs and versions used for data processing can be found in the Appendix of this report. The NOS program VELOCITY (Ver. 2.10) was also used during this survey.

The Hypack line file for detached positions acquired on DN 346 cannot be segregated for proper application of tides. Detached positions taken within this line file fall within both tide zone five and eight. The current version of HDAPS cannot re-apply correctors by Data Set Number (DSN). The only method for corrector application is data line by data line.

E. SONAR EQUIPMENT

Side Scan Sonar was used on January 5, 1996 (DN 005), May 2, 1996 (Dn 123), and May 3, 1996 (DN 124) as an aid in resolving AWOIS items. An EG&G model 260 recorder, serial number 11443 and towfish model 272-T, serial number 10696 were used. The side scan was deployed on the survey vessel's starboard quarter using the 25-meter range scale at 100 kHz system frequency. The side scan sonar tow fish was lowered in the water column approximately 1.0 meter in areas outside of the ship channel. The side scan sonar tow fish was run deeper than 1 meter when working in the middle of the ship channel to maintain the bottom track when using the 25-meter range scale. Twenty-meter line spacing was used to obtain 200% coverage.

Water depths ranged from 2.2 meters to 3.4 meters on average, with deeper depths in or near the ship channel. Confidence checks were taken on solid objects such as platforms, well heads, and aids to navigation. Confidence checks were dependent upon check objects being near the items being investigated. Degraded returns were caused by poor recorder performance and weather factors such as excessive seas and winds. These factors caused interference that resulted in whited out areas on the record.

The sea state problem persisted throughout side scan sonar operations. When the sea state reached 1.0 foot or more in

*Data filed with original field records.

height, the sonar image was adversely affected. Quality sonar records were difficult to acquire with wind speeds greater than 8 to 10 knots. A calm sea state was rare in Galveston Bay, as the average winds were greater than 10 knots.

Contact development consisted of echo sounder investigations because divers were not available during side scan sonar investigations. Contacts were selected for development based upon their computed heights and the water depth. Any contact rising off the bottom more than 10% of the surrounding water depth was investigated. All side scan data was designated as "Not for Smooth Plot" (NSP). A side scan track plot is included with the field sheets and the applicable AWOIS report.

F. SOUNDING EQUIPMENT

Innerspace model 448 depth sounders were used to collect all echo soundings on this survey. Serial number 283 was used on vessel 770, and serial number 175 was used on vessel 518.

A standard lead line calibrated in meters was used during this survey for comparison readings with the echo sounders. The lead line was calibrated using a steel tape on January 25, 1995. In addition, a five-meter long wooden sounding pole constructed according to HSG No. 69 was used to obtain all pole soundings.

No problems were encountered with any of the sounding equipment.

G. CORRECTIONS TO ECHO SOUNDINGS

Corrections for the speed of sound through the water column were computed from data obtained with a Sea-Bird Electronics Seacat Profiler, s/n 192276-287 for velocity casts 2-7, and 10-15. This instrument was calibrated by the manufacturer on November 30, 1994. Seacat Profiler s/n 1477 was used for velocity cast 9. The calibration date for s/n 1477 was February 8, 1995. An Odom Digibar, Model DB-1100, s/n 155 was used for velocity casts 8 and 25. This instrument was calibrated by the manufacturer on May 22, 1995. No velocity correctors were applied to DN 005, as sounding data was not collected on that day. Data quality assurance tests were performed prior to each cast. Program VELOCITY was used for computing the speed of sound correctors. Speed of sound corrections were applied to the sounding plot using the HDAPS program REAPPLY. *Copies of the tables and support documentation 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:

Velocity Table No.	Cast No.	Deepest Depth (m)	Applicable DN	Cast Position	Day
2	2	18.1	026	29°33'32"N 094°54'55"W	026
3	3	18.2	031-034	29°34'50"N 094°55'59"W	032
4	4	16.4	037-041	29°32'25"N 094°54'04"W	041
5	5	18.4	047-053	29°31'50"N 094°53'40"W	052
6	6	19.0	058-062	29°34'34"N 094°55'41"W	058
7	7	17.4	079-083	29°33'58"N 094°55'15"W	080
8	8	18.2	116	29°32'19"N 094°54'03"W	116
9	9	17.2	129	29°33'10"N 094°54'41"W	129
10	10	13.0	291	29°34'15"N 094°55'30"W	291
11	11	3.8	299	29°29'15"N 094°53'23"W	299
12	12	15.8	313	29°34'00"N 094°55'25"W	313
13	13	17.2	313-319	29°31'58"N 094°53'47"W	317
14	14	16.5	338	29°32'16"N 094°56'22"W	338
15	15	13.1	340-348	29°31'10"N 094°53'08"W	340
25	25	3.9	123-127	29°33'06"N 094°53'27"W	124

When weather permitted, lead line comparisons were taken to determine echo sounder error. Neither Innerspace echo sounder used on this survey had any instrument error. A copy of the calibration forms are in the "Survey Separates."

A static draft of 0.3 meters was applied to the final sounding plot by using the HDAPS program REAPPLY. The draft was measured by subtracting the difference from a punch mark on the side of Launch 770 and 518, 0.6 meters above the transducer, to the water surface.

Settlement and squat measurements for Launch 770 were determined on January 9, 1995 (DN 009). These measurements were conducted in Clear Lake, Texas using the level method. Settlement and squat measurements for Launch 518 were determined in the Galveston Ship Channel on December 6, 1994 (DN 340) using the level method. *Data from this test are included in the "Survey Separates." Settlement and squat correctors were applied off line to the soundings by using the HDAPS program REAPPLY.

Predicted tides for this project were provided on diskette by N/OES231 for the Pier 21, Galveston, Texas, reference tide station #877-1450. Correctors for this survey were used as

*Data filed with original field records.

designated in the project instructions. The correctors are:

	Time Correction		Range Ratio
	High Water	Low Water	
Zone #5	+02:00	+04:00	X 0.64
Zone #8	+03:00	+04:30	X 0.71

All elevations and soundings on survey H-10588 are based on MLLW unless otherwise specified.

Approved tide levels were requested from the Product and Services Branch, Datums Section, N/OES231, in a letter dated November 20, 1996. A copy 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 NAD 1983. The Galveston, Texas DGPS beacon was used for control throughout this survey. *The beacon's geographic position is listed on the Control Station List included in the "Survey Separates."

I. HYDROGRAPHIC POSITION CONTROL

Differential GPS (DGPS) was used for all hydrographic data acquisition. An Ashtech sensor, serial number 700417B1070, with antenna, serial number 700391A0504, was used as the remote station on launch 770. Ashtech sensor, serial number 700417A1065, with antenna, serial number 70039A1054, was used on vessel 518. The corrector data link between the reference station receiver and the launch sensor was a Communications Systems International, Inc., MBX-1 Beacon Data Receiver, model 1/02, serial number X-1251 for vessel 770, and X-1250 for vessel 518.

Daily DGPS performance checks were conducted in accordance with FPM 3.4.4, by comparing the DGPS position of the vessel to a horizontal control station. Calibration point "CAL 1" was used as a daily calibration check point. To obtain a performance check, the launch was brought alongside the checkpoint. The easting and northing values, number of SVs, HDOP, and time of observation were noted on the echogram. These values were then entered into a Lotus spreadsheet which computes the acceptable error margin based on the HDOP and also the observed difference between the known and observed positions. *The table of these comparisons is included in the "Survey Separates." All observed differences fell well within the allowable limit.

* Data filed with original field records

J. SHORELINE *See also Evaluation Report*

Shoreline shown on the final sounding plot in black ink was digitally transferred via Zeta Bruning plotter. Digital shoreline data (CM9210) provided by the HDAPS office were translated via the shoreline translator program, and then loaded in HDAPS. Shoreline shown on the survey sheet was inspected for changes by comparing the hydrographic data which junctioned at shore or by visual inspection. No shoreline changes were noted.

Reference numbers, descriptions, field notes, and explanations of new shoreline features are located on the graphic record and on the boat sheet. Photographs are included with the survey data as well.

K. CROSSLINES

A total of 64.9 linear nautical miles of crossline soundings were acquired, which represents approximately 12% of the main scheme hydrography. Crossline soundings agree with the main scheme soundings within 0.0 to 0.3 meters, with the exception of areas where the bottom is irregular. Sounding disagreement is also caused by the use of predicted rather than actual tidal heights.

L. JUNCTIONS *See also Evaluation Report*

This survey junctions with Survey H-10614 (Sheet E) to the south and with H-10586 to the west. The junction areas included 200 meters of sounding overlap. There are no contemporary survey junctions to the north and to the east. Soundings from this survey agree within 0.0 to 0.5 meters in the junction areas except where the bottom is irregular.

M. COMPARISON WITH PRIOR SURVEYS *See also Evaluation Report*

See the Atlantic Hydrographic Branch's evaluation report for H-10588, for a discussion of the comparison with prior surveys.

N. ITEM INVESTIGATION REPORTS

AWOIS item investigations for this survey are incomplete. Survey production was hampered by weather factors throughout the duration of the survey. Wind and extreme sea state severely impacted production during the final stages of survey completion involving side scan sonar investigations. Lack of personnel and equipment sharing induced delays. Progress was also hampered by

* Data filed with original field records.

survey priority during 1995. Production on survey H-10588 was suspended to conduct surveys H-10619 and H-10663 before resuming production on H-10588. Chain drags were not feasible; there were numerous pipelines in the survey area that posed hazardous situations. Bearing this in mind, investigations with large search radii required side scan sonar. There were 29 of 64 AWOIS items not resolved on this survey. The following are unresolved items: AWOIS 9229, 9231, 9232, 9235-9240, 9242, 9244-9248, 9261, 9262, 9265, 9266, 9274, 9278, 9279, 9349, 9350, 9354, 9358, 9360, 9363, and 9365. All AWOIS reports are appended to this report.

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

All comparisons were made between survey H-10588 and chart 11327, 27 26th Edition, ~~October 16, 1993~~ ^{March 15, 1997}. A chart enlargement was used for comparison and is forwarded with survey H-10588.

No dangers to navigation were identified on this survey.

A telephone conversation with Denise Sloan (409-766-6311 or 6315) of the U.S. Army Corps of Engineers, Galveston, Texas office on January 12, 1995 indicated that all spoil areas located within the limits of survey H-10588 are still active.

Numerous privately maintained beacons exist in the ^{vicinity of 29°28'55" lat} southern ^{94°53'35" w lon} survey area marking oyster lease boundaries. These markers were found to be scattered around the area in no apparent pattern or grid. The markers were made of a variety of materials. Some markers were two inch PVC pipe; some were six inch PVC pipe sealed on both ends, chain and anchor attached; some markers were bamboo poles penetrating the sediment. A Texas Parks and Wildlife employee indicated that these markers were surveyed in the mid 1980's and then published for use with fisheries studies. With time, these lease markers have been subject to the effects of wind, waves, and storm surges. Often the markers are destroyed or relocated by natural forces. Oyster reefs are scattered throughout this area.

It is recommended that a note be added to the chart stating that there are numerous privately maintained beacons in the area south of Red Fish Bar, east of San Leon and April Fool Point, and on the east and west sides of the Houston Ship Channel. Include in the note the intended purpose of the beacons as oyster lease markers. *Concur with conditions. Delete the charted aids. Add a note:*

Numerous privately maintained aids exist in this area.

The following are new features found on this survey:

DN	PN	N Latitude	W Longitude	Item Description
291	5344	29°35'21.55"	094°55'12.24"	Pile
346	7448	29°35'13.99"	094°53'30.34"	Pile
346	7480	29°31'20.50"	094°54'46.38"	Pile-Don't chart
346	7477	29°31'05.26"	094°55'02.27"	Pile-chart piles
123	7855	29°29'52.59"	094°54'21.42"	Shellfish Marker-chart marker
083	4873	29°29'52.51"	094°54'57.26"	Pile
083	4874	29°29'53.77"	094°54'56.57"	Pile
083	4875	29°29'54.41"	094°54'55.97"	Pile
083	4876	29°29'55.35"	094°54'54.88"	Pile
083	4877	29°29'57.65"	094°54'54.59"	Pile
083	4878	29°29'58.94"	094°54'53.40"	Pile
083	4879	29°29'57.61"	094°54'53.60"	Pile
083	4880	29°29'55.34"	094°54'54.22"	Pile
083	4881	29°29'53.90"	094°54'54.11"	Pile
083	4882	29°29'52.98"	094°54'53.93"	Pile
083	4883	29°29'53.02"	094°54'54.75"	Pile
083	4884	29°29'53.11"	094°54'55.94"	Pile
031	0085	29°29'18.39"	094°54'44.33"	Pile
031	0101	29°29'00.34"	094°54'58.33"	Pile
034	7492	29°35'15.76"	094°52'20.15"	Pile-Do not chart
348	7529	29°31'55.35"	094°51'47.09"	Pile
348	7541	29°32'03.99"	094°51'01.67"	Pile
348	7548	29°31'49.52"	094°51'23.01"	Pile
348	7557	29°30'55.12"	094°51'00.71"	Pile
348	7491	29°35'16.68"	094°52'20.85"	Pile
348	7526	29°31'59.93"	094°51'53.76"	Dolphin
348	7558	29°30'55.44"	094°50'59.78"	Dolphin
346	7473	29°30'43.96"	094°54'51.42"	Dolphin
346	7474	29°30'43.96"	094°54'50.40"	Dolphin
346	7449	29°35'11.97"	094°53'29.34"	Platform
346	7476	29°31'03.43"	094°55'02.85"	Platform
346	7479	29°31'04.75"	094°55'03.89"	Platform
346	7472	29°30'42.84"	094°54'50.52"	Platform
348	7493	29°35'15.64"	094°52'20.27"	Dolphin-chart dolphin
348	7523	29°32'02.50"	094°51'56.11"	Platform
348	7524	29°31'59.63"	094°51'57.81"	Platform
348	7525	29°31'57.21"	094°51'56.59"	Platform
348	7527	29°32'01.02"	094°51'52.58"	Platform
346	7463	29°31'30.25"	094°53'52.74"	Platform
346	7481	29°31'20.50"	094°54'46.38"	Platform

concur - chart piles

Chart piles

Chart piles

Chart Dolphins

Chart platforms

Chart platforms

346	7482	29°31'17.88"	094°54'46.88"	Platform
346	7486	29°31'22.19"	094°54'25.40"	Platform
348	7559	29°30'55.89"	094°50'58.55"	Platform
348	7555	29°31'50.78"	094°52'49.76"	Platform
346	7460	29°32'35.02"	094°54'34.53"	Obstruction (AWOIS 9357)
299	5610	29°32'25.87"	094°54'40.74"	Platform Ruins - chart
346	7447	29°35'17.20"	094°53'42.72"	Well Head
346	7450	29°35'10.00"	094°53'30.00"	Well Head
346	7451	29°35'05.07"	094°53'33.53"	Well Head
346	7452	29°35'04.61"	094°53'40.80"	Well Head
346	7483	29°31'07.53"	094°54'45.86"	Well Head
346	7484	29°31'10.14"	094°54'32.69"	Well Head
346	7485	29°31'21.51"	094°54'25.88"	Well Head
346	7475	29°30'43.88"	094°54'49.80"	Well Head
346	7487	29°31'32.07"	094°54'13.80"	Well Head
346	7488	29°31'35.26"	094°54'14.57"	Well Head
348	7499	29°34'34.08"	094°52'52.40"	Well Head
348	7500	29°34'31.37"	094°52'45.89"	Well Head
348	7501	29°34'05.79"	094°52'22.54"	Well Head
348	7502	29°33'50.83"	094°52'08.62"	Well Head
348	7503	29°32'32.09"	094°52'21.91"	Well Head
348	7504	29°32'30.04"	094°52'14.39"	Well Head
348	7505	29°32'40.73"	094°52'09.29"	Well Head
348	7506	29°32'39.22"	094°51'53.77"	Well Head
348	7507	29°32'39.57"	094°51'46.37"	Well Head
348	7508	29°32'30.85"	094°51'28.61"	Well Head
348	7509	29°32'31.78"	094°51'39.99"	Well Head
348	7510	29°32'35.31"	094°51'43.27"	Well Head
348	7511	29°32'33.46"	094°51'44.89"	Well Head
348	7512	29°32'31.99"	094°51'53.59"	Well Head
348	7513	29°32'26.66"	094°51'43.61"	Well Head
348	7514	29°32'23.72"	094°51'41.86"	Well Head
348	7515	29°32'19.36"	094°51'27.74"	Well Head
348	7516	29°32'17.35"	094°51'30.95"	Well Head
348	7517	29°32'15.22"	094°51'51.91"	Well Head
348	7518	29°32'18.91"	094°51'54.70"	Well Head
348	7519	29°32'14.92"	094°51'57.55"	Well Head
348	7520	29°32'17.59"	094°52'05.49"	Well Head
348	7521	29°32'02.14"	094°52'09.27"	Well Head
348	7522	29°32'05.94"	094°51'56.27"	Well Head
348	7528	29°32'08.18"	094°51'39.50"	Well Head
348	7530	29°31'57.93"	094°51'41.70"	Well Head
348	7531	29°32'01.61"	094°51'27.26"	Well Head
348	7532	29°32'06.05"	094°51'04.13"	Well Head

Chart Platforms

Obstruction (AWOIS 9357) Chart 6: Obstr
 Platform Ruins - chart ruins w/ lead depth
 8 ft. AWOIS #9356

Chart wellheads

348 7533	29°32'18.86"	094°50'40.86"	Well Head
348 7534	29°32'05.68"	094°50'43.17"	Well Head
348 7535	29°31'55.28"	094°50'38.11"	Well Head
348 7536	29°31'37.82"	094°50'43.81"	Well Head
348 7537	29°31'35.64"	094°50'37.55"	Well Head
348 7538	29°31'41.79"	094°50'51.59"	Well Head
348 7539	29°31'55.48"	094°50'45.73"	Well Head
348 7540	29°31'55.02"	094°50'47.10"	Well Head
348 7542	29°32'00.37"	094°51'00.72"	Well Head
348 7543	29°31'50.17"	094°50'58.19"	Well Head
348 7544	29°31'40.66"	094°51'02.78"	Well Head
348 7545	29°31'55.38"	094°51'23.11"	Well Head
348 7546	29°31'53.58"	094°51'27.62"	Well Head
348 7547	29°31'52.03"	094°51'24.82"	Well Head
348 7549	29°31'43.54"	094°51'18.16"	Well Head
348 7550	29°31'42.85"	094°51'35.57"	Well Head
348 7551	29°31'33.76"	094°52'00.95"	Well Head
348 7552	29°31'36.22"	094°52'04.68"	Well Head
348 7553	29°31'41.92"	094°52'18.59"	Well Head
348 7554	29°31'46.47"	094°52'44.29"	Well Head
348 7556	29°31'07.84"	094°51'08.43"	Well Head
299 5599	29°29'40.38"	094°54'32.33"	Exposed Wreck - Donot chart
299 5600	29°29'38.81"	094°54'32.78"	Exposed Wreck
299 5601	29°29'42.02"	094°54'33.54"	Exposed Wreck - Awols#9367 Chart visible wreck
299 5602	29°29'50.00"	094°54'33.45"	Exposed wreck - Donot chart (see next)
299 5603	29°29'50.89"	094°54'36.45"	Exposed Wreck - Awols#9366 - chart wk
299 5604	29°29'13.82"	094°53'35.63"	Submerged Wreck - Chart 4 wk
299 5607	29°29'41.44"	094°53'36.74"	Submerged Wreck - Chart 4 wk
299 5608	29°29'41.49"	094°53'36.69"	Submerged Wreck - Donot chart (same as above)
299 5609	29°29'47.64"	094°53'59.41"	Exposed Wreck - Awols#9268 - chart wk
319 6794	29°30'04.85"	094°53'42.43"	Exposed Wreck - chart wk
346 7470	29°29'47.49"	094°53'58.07"	Submerged Wreck - chart 2 wk
031 0078	29°29'28.18"	094°54'37.38"	Exposed Wreck - chart wk
031 0079	29°29'30.14"	094°54'36.76"	Exposed Wreck - chart wk
031 0106	29°29'13.03"	094°54'12.42"	Exposed Pipe (Lease Mkr) - chart pipe
031 0107	29°29'12.07"	094°54'12.15"	Pipe Awash (Lease Mkr) - chart Pipe (cov 1 ft at mllw)
083 4899	29°29'15.42"	094°54'47.06"	Exposed Pipe
083 4900	29°29'12.66"	094°54'47.13"	Exposed Pipe Chart pipes
083 4901	29°29'12.02"	094°54'47.45"	Exposed Pipe
083 4902	29°29'11.54"	094°54'47.68"	Exposed Pipe - donot chart
083 4903	29°29'10.92"	094°54'46.90"	Exposed Pipe
083 4904	29°29'11.47"	094°54'46.69"	Exposed Pipe
083 4905	29°29'12.09"	094°54'46.35"	Exposed Pipe Chart pipes
083 4906	29°29'11.93"	094°54'45.24"	Exposed Pipe

Chart wellheads

083 4907	29°29'11.27"	094°54'45.50"	Exposed Pipe - Do not chart
083 4908	29°29'10.71"	094°54'45.78"	Exposed Pipe
083 4909	29°29'09.16"	094°54'46.64"	Exposed pipe } chart pipe
083 4910	29°29'09.76"	094°54'50.11"	Exposed Pipe
031 0048	29°29'55.52"	094°55'04.18"	Pier Ruins - no change in charting
031 0049	29°29'53.62"	094°55'02.94"	Pier Ruins
031 0050	29°29'52.27"	094°55'01.47"	Pier Ruins
031 0051	29°29'51.30"	094°54'59.10"	Pier Ruins
031 0058	29°29'50.23"	094°54'53.21"	Pier Ruins
031 0073	29°29'37.46"	094°54'34.73"	Pier Ruins
031 0074	29°29'33.64"	094°54'37.37"	Pier Ruins
031 0080	29°29'25.01"	094°54'39.28"	Pier Ruins
031 0082	29°29'23.37"	094°54'39.78"	Pier Ruins
031 0083	29°29'20.69"	094°54'39.85"	Pier Ruins
031 0084	29°29'18.86"	094°54'44.92"	Pier Ruins
031 0092	29°29'06.91"	094°54'47.44"	Pier Ruins
031 0093	29°29'05.58"	094°54'47.51"	Pier Ruins
031 0094	29°29'04.34"	094°54'47.45"	Pier Ruins
031 0096	29°29'03.87"	094°54'47.38"	Pier Ruins
031 0097	29°29'03.88"	094°54'52.75"	Pier Ruins
031 0098	29°29'02.23"	094°54'55.15"	Pier Ruins
031 0099	29°29'01.30"	094°54'55.43"	Pier Ruins
031 0102	29°28'55.46"	094°55'01.34"	Pier Ruins
031 0103	29°28'52.37"	094°55'00.59"	Pier Ruins
031 0104	29°28'52.10"	094°55'03.61"	Pier Ruins
031 0105	29°28'50.86"	094°55'04.18"	Pier Ruins
083 4864	29°29'54.92"	094°55'18.44"	Pier Ruins
083 4865	29°29'53.58"	094°55'17.69"	Pier Ruins
083 4866	29°29'53.35"	094°55'14.17"	Pier Ruins
083 4867	29°29'52.61"	094°55'12.92"	Pier Ruins
083 4868	29°29'52.26"	094°55'12.47"	Pier Ruins
083 4869	29°29'52.19"	094°55'11.74"	Pier Ruins
083 4870	29°29'52.21"	094°55'10.72"	Pier Ruins
083 4871	29°29'51.31"	094°55'02.44"	Pier Ruins
083 4872	29°29'51.10"	094°54'57.40"	Pier Ruins
083 4896	29°29'34.60"	094°54'37.59"	Pier Ruins
083 4897	29°29'26.74"	094°54'40.74"	Pier Ruins
083 4898	29°29'27.83"	094°54'41.02"	Pier Ruins
031 0100	29°28'59.91"	094°54'58.47"	Pier

Already charted
No changes
necessary

The hydrographer recommends the above features, with the exception of the well heads, be added to the chart. Because the chart warns of numerous wells and pipelines in a magenta warning note, the well heads are not recommended for charting and were

located just for the hydrographic record. The platforms located are sizable permanent structures. The wellheads are small, easily relocated structures. None of the above features are considered dangers to navigation either because of their proximity to shore or the charted magenta warning note. *Concur w/ conditions, Chart all wellheads and platforms.*

The controlling depths of the Houston Ship Channel from Light 49 northward to Light 68 are compared in the following list:

CHANNEL SECTION	CHARTED CONTROLLING DEPTH	SURVEY CONTROLLING DEPTH
Center	40.0 ft/12.2 m	43. ³ 2 ft/13. ² 4 m
Left Outside	36.0 ft/11.0 m	^{42.4} 35.4 ft/10.8 m
Right Outside	31.0 ft/ 9.4 m	33.4 ft/10.2 m

The channel width was determined to be 200 meters (656 feet) wide from the six-meter curve on one side to the six-meter curve on the opposite side. The bottom profile within the channel confines is irregular because of dredging operations by the U.S. Army Corps of Engineers. The navigation aids, both buoys and fixed aids, all fall outside the six-meter contour. Survey soundings near the center of the channel are generally deeper than the survey controlling depths listed above.

The following list indicates discrepancies between bulls eye soundings on chart 11327 and soundings from survey H-10588.

Location	Charted Depth Feet	Survey Depth Feet/Meters	Charting Recommendation
29°33'26.35"N 094°55'04.03"W	6	^{9.0 2.7} 11.2/3.4	Survey Soundings
29°33'15.15"N 094°54'56.21"W	6	^{8.0 2.5} 10.2/3.1	Survey Soundings
29°33'01.88"N 094°54'19.78"W	3	^{7.0} 8.5/2.6	Survey Soundings
29°33'10.99"N 094°53'58.63"W	6	7.2/2.2	Survey Soundings
29°32'51.98"N 094°54'13.45"W	2 & 3	^{7.2} 8.2/2.5	Survey Soundings
29°32'22.27"N 094°54'09.69"W	6	^{11.5} 12.5/3.8 ⁵	Survey Soundings

*Concur
Chart
Present
Survey
Soundings*

29°32'06.09"N 094°53'06.53"W	6	$\frac{7.5}{8.9/2.7^6}$	Survey Soundings
29°31'56.33"N 094°53'25.09"W	3	$\frac{6.0}{7.5/2.3^0}$	Survey Soundings
29°31'41.65"N 094°54'30.06"W	6	$10.8/3.3^0$	Survey Soundings
29°31'10.82"N 094°54'03.09"W	6	$\frac{8}{9.2/2.8^5}$	Survey Soundings
29°30'54.54"N 094°54'43.91"W	6	$\frac{8}{9.5/2.9^5}$	Survey Soundings
29°29'18.10"N 094°54'25.75"W	3	$\frac{3.9}{4.6/1.4^2}$	Survey Soundings
29°29'38.31"N 094°53'19.33"W	6	$\frac{7.2}{8.9/2.7^2}$	Survey Soundings
29°34'29.08"N 094°51'47.50"W	6	$9.2/2.8^9$	Survey Soundings
29°32'31.91"N 094°55' ₅₄ 34.40"W	6	8.5/2.6	Survey Soundings
29°32'32.15"N 094°51'52.28"W	6	$\frac{9.0}{8.9/2.7}$	Survey Soundings
29°32'32.12"N 094°52' ₁₂ 21.99"W	6	$8.8/2.6^7$	Survey Soundings
29°32'18.82"N 094°52'05.27"W	6	$9.1/2.9^8$	Survey Soundings
29°32'01.93"N 094°52'08.96"W	6	$7.9/2.4^3$	Survey Soundings
29°31'59.65"N 094°52'20.10"W	6	$9.1/2.9^8$	Survey Soundings
29°31'19.69"N 094°52'29.34"W	22	$10.8/3.3^1$	Survey Soundings

Concur -
chart
present
Survey
Soundings

Latitude	Longitude	Chart Depth	Survey Depth	Notes
29°30'51.50"N	094°51'07.61"W	5	11.2/3.4	Survey Soundings
29°30'38.49"N	094°51'28.02"W	6	8.0/2.7	Survey Soundings
29°29'40.03"N	094°51'33.53"W	6	10.2/3.1	Survey Soundings
29°29'56.29"N	094°51'09.11"W	5	8.2/2.5	Survey Soundings
29°29'10.80"N	094°51'31.27"W	6	9.3/2.9	Survey Soundings
29°29'36.82"N	094°50'41.55"W	6	8.2/2.6	Survey Soundings

7.9/3.0/5.3/3.32/9.99
 2.4/1.5/1.03

535
 8.5 2.6
 11.0/3.3
 7.5 3
 8.2/2.5
 7.8
 8.2/2.6

Concur -
 Chart present
 Survey soundings.

Survey soundings within the six-foot contour located west of the Houston Ship Channel between 29°31'30"N and 29°33'45"N were found to be deeper than charted depths. Survey soundings range between 2.6m (8.5^{7.0}ft) to 4.6m (15.1^{12.0}ft). The hydrographer recommends updating the chart with soundings from this survey. *Concur*

The six-foot contour located on the west side of the charted Red Fish Island requires revision. Survey soundings range from ~~less than 1.0m~~ ^{less - 0.5m} near the island to 3.0m ~~on the outside edge of the six-foot contour~~. Note that Red Fish Island does not exist; rather the feature is now a ~~submerged~~ shoal. *Concur - Chart as found on present survey.*

The oyster shell shoal limits located at 29°30'00"N, 094°54'00"W have changed. The hydrographer recommends updating the shoal limits based upon soundings from this survey. *Concur*

Survey soundings located at 29°30'30"N 094°51'30"W are deeper than the charted six-foot bulls eye soundings in this area. The hydrographer recommends updating the chart with soundings from this survey. *Concur*

Survey soundings show evidence of a shoal located at 29°29'59.46"N, 094°52'40.38"W. This shoal is situated 100 meters west of a charted spoil area. The north edge of the shoal is located on the western edge of the designated spoil area. The shoal is not a danger to navigation because of the proximity to the spoil area. Graphic record annotation between PN 6800 to PN 6880 indicates oyster dredgers working in the immediate area.

The hydrographer recommends charting the shoal with a least depth of ~~0.9m/3.0ft~~^{2.0} and updating the chart with soundings from this survey. *Concur*

A deep hole charted with a depth of 104 feet located at 29°32'00"N, 094°50'41"W no longer exists. Sounding development of the area showed depths now in the range of 2.9m (~~9.5~~^{9.8}ft) to 3.7m (~~12.1~~^{12.1}ft.) Local knowledge explains the hole as a well blowout which has filled with sediment. The hydrographer recommends updating the chart in this area with soundings from this survey. *Concur*

A charted shoal at 29°30'25"N, 094°52'18"W does not exist. Survey soundings in the area now range from 2.4m (~~6.9~~^{6.9}ft) to 4.9m (~~16.1~~^{16.1}ft). The hydrographer recommends updating the chart with soundings from this survey. *Concur*

Survey data indicates a shoal located within the confines of an active spoil area. The shoal is located at 29°30'~~51.45~~^{49.92}"N 094°52'~~14.48~~^{17.28}" with a least depth of ~~1.0m/3.3ft~~^{0.7/2.3}. The hydrographer recommends updating the chart with soundings from this survey. *Concur*

Survey data indicates a shoal located within the confines of an active spoil area. The shoal is located at 29°31'43.37"N 094°52'~~59.07~~^{58.04}"W with a least depth of ~~1.0m/3.3ft~~^{0.8/2.6}. The hydrographer recommends updating the chart with soundings from this survey. *Concur*

Survey data indicates that most of the soundings are deeper than charted depths. This is due to well documented bottom subsidence throughout Galveston Bay. *Concur*

Buoy "W/Or B Priv" charted at 29°31'49.73"N, 094°54'58.67"W - *NOT charted* was not visible during data acquisition at the charted position. Approximately 700 meters to the east, the graphic record was annotated with a reference to a "white/orange buoy to port (southward) approximately 20 meters" (PN 3560.56). The successive sounding line has an annotation "white/orange buoy to port (northward) approximately 75 meters." The buoy sighted did not contain any identification letters. The hydrographer recommends charting the "White/Orange buoy Priv" ^{marked} at the scaled (from annotations made on the graphic record) geographic position of 29°31'52.34"N, 094°54'33.06"W. *No changes in charting recommended.*

Buoy "W/Or C Priv" charted at 29°31'20.84"N, 094°54'49.71"W was not visible during data acquisition. The graphic record annotations between PN 3697-3699 and PN 3722-3724 indicate that

the buoy was not visible. No additional search was performed. The hydrographer recommends this buoy be deleted from the chart. *Not presently charted. No changes in charting are recommended.*

Buoy "W/Or D Priv" charted at 29°30'54.50"N, 094°55'07.49"W was not visible during data acquisition. The graphic record annotations between PN 4035-4036 and PN 4040-4042 indicate that the buoy was not visible. No additional search was performed. The hydrographer recommends this buoy be deleted from the chart. *Not presently charted. No changes in charting are recommended.*

A marker charted at 29°29'41.69"N, 094°50'49.72"W was not visible during data acquisition. No annotations were made on the graphic record identifying the marker as existing. The hydrographer recommends revising this marker to a submerged pile at the charted position. *Concur*

The following list of charted submerged items located along the Houston Ship Channel were not investigated and should remain as charted:

Latitude (N)	Longitude (W)	Item
29°34'10.02"	094°55'14.50"	Subm Pile-Concur
29°34'00.27"	094°55'12.25"	Subm Pile stake - Awois#9352 - Delete from chart
29°33'53.79"	094°55'02.21"	Subm Pile
29°33'46.00"	094°54'55.88"	Subm Pile
29°33'29.13"	094°54'43.22"	Subm Pile
29°33'18.74"	094°54'40.61"	Subm FileStake
29°33'11.60"	094°54'36.88"	2 Subm Piles
29°33'13.23"	094°54'31.31"	Subm Pile
29°33'05.12"	094°54'25.36"	Subm Pile
29°32'48.89"	094°54'12.33"	Subm Pile
29°32'40.78"	094°54'06.00"	2 Subm Piles
29°32'32.99"	094°53'59.31"	Subm Pile
29°32'07.52"	094°53'40.51"	Subm Pile
29°31'26.15"	094°53'08.33"	Subm Pile - Awois#9244 - Retain as charted
29°31'18.03"	094°53'01.82"	Subm Pile
29°31'09.59"	094°52'55.31"	Subm Pile
29°31'01.48"	094°52'49.18"	Subm Pile
29°30'44.93"	094°52'36.72"	Subm Pile
29°30'36.82"	094°52'30.40"	Subm Pile - Awois#9244 Retain as Charted
29°30'28.70"	094°52'24.44"	Subm Pile
29°30'20.26"	094°52'17.75"	Subm Pile
29°30'09.23"	094°52'06.23"	Subm Pipe
29°30'04.36"	094°52'05.48"	Subm Pile - Awois#9244
29°29'36.77"	094°51'46.52"	Subm Pile
29°29'32.87"	094°51'50.22"	Subm Pile - Awois#9275 - Delete from chart

29°29'18.59"	094°51'37.21"	Subm Pile	} Retain as charted
29°29'09.82"	094°51'32.38"	Subm Pile	
29°29'01.71"	094°51'28.29"	Subm Pile	
29°28'52.62"	094°51'25.68"	Subm Pile	

The following items are located east of Eagle Point. The graphic records do not indicate that the stakes were visible and no intensive search was conducted. The hydrographer recommends that the stakes remain as charted. *Concur*

<u>N Latitude</u>	<u>W Longitude</u>	<u>Item</u>
29°29'47.64"	094°54'29.88"	2 Subm Stakes
29°29'45.38"	094°54'25.05"	2 Subm Stakes

Platform ruins charted at 29°34'¹⁸14.88"N, 094°55'20.83"W were not visible during data acquisition. The graphic records (PN 2876-2878; 5381-5387) have no annotations concerning this item. No other investigation was conducted. The hydrographer recommends revising the platform ruins to submerged platform ruins. *Item resolved in H-10586 DR - P. A - De Wit*

A platform charted at 29°33'37.89"N, 094°54'49.18"W was not visible during data acquisition. The graphic records (PN 3050-3051; 3112-3114; 5424) have no annotations concerning this platform as visible. No other investigation was conducted. The hydrographer recommends revising the platform to a submerged platform. *Concur*

A platform charted at 29°32'56.36"N, 094°54'17.91"W was not visible during data acquisition. The graphic record annotation (PN 3243-3245) indicates that a platform is not visible. A spike with a least depth of 1.4m ^(3ft) is located at 29°32'56.31"N, 094°54'11.85"W (PN 5501.58). This feature is located 163 meters to the east of the charted position of the platform. No other investigation was conducted. The recommendation is to revise the visible platform to a submerged platform at the charted location. The hydrographer recommends charting a submerged obstruction at the geographic position of (PN 5501.58) 29°32'56.31"N 094°54'11.85"W with a least depth of 1.4m ^(3ft). *Concur - Chart subm platform symbol w/ note platform (low 3 ft at max) ruins and chart a '3' Obstr*

A platform charted at 29°31'33.61"N, 094°53'15.03"W was not visible during data acquisition. The graphic record annotation (PN 3645-3646) indicates that the platform is not visible. No other investigation was conducted. The hydrographer recommends revising the platform to a submerged platform at the charted position. *Concur*

A lighted marker charted at 29°32'33.64"N, 094°54'01.67"W was not visible during data acquisition. The graphic record annotation

(PN 3358-3360) indicates that the lighted marker is not visible. No other investigation was conducted. The hydrographer recommends revising the lighted marker to a submerged obstruction at the charted position. *Concur - Revise to subm pile*

A pile charted at 29°32'23.91"N, 094°53'51.13"W was not visible during data acquisition. The graphic records (PN 3390-3392; 3415-3416; 5540-5541) did not indicate the presence of a visible pile. No other investigation was conducted. The hydrographer recommends revising the pile to a submerged pile at the charted position. *concur*

Platform ruins charted at 29°32'15.47"N, 094°53'45.54"W were not visible during data acquisition. The graphic record (PN 3447-3448) indicated that the ruins were not visible. The graphic record for PN 3425-3427 and 3457-3458, had no annotation regarding the visible ruins. No other investigation was conducted. The hydrographer recommends revising the platform ruins to submerged platform ruins at the charted position. *CONCUR*

A pile charted at 29°31'59.89"N, 094°53'34.01"W was not visible during data acquisition. The graphic record (PN 3523-3524) has an annotation "no charted pile visible." No other investigation was conducted. The hydrographer recommends revising the pile to a submerged pile at the charted position. *Concur*

A pile charted at 29°31'50.97"N, 094°53'28.05"W was not visible during data acquisition. The graphic record (PN 3554-3555; 3579-3580) annotations indicate that the pile was not visible. No other investigation was conducted. The hydrographer recommends revising the pile to a submerged pile at the charted location. *CONCUR*

A pile charted at 29°31'42.05"N, 094°53'21.36"W was not visible during data acquisition. The graphic record annotations (PN 3610-3612; 3615-3616) indicate the pile was not visible. No other investigation was conducted. The hydrographer recommends revising the pile to a submerged pile at the charted location. *Concur*

An articulated yellow flashing private light charted at 29°32'41.11"N, 094°54'01.55"W was not visible during data acquisition. The graphic record annotation (PN 3316-3317) indicates the light was not visible. No other investigation was conducted. The hydrographer recommends revising the light to a submerged obstruction at the light's charted position. *Concur w/condition - light not shown on chart. No changes recommended.*

An articulated yellow flashing private light "PL" charted at 29°33'27.14"N, 094°54'13.42"W was not visible during data acquisition. The graphic record annotation (PN 3376-3377; 3392-

3394) indicates the light was not visible. No other investigation was conducted. The hydrographer recommends revising the light to a submerged obstruction at the light's charted position. *Concur w/condition 'Revise to a subm pile'*

A visible pipe charted at 29°29'30.77"N, 094°54'21.31"W was not visible during data acquisition. The graphic record has no annotations concerning this pipe. No other investigation was conducted. The hydrographer recommends revising this pipe to a submerged pipe at the charted position. *Concur*

A visible pile charted at 29°29'26.86"N, 094°54'29.85"W was not visible during data acquisition. The graphic record has no annotations concerning this pile. No other investigation was conducted. The hydrographer recommends revising this pile to a submerged pile at the charted location. *Concur*

A visible stake charted at 29°29'26.56"N, 094°54'07.95"W was not visible during data acquisition. The graphic record has no annotations concerning this stake. No other investigation was conducted. The hydrographer recommends revising this stake to a submerged stake at the charted location. *Concur*

A visible pipe charted at 29°29'12.71"N, 094°54'47.65"W was identified and positioned (PN 4900) at 29°29'12.66"N, 094°54'47.13"W. The pipe is two inch diameter and exposed 0.6⁸m corrected for ~~predicted~~ ^{subm} tides. The hydrographer recommends revising the charted pipe to the surveyed position. *Concur*

An obstruction at 29°34'23.38"N, 094°53'29.01"W originating from the digitized chart manuscript CM9210 was not visible during data acquisition. This item is not currently on the chart. The graphic record has no annotations concerning this item. No other investigation was conducted. The hydrographer recommends charting a submerged obstruction at the position listed above. *Do Not Concur, Not presently charted - Do Not Chart.*

A visible platform charted at 29°30'12.47"N, 094°52'11.80"W was not visible during data acquisition. The graphic record at PN 1880 shows a 0.5m deep hole with a 0.5m spike in the middle of the depressed area. The corrected least depth is 5.1⁸m MLLW. The hydrographer recommends revising the platform to submerged platform ruins at 29°30'12.38"N, 094°52'11.43"W. *Always #9244 - Revise to subm platform ruins (cov 15ft MLLW)*

A visible platform charted at 29°30'04.36"N, 094°51'50.25"W was not visible during data acquisition. The graphic record contains no annotation concerning the visible platform. No other investigation was conducted. The hydrographer recommends revising the platform to a submerged platform at the charted location. *Concur*

A visible platform charted at 29°29'29.30"N, 094°51'42.05"W was not visible during data acquisition. No other investigation was conducted. The hydrographer recommends revising this platform to a submerged platform at the charted location. *Concur*

An obstruction shown at 29°34'23.38"N, 094°53'29.01"W on the digitized chart manuscript CM9210 was not visible during data acquisition. This item is not currently on the chart. The graphic record has no annotations concerning this visible obstruction. A sounding line passed over the location of this obstruction (PN 817.55.) The graphic record did not show any evidence of an obstruction. No other investigation was conducted. Recommend reviewing the aerial photography. If CM9210 is evaluated as accurate, chart a submerged obstruction (ED) at the geographic position listed above. *Do not concur - Not charted - Do not chart*

Two obstructions shown on digitized chart manuscript CM9210 at 29°31'42.91"N, 094°52'28.44"W were not visible during data acquisition. These items are not currently charted. The graphic record shows two features rising off the bottom 0.7m to 0.9m (PN 1308.16 and 1308.2), with a least depth of 2.6m corrected to MLLW. The hydrographer recommends charting these features as submerged obstructions at 29°31'43.37"N, 094°52'38.23"W and 29°31'43.37"N, 094°52'37.60"W respectively. These positions were obtained from the hydrographic record. These features appear to be well heads that have been removed. It is common practice for oil companies to quickly remove the well heads and cap off the pipe flange extending upward from the sediment, then pile sediment around the capped pipe flange. This would explain the disappearance of the obstruction noted on the photo manuscript. *Add 2 Obs'n in 29-31-43.37N Lat, 94-52-37.6 W Lon*

An obstruction shown on digitized chart manuscript CM9210 at 29°31'30.72"N, 094°52'43.09"W was not visible during data acquisition. This item is not currently charted. No other investigation was conducted. The hydrographer recommends charting a submerged obstruction at the position listed above. *Retain as charted. Do not chart.*

The hydrographer recommends that soundings from this survey supersede the prior survey soundings for compilation of the next chart edition. *Concur*

P. ADEQUACY OF SURVEY - *See also Evaluation Report*

This basic hydrographic survey is adequate to supersede the prior survey hydrography within their common areas. Investigations of AWOIS items and some charted features are incomplete. Section N

of this report outlines the causes for the deficiencies in this survey.

Q. AIDS TO NAVIGATION

The following aids to navigation are maintained by the U.S. Coast Guard and lie within the survey area. All of the aids serve their intended purpose. Aids to navigation were positioned by DGPS during hydrographic operations. Resources were not available for obtaining third-order positions on all the non-floating aids to navigation. Vessel traffic frequently destroys navigation aids along the Houston Ship Channel. The U.S. Coast Guard replaces destroyed aids with temporary markers, making permanent replacements as time permits. This procedure was witnessed on several occasions. A comparison of aids to navigation positioned during this survey was made with the *U.S. Coast Guard Light List*, Volume IV, Gulf of Mexico, 1996 Edition.

USCG FIXED AIDS:

PN	Name/USCGLL#	LL Position	Survey Position	DDFCL*
Upper Galveston Bay - Houston Ship Channel				
0139	Light 68/23170	Not Listed	29°34'08.18"N 094°55'19.08"W	10m/000°
0140	Light 67/23165	29°34.1'N 094°55.4'W	29°34'04.44"N 094°55'25.88"W	On Station
0135	Light 64/23150	Not Listed	29°33'01.21"N 94°54'27.71"W	On Station
0136	Light 63/23145	Not Listed	29°32'56.68"N 094°54'33.80"W	10m/345°
0130	Light 60/23125	Not Listed	29°31'52.71"N 094°53'34.69"W	70m/325°
0131	Light 59/23120	Not Listed	29°31'48.59"N 094°53'41.27"W	On Station
7571	Light 58/23095	29°31.4'N 094°53.2'W	29°31'25.22"N 094°53'11.64"W	*(a)

7572 Light 57/23090	29°31.1'N 094°53.1'W	29°31'19.64"N 094°53'20.54"W	* (b)
7569 Light 56/23073	29°30.9'N 094°52.8'W	29°30'52.15"N 094°52'46.43"W	* (c)
7568 Light 55/23060	29°30.8'N 094°52.9'W	29°30'46.34"N 094°52'55.59"W	* (d)
7566 Light 54/23038	29°30.3'N 094°52.3'W	29°30'19.48"N 094°52'20.70"W	* (e)
7567 Light 53/23033	29°30.2'N 094°52.5'W	29°30'13.57"N 094°52'30.26"W	* (f)
7564 Light 52/23025	29°29.7'N 094°51.9'W	29°29'41.75"N 094°51'52.70"W	* (g)
7560 Light 50/23015	29°29.3'N 094°51.7'W	29°29'19.05"N 094°51'40.75"W	* (h)
7562 Light 49/23010	29°29.2'N 094°51.9'W	29°29'14.83"N 094°51'50.91"W	* (i)
0044 Eagle Point Wreck Light WR1/25045	29°29.2'N 094°53.6'W	29°29'15.79"N 094°53'35.02"W	15m/070°
0110 Upper Galveston Bay Outer Rng Rear LT/23045	Not Listed	29°28'55.53"N 094°51'23.80"W	On Station
0116 Lower Galveston Bay Inner Rng Front LT/22950	29°30.5'N 094°52.4'W	29°30'28.95"N 094°52'22.36"W	On Station
0121 Lower Galveston Bay Inner Rng Rear LT/22955	Not Listed	29°31'11.60"N 094°52'43.92"W	20m/300°

The following aids to navigation are privately maintained and located near the Houston Ship Channel:

PN	Name/USCGLL#	LL Position	Survey Position	DDFCL*
0126	Pipeline Marker Light A/23100	29°31.1'N 094°53.2'W	29°31'05.74"N 094°53'22.19"W	140m/250°
0124	Pipeline Marker Light B/23105	Not Listed	29°31'18.90"N 094°52'58.29"W	15m/060°
0127	Pipeline Marker Light C/23110	Not Listed	29°31'33.79"N 094°53'44.74"W	15/262°
0129	Pipeline Marker Light D/23115	Not Listed	29°31'45.59"N 094°53'23.41"W	100m/270°

* Distance/Direction From Charted Location

- (a) Originally charted as Red Nun Buoy "58", Light Relocated
- (b) Originally charted as Green Can Buoy "57", Light Relocated
- (c) New since last chart edition
- (d) Originally charted as Green Can Buoy "55", Light Relocated
- (e) Light "54" Relocated
- (f) Light "53" Relocated
- (g) Originally charted as Red Nun Buoy "52", Light Relocated
- (h) Light "50" Relocated
- (i) Light "49" Relocated

Trinity River North Junction Light TR (1995 *Light List* No. 23065) was originally positioned on DN 031, PN 112, 1995. This light was not found when repositioning several aids to navigation on DN 348, 1995. The light has also been deleted from the *U.S. Coast Guard Light List, Volume IV, Gulf of Mexico, 1996 Edition*. *Cancel*

Red Fish Bar Light 1 (1995 *Light List* No. 23070) and Red Fish Bar Light 2 (1995 *Light List* No. 23075) was originally positioned on DN 031, 1995, PN 119 and 117. These lights were found removed when repositioning several aids to navigation on DN 348, 1995. These lights have also been deleted from the *U.S. Coast Guard Light List, Volume IV, Gulf of Mexico, 1996 Edition*. *Cancel*

Red Fish Island Shoal Daybeacons (2), (1996 *Light List* No. 25050) shown in the *Light List* at 29°30.4'N, 094°53.2'W, were not visible during hydrographic data acquisition. The graphic record

annotation for PN 4209 indicates that the beacons are not visible. No additional search was conducted. *concur*

Private aid (1996 *Light List* Number 23140) "United Texas Pipeline Marker Articulated Light PL" was not found during survey. No search was conducted. *concur*

Red Fish Bar Buoy 1A (1995 *Light List* No. 23080) and Red Fish Bar Buoy 2A (1995 *Light List* No. 23085) were originally positioned on DN 031, 1995, PN 120 and 118. These aids were found removed when repositioning aids to navigation on DN 348, 1995. These buoys have also been deleted from the *U.S. Coast Guard Light List*, Volume IV, Gulf of Mexico, 1996 Edition. *concur*

Lighted green buoy "51", PN 7563, (1995 *Light List* No. 23020) was positioned at 29°29'37.09"N, 094°52'02.24"W. This buoy is charted as a green can on chart 11327, 26th ed. Since the lighted buoy was located, it has been changed to a fixed light in the *U.S. Coast Guard Light List*, Volume IV, Gulf of Mexico, 1996 Edition. This aid was not relocated before survey operations were terminated in Galveston Bay. ✓

No bridges or overhead cables exist within the survey limits. ✓

One pipeline crossing area shown on chart 11327 in the southern survey area was not verified, nor referenced on this survey. This pipeline crossing was not marked by pipeline crossing signs or any other visible means. Sounding data showed no indications of pipeline limits as charted. A chart note (see Note B) is printed on chart 11327 in four separate areas within the survey limits which mentions numerous charted and uncharted gas and oil structures. Note B states that "Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart." The hydrographer recommends maintaining Note B on the chart. ✓ *No changes in charting are recommended*

R. STATISTICS

<u>Description</u>	<u>Quantity</u>
Total Number of Positions	8219
Total LN Miles of Hydrography	706.87
Square Nautical Miles of Hydrography	38.21
Days of Production	38
Detached Positions	221
Bottom Sample	106
Tide Stations	1
Velocity Casts	15

S. MISCELLANEOUS

Bottom samples were collected at intervals of 1,000 meters. The samples were classified and then discarded. The predominate sediment type was soft mud throughout the survey area except for oyster shells and brown sand near Red Fish Bar and all shoal areas, and just brown sand near the shoreline. *C. MUR*

No tidal anomalies were observed during this survey. The hydrographer noticed that wind impacts the water levels as much or more than tides in the survey area. This factor was dependent upon the fetch, duration of wind flow, and wind velocity.

The U.S. Army Corps of Engineers, Galveston District, was contacted for salvage documentation concerning the status of charted stakes, piles, and platforms along the Houston Ship Channel. The contact person was Johnny Rozsypal (409-766-3926). The hydrographer received a letter from Mr. Rozsypal dated February 13, 1996 stating the origin, description, and disposition of the charted wooden stakes from. The COE had no salvage documentation regarding the piles and platforms. A copy of the letter is included in the appendix of this report and with respective item descriptions.

T. RECOMMENDATIONS

Additional field work is required and was identified after field processing was completed. Specific recommendations are made on the Item Investigation Reports located in the Appendices, and in sections N, O, and P of this report. Section N outlines items which were not completed.

U. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report to Accompany Survey H-10558	Atlantic Hydrographic Division N/CS33, Norfolk, VA (1984)

Respectfully Submitted,



Castle Eugene Parker
Hydrographer-in-charge
Atlantic Hydrographic Party

AWOIS NO: 9225

Item Description: Obstruction (Piles)

Source: CL1406/73, H8695/62

AWOIS Position: Lat - 29/30/01.00N Lon - 094/54/49.00W

Required Investigation: VS,BD

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/04/95 (DN:338); 5/02/96 (DN:123); 12/12/95 (DN:346)

Position Numbers: 7425, 7471, 7777-7854 Launch Number: 770

Investigation Used: DI, S1 Water Visibility: <1m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100m radius circle search around the AWOIS target center (PN 7471). No contacts were found. A 30-meter wide dive swath search was performed from the geographic position of PN 7471 southward towards existing piles located by positions 4873-4884 on survey H-10588. The only contact found within this swath search pattern was the existing pile positioned at PN 4878. A 100% coverage side scan sonar investigation was conducted on DN 123. Line spacing was restricted to 20 meters using the 25 meter range scale. The side scan sonar coverage primarily centered around the eastern side of the search area, as the dive investigation covered the western offshore area. Depths in the search area were less than 2.0 meters, reducing the quality of the sonagram. *See attached swath plot for coverage.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted piles be revised to the following positions:

29/29/52.5N, 094/54/57.3W	29/29/57.6N, 094/54/53.6W
29/29/53.8N, 094/54/56.6W	29/29/55.3N, 094/54/54.2W
29/29/54.4N, 094/54/55.9W	29/29/53.9N, 094/54/54.1W
29/29/55.3N, 094/54/54.9W	29/29/53.0N, 094/54/53.9W
29/29/57.6N, 094/54/54.6W	29/29/53.0N, 094/54/54.8W
29/29/58.9N, 094/54/53.4W	29/29/53.1N, 094/54/55.9W

Recommended Least Depth: -2.0m MLLW (Predicted Tides)

COMPILATION NOTES

Charts

Applied As

Chart piles in the above present survey location.
Delete presently charted piles.
See also p.8 of DR

Plot Center: Scale 1:5000

LAT 029:29:58.000
N 27660.22

LON 094:54:53.000
E 24027.4

WDIS #9225

E24000

LON 94:55:00

LON 94:54:50

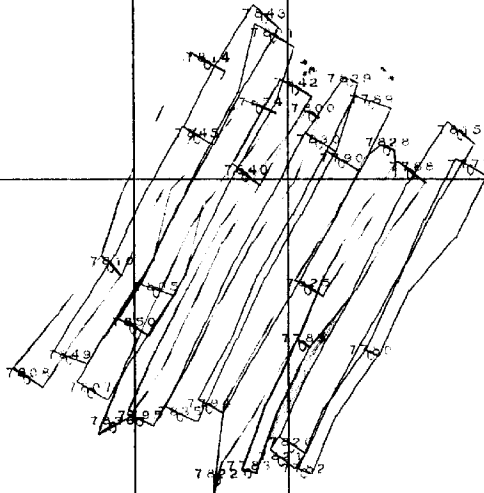
LON 94:54:40

N28000

LAT 29:30:10

LAT 29:30:00

LAT 29:29:50



AWOIS NO: 9226

Item Description: Wreck (21-foot Pleasure Craft)

Source: LNM36/80

AWOIS Position: Lat - 29/30/010.82N Lon - 094/54/34.72W

Required Investigation: BD, SD Search Radius: 200m

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 05/02/96 (DN:123); 05/03/96 (DN:124)

Position Numbers: 7857-7943; 7944-8026 Launch Number: 770

Investigation Used: S1 Water Visibility: <0.5m

Position Determined By: DGPS

Investigation Summary: A 100% coverage side scan sonar search was conducted with 40-meter line spacing using the 25-meter range scale. The search radius was limited to 200 meters, centered around the AWOIS position. No significant contacts were found.

*See attached swath plot for coverage.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck (21 ft pleasure craft) be deleted from the chart. *Concur*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Charts

Applied As

De wte (HH) PA

Plot Center: Scale 1:5000

LAT 029:30:10.800
N 28053.65

LON 094:54:34.700
E 24520.86

AWOIS# 9226

LON 94:54:50

LON 94:54:40

LON 94:54:30

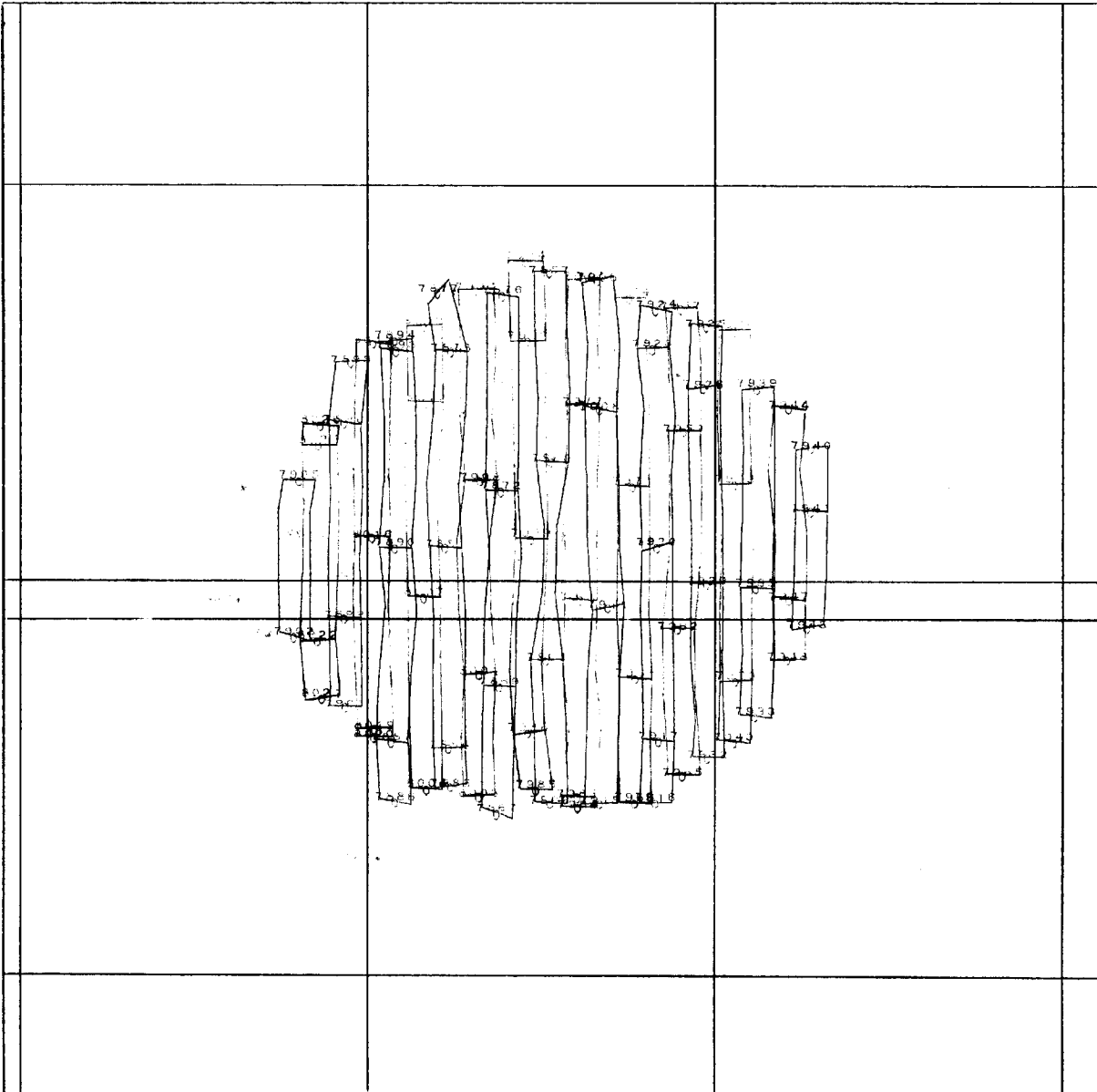
LON 94:54:20

LAT 29:30:20

LAT 29:30:10

LAT 29:30:00

N28000



AWOIS NO: 9227

Item Description: Obstruction (Shoal)

Source: CL923/87

AWOIS Position: Lat - 29/30/10.00 N Lon - 094/53/45.00W
29-30-20 N 94-53-15 W

Required Investigation: ES, ##

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): DN 080,081,082,083,129,317

Position Numbers:

Launch Number: 770

Investigation Used: ES

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: The area of Todd=s Dump was developed with main scheme, main scheme splits, and cross line echo sounder lines. Main scheme lines were conducted with line spacing of 100 meters, and main scheme splits were at 50-meter line spacing. The shoal consists of an islet composed of shells, exposed 0.5m at high water to least depth soundings of 0.5m-1.3m along the islet=s shoreline. Depths increase as the range from the shoal increases. The shoal extends from 29°29'51"N, 094°54'10"W at the southwest end towards the northeast end located at 29°30'14"N, 094°53'31"W. The width of the shoal varies from 50 meters to approximately 150 meters.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted shoal be revised on the next chart edition with shoal limits based on soundings from survey H-10588.

Recommended Position: Lat- 29°29'51"N Lon- 094°54'10"W SW Corner
29°30'14"N 094°53'31"W NE Corner

Recommended Least Depth: -0.5m (Islet Exposed Above MLLW ~~(Predicted)~~ Actual Tides)

***** *CURR* *****

COMPILATION NOTES

Charts

Applied As

Remove notes:
Shoaling rep 1987
Shoaling rep 1982

AWOIS NO: 9229

Item Description: Wreck (Unknown)

Source: LNM29/92

AWOIS Position: Lat - 29/30/03.70N Lon - 094/53/00.00W
12.0

Required Investigation: S2, BD, ES, SD, 300m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources, the danger of dragging in Galveston Bay with the numerous pipelines therein, and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

NO charting changes recommended,

AWOIS NO: 9230

Item Description: Obstruction (Stakes)

Source: CL64/65--COE, CL~~69~~³⁸⁹/93--USPS

AWOIS Position: Lat - 29/30/03.70N Lon - 094/52/25.70W

Required Investigation: BD, ##

Charts Affected: 11378

INVESTIGATION

Date(s)/DN(s): 02/13/96 (DN:044)

Position Numbers: N/A

Launch Number: 770

Investigation Used: SD

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: The hydrographer contacted the Galveston District, Corps of Engineers for salvage documentation concerning the status of the charted stakes along the Houston Ship Channel. The person contacted was Johnny Rozsypal (409-766-3926). A letter dated February 13, 1996 was received from Mr. Rozsypal stating the origin, item description, and his conclusion concerning the charted wooden stakes. A copy of the letter is included with this report. Mr. Rozsypal indicates there is no salvage documentation in USACOE records. The USACOE believes that the charted stakes were used as dredge survey limits during the 60's and 70's. It is the USACOE belief that these items no longer exist. Survey data from H-10588 showed no evidence of the stakes existence.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted stakes be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur

Remove charted subm stakes
Charts **COMPILATION NOTES**

Lat(N)	Lon(W)	Lat(N)	Lon(W)	Applied As
29-30-03.7	94-52-25.7	29-31-01	94-53-09.7	
29-30-12	94-52-32	29-31-09.5	94-53-15.7	
29-30-20.3	94-52-38	29-31-17.6	94-53-22.5	
29-30-45.1	94-52-56.8			
29-30-53	94-53-03.4			

AWOIS NO: 9231

Item Description: Wreck (Red Turtle)

Source: LNM14/86

AWOIS Position: Lat - 29/30/30.82N Lon - 094/53/00.72W

Required Investigation: BD, S2, ES, SD, 250m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources, the danger of dragging in Galveston Bay with the numerous pipelines therein, and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No charting changes recommended.

AWOIS NO: 9232

Item Description: Wreck (Nellie Meta)

Source: LNM26/86

AWOIS Position: Lat - 29/30/30.82N Lon - 094/53/30.72W

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

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above.

Recommended Least Depth:

***** *Concur* *****

COMPILATION NOTES

Charts

Applied As

No charting changes recommended

AWOIS NO: 9233

Item Description: Visible Wreck (Unknown)

Source: CL1226/74, CL1105/77

AWOIS Position: Lat - 29/30/49.00N Lon - 094/53/08.00W

Required Investigation: BD, S2, ES, SD, 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/04/95 (DN:338); 12/12/95 (DN:346)

Position Numbers: 7417, 7468

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter radius circle search around the AWOIS position. The shoal bottom was visible in the shallower areas of the search radius. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Delete (H) PA

AWOIS NO: 9234

Item Description: Obstruction (Unknown)

Source: LNM42/87

AWOIS Position: Lat - 29/30/52.82N Lon - 094/53/02.72W

Required Investigation: BD, S2, 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/04/95 (DN:338); 12/12/95 (DN:346)

Position Numbers: 7415, 7467

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter circle search. The dive search covered the area on the western edge of the Houston Ship Channel. Divers did not search within the C.O.E. maintained channel. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the unknown submerged obstruction be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Delete (S) Obstruction (1987)

AWOIS NO: 9235

Item Description: Wreck (Unknown)

Source: LNM20/86

AWOIS Position: Lat - 29/31/00.82N Lon - 094/53.36.72W

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

Charts Affected: 11378

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur
COMPILATION NOTES

Charts

Applied As

No changes in charting recommended.

AWOIS NO: 9236

Item Description: Obstruction (Pile)

Source: LNM17/92

AWOIS Position: Lat - 29/31/00.00N Lon - 094/54/00.00W

Required Investigation: VS, BD -- 200m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the ^{Pile}obstruction PA be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

concur w/ condition

COMPILATION NOTES

Charts

Applied As

Revise O Pile PA to O subm pile PA

AWOIS NO: 9237

Item Description: Obstruction (15 ft dia Cable)

Source: LNM49/91

AWOIS Position: Lat - 29/31/18.20N Lon - 094/54/28.30W

Required Investigation: BD, S2, SD -- 200m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No charting changes recommended.

AWOIS NO: 9238

Item Description: Wreck (SMAUG)

Source: LNM6/84, LNM27/87

AWOIS Position: Lat - 29/31/30.82N Lon - 094/54/12.72W

Required Investigation: BD, S2, ES, SD -- 300m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

NO charting changes recommended.

AWOIS NO: 9239

Item Description: Obstruction

Source: LNM20/90

AWOIS Position: Lat - 29/31/38.80N Lon - 094/54/17.70W

Required Investigation: BD -- 200m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No changes in charting are recommended.

AWOIS NO: 9240

Item Description: Wreck PA

Source: LNM6/74, CL991/77

AWOIS Position: Lat - 29/31/20.82N Lon - 094/53/40.72W

Required Investigation: BD, ES, SD -- 150m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck PA be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No change in charting are recommended

AWOIS NO: 9241

Item Description: Obstruction (500 ft of 30" Subm Dredge Pipe)

Source: LNM50/82

AWOIS Position: Lat - 29/31/10.82N Lon - 094/53/12.72W

Required Investigation: S2, BD, ES, SD, ## -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/04/95 (DN:338); 12/12/95 (DN:346)

Position Numbers: 7413, 7466

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter radius circle search around the AWOIS target center. The search area excluded the area within the maintained Houston Ship Channel. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction be deleted from the chart.

Recommended Position:

Recommended Least Depth:

***** *Concun* *****

COMPILATION NOTES

Charts

Applied As

Delete Obstrn PA

AWOIS NO: 9242

Item Description: Wreck (Lazy L)

Source: LNM14/86

AWOIS Position: Lat - 29/31/18.82N Lon - 094/53/24.72W

Required Investigation: S2, BD, ES, SD--200m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

*****Concur*****

COMPILATION NOTES

Charts

Applied As

No charting changes needed.

AWOIS NO: 9244

Item Description: Obstruction (Piles)

Source: BP68549/65, CL389/93, 5/15/92

AWOIS Position: Lat - 29/30/04.50N Lon - 094/52/05.50W

Required Investigation: BD, ## -- 50m Radius

Charts Affected: 11378

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used: VS,SD

Water Visibility: <1.0m

Position Determined By: DGPS

Investigation Summary: Salvage documentation from the Galveston Corps of Engineers did not mention any items from AWOIS 9244. The letter states that there is no salvage documentation on file concerning piles and platforms. The letter only speaks of stakes and markers. A visual search was performed while acquiring sounding data; platforms and piles were not visible above the water surface. A bottom drag was prohibitive because of the numerous oil and gas pipelines crisscrossing Galveston Bay.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted piles and platforms be revised to submerged piles and platforms (PA).

Recommended Position:	Lat- 29/30/04.0N	Lon- 094/52/05.5W	subm Pile - No changes] No changes
	29/30/12.0N	094/52/12.0W	Platform - Revise	
	29/30/20.0N	094/52/17.7W	Pile subm	
	29/30/28.5N	094/52/24.0W	Pile subm	
	29/30/36.5N	094/52/30.5W	Pile subm	
	29/30/45.0N	094/52/37.0W	Pile subm	
	29/30/53.0N	094/52/43.0W	Platform - revise	
	29/31/01.5N	094/52/49.0W	Pile subm	
	29/31/18.0N	094/53/02.0W	Pile subm	
	29/31/26.2N	094/53/08.0W	Pile subm	

Recommended Least Depth:

COMPILATION NOTES

Charts

Applied As

Revise platform in 29/30/12N 94/52/12W to

[] Platform ruins (cov 15ft at MLLW)

Revise platform in 29-30-53N -94-52-43W to [] Subm platform (ruins)

AWOIS NO: 9245

Item Description: Wreck (Hustler)

Source: NM46/67

AWOIS Position: Lat - 29/30/12.82N Lon - 094/53²706.72W

Required Investigation: S2, BD, ES, SD, ## -- 150m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Retain wk as charted

AWOIS NO: 9246

Item Description: Wreck (Captain Buck)

Source: LNM7/77

AWOIS Position: Lat - 29/30/30.82N Lon - 094/52/00.72W

Required Investigation: S2, BD, ES, SD, ## -- 200m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

***** *Cancun* *****

COMPILATION NOTES

Charts

Applied As

No charting changes recommended

AWOIS NO: 9247

Item Description: Wreck (Unknown)

Source: LNM38/89

AWOIS Position: Lat - 29/30/44.00N Lon - 094/51/57.00W

Required Investigation: S2, BD, ED, SD -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No changes in charting recommended.

AWOIS NO: 9248

Item Description: Wreck (Big Joe)

Source: NM14/66

AWOIS Position: Lat - 29/30/45.82N Lon - 094/52/15.72W

Required Investigation: S2, BD, ES, SD, ## -- 150m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur w/ conditions.

COMPILATION NOTES

Charts

Applied As

Revise (H) to (H) E0

AWOIS NO: 9251

Item Description: Obstruction (Submerged Pile)

Source: Unknown, TP01147/81, CL36/93

AWOIS Position: Lat - 29/29/47.50N Lon - 094/51/52.70W

Required Investigation: ES, BD, DI, SD -- 50m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7441

Launch Number: 770

Investigation Used: DI

Water Visibility: <0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter radius circle search around the AWOIS target center. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged pile be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Delete 0 subm pile

AWOIS NO: 9252

Item Description: Obstruction (Pile)

Source: Unknown, TP01147/81

AWOIS Position: Lat - 29/29/56.00N Lon - 094/51/59.00W

Required Investigation: ES, BD, DI -- 50m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7442

Launch Number: 770

Investigation Used: DI

Water Visibility: <0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter radius circle search around the AWOIS target center. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the pile be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Delete pile

AWOIS NO: 9260

Item Description: Wreck (Trojan)

Source: LNM33/83, LNM34/85

AWOIS Position: Lat - 29/29/10.83N Lon - 094/51/38.71W

Required Investigation: ES, BD, DI, SD -- 500m X 1000m Centered
on Channel

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar
equipment resources and time constraints for completion of this
project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained as
charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No charting changes necessary.

AWOIS NO: 9261

Item Description: Obstruction (Pipe PA)

Source: CL699/85, LNM40/85

AWOIS Position: Lat - 29/29/02.83N Lon - 094/52/37.22W

Required Investigation: ES, BD, DI -- 300m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used: VS

Water Visibility: <1.0m

Position Determined By: DGPS

Investigation Summary: No intensive search was conducted. No visual evidence of a pipe was seen in the AWOIS area while conducting main scheme sounding lines. An oyster dredge was observed working in the area. The item description is similar to PVC pipes that are used for oyster lease markers. Due to lack of a thorough investigation because of project time constraints, this item is unresolved.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted visible pipe (PA) be revised to submerged pipe (PA).

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Revise o Pipe PA to o subm pipe PA

AWOIS NO: 9262

Item Description: Obstruction (Pipe PA)

Source: CL699/85,m LNM40/85

AWOIS Position: Lat - 29/29/11.33N Lon - 094/52/18.22W

Required Investigation: ES, BD, DI -- 300m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 770

Investigation Used: VS

Water Visibility: 1.0m

Position Determined By: DGPS

Investigation Summary: No search was conducted. A visual investigation during sounding data collection did not identify a 4 ft pipe in this AWOIS area. Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated any further and is considered unresolved.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted visible pipe (PA) be revised to submerged pipe (PA).

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Revise ° Pipe PA to ° subm pipe PA

AWOIS NO: 9263

Item Description: Wreck (Unknown F/V)

Source: NM45/68

AWOIS Position: Lat - 29/29/14.83N Lon - 094/53/30.72W

Required Investigation: ES, BD, DI, SD -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5605

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter radius circle search around the AWOIS target center. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Delete (H)

AWOIS NO: 9264

Item Description: Wreck (Unknown)

Source: NM28/66, Nm36/66, TP01147/81

AWOIS Position: Lat - 29/29/14.83N Lon - 094/53/35.72W

Required Investigation: ES, BD, DI, SD -- 50m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5604

Launch Number: 770

Investigation Used: DI

Water Visibility: <0.3m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter radius circle search around the AWOIS target center. Divers literally ran into a steel barge. An extensive search of the wreck was limited because of the sea state and poor visibility causing unsafe diving conditions. The wreck is approximately 10-meters wide and greater than 30-meters in length. A least depth of 1.6m was acquired by sounding pole at the time of survey. This wreck found at PN 5604 bears 355°20'57.92" and 31.232 meters from the AWOIS position.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck be retained at the revised position recommended below.

Recommended Position: Lat- 29/29/13.81N Lon- 094/53/35.63W

Recommended Least Depth: 1.5^{2 (4ft)}m MLLW (^{Actual}~~Predicted~~ Tides)

COMPILATION NOTES

Charts

Applied As

Delete (44) (3ft rep)
Add (4) wk
See also page 10 of DR

AWOIS NO: 9265

Item Description: Wreck (Big Joe)

Source: NM14/66, CL1402/73

AWOIS Position: Lat - 29/29/30.82N Lon - 094/53/42.72W

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

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged wreck(ED) be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No changes in charting recommended.

AWOIS NO: 9266

Item Description: Wreck (Unknown F/V)

Source: CL923/87

AWOIS Position: Lat - 29/29/38.82N Lon - 094/53/52.72W

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

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged wreck (PA) be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Comar

COMPILATION NOTES

Charts

Applied As

No changes in charting recommended.

AWOIS NO: 9267

Item Description: Wreck (Unknown)

Source: NM28/66, NM36/66, TP01147/81, CL1198/85

AWOIS Position: Lat - 29/29/40.82N Lon - 094/53/35.72W

Required Investigation: ES, BD, DI, SD -- 50m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5607, 5608

Launch Number: 770

Investigation Used: DI

Water Visibility: <0.3m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter radius circle search around the AWOIS target center. Positive identification of a wreck/barge was confirmed. A least depth of 1.4m corrected for ^{actual} predicted tides was acquired at PN 5607. The least depth was determined from the graphic record as unsafe diving conditions prevailed. Wind, sea action, and limited visibility impaired the investigation. The barge appeared to be approximately 10-meters wide and greater than 40-meters long. PN 5607 bears 125°01'02.01" and 33.482 meters from the AWOIS position.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck be retained on the chart at the revised position recommended below.

Recommended Position: Lat- 29/29/41.4N Lon- 094/53/36.7W

Recommended Least Depth: 1.4²m MLLW (^{Actual} Predicted Tides)

COMPILATION NOTES

Charts

Applied As

Revise (11) PA to (4) wk
See also p.10 of D.R.

AWOIS NO: 9268

Item Description: Wreck (Unknown)

Source: NM28/66, TP01147/81, LNM24/84

AWOIS Position: Lat - 29/29/47.82N Lon - 094/53/59.72W

Required Investigation: ES, BD, DI, SD -- 50m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5609

Launch Number: 770

Investigation Used: VS, DI

Water Visibility: <0.3m

Position Determined By: DGPS

Investigation Summary: AHP divers visually identified wreckage at this location. The dive investigation found metal debris scattered within a 15-meter radius of PN 5609. The exposed portion of the wreck is a barge bitt exposed -0.7m at the time of survey. An extensive dive search was not performed due to unsafe diving conditions caused by poor visibility and sea state. Position 5609 bears 124°419'42.03" with a range of 10.05 meters from the AWOIS position.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck be retained at the revised position recommended below.

Recommended Position: Lat- 29/29/47.64N Lon- 094/53/59.41W

Recommended Least Depth: ~~-0.7m~~ MLLW (Predicted Tides)
-1.0m Actual

COMPILATION NOTES

Charts

Applied As

move charted \triangleleft to present survey location.

AWOIS NO: 9269

Item Description: Submerged Wreck (Unknown)

Source: LNM40/85

AWOIS Position: Lat - 29/29/48.82N Lon - 094/53/59.72W

Required Investigation: ES, BD, DI, SD -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299); 03/23/95 (DN:082); 1/13/95 (DN317)

Position Numbers: 5609, 4621-4623; Launch Number: 770
6538-3541

Investigation Used: VS, DI Water Visibility: <0.3m

Position Determined By: DGPS

Investigation Summary: AHP divers visually identified wreckage. The diver investigation found metal debris scattered within a 15-meter radius of PN 5609. The exposed portion of the wreck is a barge bitt exposed -0.7m at the time of survey. An extensive dive search was not performed due to unsafe diving conditions caused by poor visibility and sea state. Position 5609 bears 192°49'14.4" at a range of 37.39 meters from the AWOIS target center.

Sounding data indicates depths from 1.3m to 1.7m in the vicinity of this item. The graphic record shows no indication of a 22 ft fishing vessel. It is the hydrographer's opinion that AWOIS 9269 is the same as AWOIS 9268. It is also believed that the 22 ft fishing vessel is part of the scattered debris found at AWOIS 9268 (PN 5609).

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck, 22 ft fishing vessel at 29°29'48.82"N, 094°53'59.72"W (AWOIS 9269 target center) be deleted from the chart. Chart an exposed wreck at the recommended position below.

Recommended Position: Lat- 29°29'47.64"N Lon- 094°53'59.41"W

Recommended Least Depth: -0.7m MLLW (Predicted Tides)

Actual

COMPILATION NOTES

Charts

Applied As

Deutch (+) PA - visible wk above charted as part of AWOIS #9268

AWOIS NO: 9270

Item Description: Submerged Wreck (Unknown)

Source: LNM40/85

AWOIS Position: Lat - 29/29/48.82N Lon - 094/53/54.72W

Required Investigation: ES, BD, DI, SD -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/04/95 (DN:338); 12/12/95 (DN:346)

Position Numbers: 7422, 7469, 7470 Launch Number: 770

Investigation Used: DI Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter circle search around the AWOIS target center (PN 7469). Wreckage was found near the outer most edge of the search radius. The contact consisted of steel wreckage and scattered metal debris within a 10-meter radius of PN 7422 and PN 7470. Data collected on DN 338 (PN 7422) was lost due to computer problems; the position of the wreck was re-acquired on DN 346 (PN 7470) at the geographic position of 29°29'47.49"N, 094°53'58.07"W. The least depth of the wreckage was determined to be 0.9m (lead line) at the time of survey, corrected to 0.8m for predicted tides (MLLW). The wreck is located 244°18'11.49" and 95.52 meters from the search center. Position 7470 bears 97°11'24.57" with a range of 36.41 meters from Position 5609 (AWOIS 9268). Due to limited visibility, there was no clear evidence of a fishing vessel; only scattered metal wreckage.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck be revised to the position listed below.

Recommended Position: Lat- 29/29/47.49N Lon- 094/53/58.07W

Recommended Least Depth: 0.8^{6 (zft)}m MLLW (~~Predicted~~^{Actual} Tides)

COMPILATION NOTES

Charts

Applied As

Delete (11) PA
Add (2) wk

AWOIS NO: 9271

Item Description: Obstruction (Stake)

Source: Unknown, TP01147/81, CL389/93

AWOIS Position: Lat - 29/29/39.00N Lon - 094/52/07.00W

Required Investigation: ES, BD, DI -- 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7437

Launch Number: 770

Investigation Used: DI, SD

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter circle search around the AWOIS location. No contacts were found. Salvage documentation includes a letter from Mr. Johnny Rozyspal, from the Galveston Corps of Engineers (409-766-3926). Mr. Rozyspal indicated that their records have no actual salvage documentation on file. He believes this item refers to surveying reference stakes and markers used for channel surveys and dredging during the 1960's and 1970's. Mr. Rozyspal states, "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."

A copy of Mr. Rozyspals letter is included with this report.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted submerged stake be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Conar

COMPILATION NOTES

Charts

Applied As

Delete o Subm stake

AWOIS NO: 9272

Item Description: Obstruction (Submerged Stake)

Source: Unknown, TP01147/81, CL89/93

AWOIS Position: Lat - 29/29/47.00N Lon - 094/52/13.00W

Required Investigation: ES, BD, DI -- 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7436

Launch Number: 770

Investigation Used: DI, SD

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter circle search around the AWOIS target center. No contacts were found. Bottom sediment was comprised of oyster shell with scour marks created by oyster dredgers that work the immediate area. Salvage documentation includes a letter from Johnny Rozyspal, from the Galveston Corps of Engineers (409-766-3926). Mr. Rozyspal indicated that their records have no actual salvage documentation on file. He believes this item refers to surveying reference stakes and markers used for channel surveys and dredging during the 1960's and 1970's. Mr. Rozyspal states, "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."
A copy of Mr. Rozyspals letter is included with this report.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted submerged stake be deleted from the chart.

Recommended Position:

Recommended Least Depth: *concur*

COMPILATION NOTES

Charts

Applied As

Delete o subm stake

AWOIS NO: 9273

Item Description: Obstruction (Stake)

Source: Unknown, TP01147/81, CL389/93

AWOIS Position: Lat - 29/29/55.50N Lon - 094/52/19.00W

Required Investigation: ES, BD, DI -- 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7434

Launch Number: 770

Investigation Used: DI/SD

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter circle search around the AWOIS target center. No contacts were found. Salvage documentation includes a letter from Mr. Johnny Rozyspal, from the Galveston Corps of Engineers (409-766-3926). Mr. Rozyspal indicated that their records have no actual salvage documentation on file. He believes this item refers to surveying reference stakes and markers used for channel surveys and dredging during the 1960's and 1970's. Mr. Rozyspal states, "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." A copy of Mr. Rozyspals letter is included with this report.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted submerged stake be deleted from the chart.

Recommended Position:

Recommended Least Depth: *Concur*

COMPILATION NOTES

Charts

Applied As

Delete 0 subm stake

AWOIS NO: 9274

Item Description: Wreck (Empathy)

Source: LNM9/84, LNM27/84

AWOIS Position: Lat - 29/29/56.82N Lon - 094/52/12.72W

Required Investigation: ES, BD, DI, SD, -- 150m Radius
Within Channel Limits

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: This item is charted within the Houston Ship Channel limits. Telephone conversations with the Galveston Corps of Engineers indicate that there are no obstructions within the limits of the controlled channel. The person contacted was Mr. Felix Castenda (409-766-6308) of the Technical Support Department. Mr. Castenda states there is no actual salvage documentation on file. No lighted buoy as described in the AWOIS description was visually identified during sounding collection. There was no side scan development in this area. This item remains unresolved. Gene, if this is being retained because of the search radius size, but its charted in the channel just like the next item, why isn't this item being deleted also? Should we recommend it be just outside the channel and which side?

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck (PD) be retained as charted.

Recommended Position:

Recommended Least Depth: *Do NOT concur*

COMPILATION NOTES

Charts

Applied As

*According to Mr. Castenda, of the COE this wk is no longer here.
Delete (HE) PD.*

AWOIS NO: 9275

Item Description: Obstruction (Submerged Pile PA)

Source: LNM17/92

AWOIS Position: Lat - 29/29/33.00N Lon - 094/51/45.72W

Required Investigation: ES, BD, DI, SD## -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7439

Launch Number: 770

Investigation Used: SD

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: The location of position 7439 and the entire required search radius are now in the Houston Ship Channel, because of widening. No search was conducted as required for resolving this AWOIS item. Telephone conversations with the Galveston Corps of Engineers indicate that there are no obstructions within the limits of the maintained channel. The person contacted was Mr. Felix Castenda (409-766-6308) of the Technical Support Department.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted obstruction be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

*Delete 0 ← Subm pile PA
See also p. 16 of DR*

AWOIS NO: 9276

Item Description: Wreck (TX-2-51-ZU)

Source: LNM34/86

AWOIS Position: Lat - 29/29/40.82N Lon - 094/51/45.72W

Required Investigation: ES, BD, DI, SD## -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7438

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter circle search around the AWOIS target center. No contacts or evidence of a wrecked fishing vessel were found. There is no evidence of a marked or maintained channel within or near the search area as mentioned in the AWOIS description.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged wreck be deleted from the chart.

Recommended Position:

Recommended Least Depth: *Concave*

COMPILATION NOTES

Charts

Applied As

Deute (HH) PA

AWOIS NO: 9277

Item Description: Obstruction (Platform Ruins)

Source: BP82933/71, CL1485/77, TP01147/81

AWOIS Position: Lat - 29/29/42.00N Lon - 094/51/49.00W

Required Investigation: ES, BD, DI -- 50m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/06/95 (DN:340)

Position Numbers: 7440

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter radius circle search around the AWOIS target center. No evidence of platform ruins were found. Divers found evidence of dredge marks left by oyster dredgers working the immediate area.

CHARTING RECOMMENDATION

The hydrographer recommends that the platform ruins be deleted from the chart.

Recommended Position:

Recommended Least Depth:

***** *Concur* *****

COMPILATION NOTES

Charts

Applied As

Delete [] Platform (ruins)

AWOIS NO: 9278

Item Description: Wreck (Enea)

Source: LNM26/76

AWOIS Position: Lat - 29/30/00.82N Lon - 094/51/00.71W

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

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated. There was no visual identification of a "three foot mast visible" during main scheme data collection. Item unresolved.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck (PA) be retained as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No changes in charting recommended

AWOIS NO: 9279

Item Description: Obstruction

Source: LNM15/86

AWOIS Position: Lat - 29/29/30.83N Lon - 094/51/30.71W

Required Investigation: ES, BD, DI -- 250m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated. An obstruction was visually sighted during mainscheme data collection. Graphic record has an annotation of an obstruction sighted (visually) in the immediate area of 29°29'30.83"N 094°51'41.09"W between PN 2121 - 2123 on DN 052. Annotation was marked for additional field work which was not conducted. Item remains unresolved.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged obstruction (PA) remain as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No charting changes recommended.

AWOIS NO: 9280

Item Description: Obstruction (Sounding)

Source: Unknown

AWOIS Position: Lat - 29/29/20.00N Lon - 094/52/05.00W

Required Investigation: ES, -- 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 05/03/96 (DN:124)

Position Numbers: 8039-8150

Launch Number: 770519

Investigation Used: ES

Water Visibility: <0.5m

Position Determined By: DGPS

Investigation Summary: An echo sounder search was conducted with 10-meter line spacing. The search area was limited to a 100-meter radius around the AWOIS target center. Depths range from 1.9m to 3.1m within the search radius. The least depth acquired was 1.9₇m (~~6.2~~^{5.5}ft) at 29°29'21.10"N, 094°52'07.92"W.

*See attached sounding plot.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted 2 foot sounding be deleted from the chart. It is recommended that soundings charted in this area be updated with soundings from survey H-10588. *and the obstn symbol*

Recommended Position: Lat- 29°29'21.10N Lon- 094°52'07.92W

Recommended Least Depth: 1.9₇m (~~6.2~~^{5.5}ft) MLLW (~~Predicted~~^{Actual} Tides)

COMPILATION NOTES

Charts

Applied As

Deute

Plot Center: Scale 1:2500

LAT 029:29:20.129
N 26488.67

LON 094:52:04.886
E 28554.41

Awols #9280

LON 94:52:10

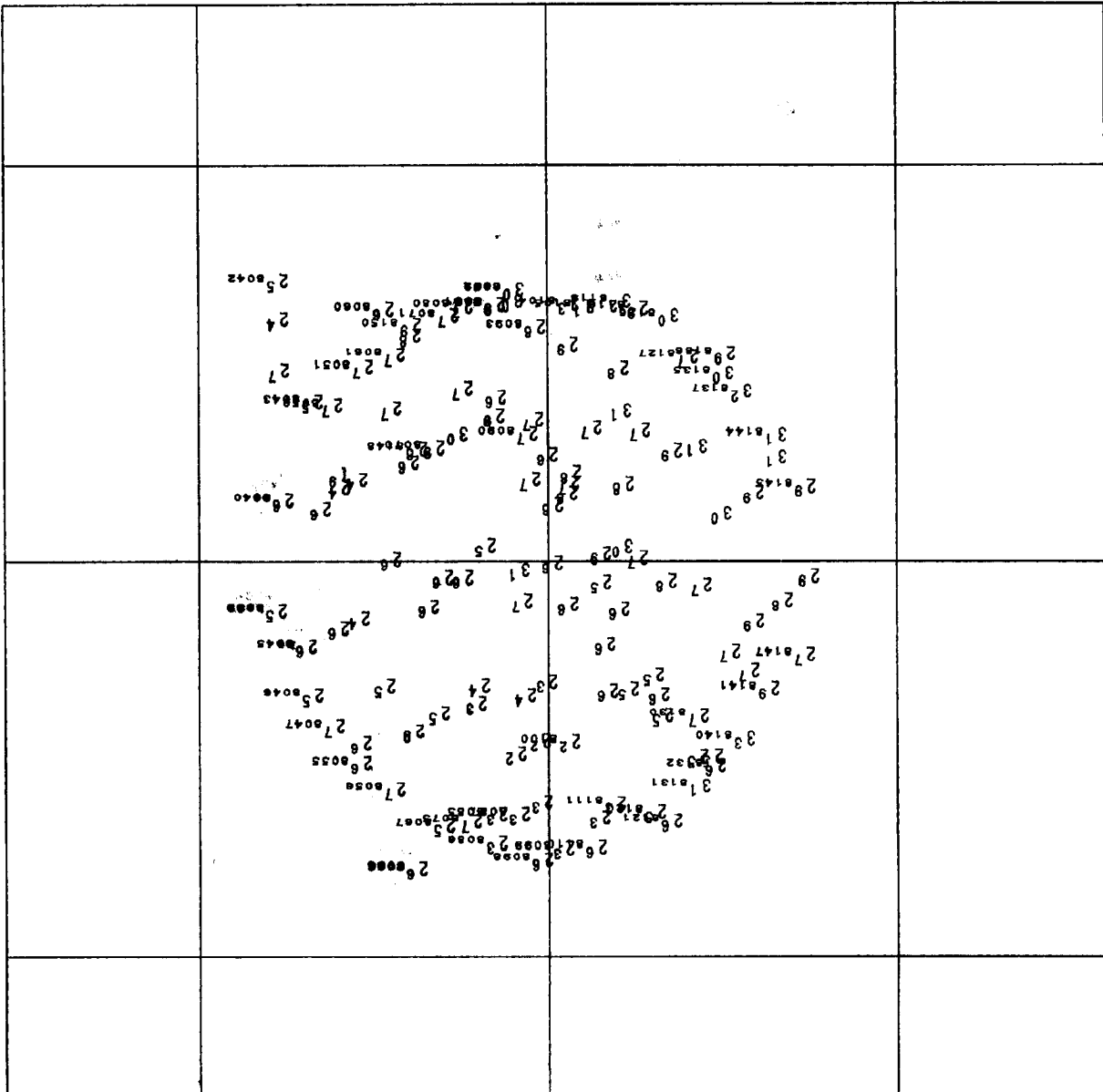
LON 94:52:05

LON 94:52:00

LAT 29:29:25

LAT 29:29:20

LAT 29:29:15



AWOIS NO: 9311

Item Description: Obstruction

Source: LNM18/85

AWOIS Position: Lat - 29/34/05.82N Lon - 0094/55/24.72

Required Investigation: BD, DI -- 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: This item was investigated on survey H-10586.

CHARTING RECOMMENDATION

See report submitted with survey H-10586.

Recommended Position:

Recommended Least Depth:

***** NOT IN Survey area *****

COMPILATION NOTES

Charts

Applied As

Deleted by survey H-10586. ~~See p.2B of Drawing History~~
Item write-up in DR for H-10586.

Handwritten initials and date:
WJL
11/15/98

AWOIS NO: 9312

Item Description: Obstruction (Stakes)

Source: CL64/65, CL389/93

AWOIS Position: Lat - 29/34/08.50N Lon - 094/55/48.00W

Required Investigation: BD, DI

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 02/13/96 (DN:044)

Position Numbers: N/A

Launch Number: 770

Investigation Used: SD

Water Visibility:

Position Determined By: DGPS

Investigation Summary: The hydrographer contacted the Galveston District, Corps of Engineers for salvage documentation concerning the status of charted stakes along the Houston Ship Channel. The person contacted was Johnny Rozsypal (409-766-3926). A letter dated February 13, 1996 was received from Mr. Rozsypal stating the origin, description, and conclusion concerning the charted wooden stakes. Mr. Rozsypal indicates there is no salvage documentation found in the records of the USACE. He believes this item refers to surveying reference stakes and markers used for channel surveys and dredging during the 1960's and 1970's. Mr. Rozsypal states, AAT 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. @ A copy of Mr. Rozsypal's letter is included with this report. It is the USACE's belief that these items no longer exist.

Survey data from H-10588 showed no evidence of the stakes existence.

CHARTING RECOMMENDATION

The hydrographer recommends that the stakes be deleted from the chart.

Recommended Position:

Recommended Least Depth: NOT IN SURVEY AREA

COMPILATION NOTES

Charts

Applied As

See H-10586 AWOIS Item Section in DR.

AWOIS NO: 9313

Item Description: Obstruction

Source: BP68549/65, H-8742/62-63, CL389/93

AWOIS Position: Lat - 29/34/27.80N Lon - 094/55/27.20W

Required Investigation: BD -- 50m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: This item was investigated on survey H-10586.

CHARTING RECOMMENDATION

See the report from H-10586.

Recommended Position:

Recommended Least Depth:

***** *Not in Survey Area* *****

COMPILATION NOTES

Charts

Applied As

See H-10586 AWOIS Item Section

AWOIS NO: 9314

Item Description: Wreck (Unknown F/V)

Source: LNM26/81, LNM33/81

AWOIS Position: Lat - 29/34/30.82N Lon - 094/55/30.72W

Required Investigation: BD, ES, SD -- 150m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: This item was investigated on survey H-10586.

CHARTING RECOMMENDATION

See the report from H-10586.

Recommended Position:

Recommended Least Depth:

*****NOT in Survey area*****

COMPILATION NOTES

Charts

Applied As

See AWOIS Item Section in H-10586

AWOIS NO: 9349

Item Description: Wreck (Miss K.A.)

Source: lnm9/84, LNM27/84

AWOIS Position: Lat - 29/30/48.82N Lon - 094/52/30.72W

Required Investigation: BD, S2, ES, SD -- 250m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck (PD) remain as charted.

Recommended Position:

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No changes in charting Recommended.

AWOIS NO: 9350

Item Description: Wreck (Shadow)

Source: LNM26/85

AWOIS Position: Lat - 29/31/^{48.0}~~47.82~~N Lon - 094/51/48.72W

Required Investigation: VS, BD, S2, SD -- 300m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck remain as charted.

Recommended Position:

Recommended Least Depth:



Do NOT Concur

COMPILATION NOTES

Charts

Applied As

There is no visible wk ~~chr~~ here. There is 10-11 ft of water over it, if it is even there. Recommend revising to a dangerous sunken wreck, ED.

Revise  PA to  ED

AWOIS NO: 9351

Item Description: Obstruction (~~Stakes~~) (Subm ~~stake~~ pile)

Source: CL64/65, CL336/93

AWOIS Position: Lat - 29/31/24.00N Lon - 094/53/12.00W

Required Investigation: BD -- 50m radius

Charts Affected: 11378

INVESTIGATION

Date(s)/DN(s): 02/13/96 (DN:044)

Position Numbers: N/A

Launch Number: 770

Investigation Used: SD

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: The hydrographer contacted the Galveston District, Corps of Engineers for salvage documentation concerning the status of charted stakes along the Houston Ship Channel. The person contacted was Johnny Rozsypal (409-766-3926). A letter dated February 13, 1996 was received from Mr. Rozsypal stating the origin, description, and conclusion concerning the charted wooden stakes. Mr. Rozsypal indicates there is no salvage documentation found in the records of the USACE. He believes this item refers to surveying reference stakes and markers used for channel surveys and dredging during the 1960's and 1970's. Mr. Rozsypal states, AAt 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. A copy of Mr. Rozsypal's letter is included with this report. It is the USACE's belief that these items no longer exist.

Survey data from H-10588 showed no evidence of the stakes existence.

CHARTING RECOMMENDATION

The hydrographer recommends that the ~~stakes~~ be deleted from the chart.
 PILES

Recommended Position:

Recommended Least Depth:

concur

COMPILATION NOTES

Charts

Applied As

Delete 0 Subm pile

AWOIS NO: 9352

Item Description: Obstruction (Stakes)

Source: CL64/65, CL389/93

AWOIS Position: Lat - 29/31/32.20N Lon - 094/53/18.50W

Required Investigation: BD -- 50m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 02/13/96 (DN:044)

Position Numbers: N/A

Launch Number: 770

Investigation Used: SD

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: The hydrographer contacted the Galveston District, Corps of Engineers for salvage documentation concerning the status of charted stakes along the Houston Ship Channel. The person contacted was Johnny Rozsypal (409-766-3926). A letter dated February 13, 1996 was received from Mr. Rozsypal stating the origin, description, and conclusion concerning the charted wooden stakes. Mr. Rozsypal indicates there is no salvage documentation found in the records of the USACE. He believes this item refers to surveying reference stakes and markers used for channel surveys and dredging during the 1960's and 1970's. Mr. Rozsypal states, AAT 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. A copy of Mr. Rozsypal's letter is included with this report. It is the USACE's belief that these items no longer exist.

Survey data from H-10588 showed no evidence of the stakes existence

CHARTING RECOMMENDATION

The hydrographer recommends that the charted stakes be deleted from the chart.

Recommended Position:

Recommended Least Depth: N/A CONCUR

COMPILATION NOTES

Charts	Delete	Subm stakes below	Applied As
Lat (N)	Lon (W)	Lat (N)	Lon (W)
29-31-32.2N	94-53-18.5	29-32-21.5	94-53-56.3
29-31-40.4'	94-53-24.6	29-32-29.7	94-54-02.7
29-31-48.6	94-53-31	29-32-37.9	94-54-09.2
29-31-57	94-53-37.5	29-32-46.3	94-54-15.3
29-32-05.3	94-53-43.7	29-32-54.5	94-54-21.7
29-32-13.4	94-53-50.3	29-33-02.5	94-54-28
			29-33-10.7
			29-33-27.3
			29-33-35.5
			29-33-44
			29-33-52
			29-34-00.27
			94-54-34
			94-54-46'
			94-54-53
			94-54-59.5
			94-55-05-
			94-55-12.2

AWOIS NO: 9353

Item Description: Obstruction (8" Steel Pipe)

Source: LNM26/89

AWOIS Position: Lat - 29/31/54.32N Lon - 094/53/52.72W

Required Investigation: S4, BD -- 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/04/95 (DN:338); 12/12/95 (DN:346)

Position Numbers: 7411, 9353

Launch Number: 770

Investigation Used: DI

Water Visibility: <0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter radius circle search around the AWOIS target center. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged pipe (PA) be deleted from the chart.

Recommended Position:

Recommended Least Depth:

CMUR

COMPILATION NOTES

Charts

Applied As

Delete o subm pipe PA

AWOIS NO: 9354

Item Description: Obstruction (pipe)

Source: LNM67/71

AWOIS Position: Lat - 29/32/21.82N Lon - 094/54/00.72W

Required Investigation: VS, BD -- 200m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number:

Investigation Used:

Water Visibility:

Position Determined By:

Investigation Summary: Because of time constraints for completion of this project and the danger of dragging in Galveston Bay with the numerous pipelines therein, this item was not investigated.

CHARTING RECOMMENDATION

The hydrographer recommends that the pipe remain as charted.

Recommended Position:

Recommended Least Depth:

Cenar

COMPILATION NOTES

Charts

Applied As

Revise \circ Pipe PA to \circ subm pipe PA

AWOIS NO: 9355

Item Description: Obstruction (Unknown)

Source: LNM40/89

AWOIS Position: Lat - 29/32/21.82N Lon - 094/54/08.72W

Required Investigation: BD, S4 -- 75m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 12/04/95 (DN:338); 12/12/95 (DN:346)

Position Numbers: 7403,7461

Launch Number: 770

Investigation Used: DI

Water Visibility: <0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 75-meter radius circle search around the AWOIS target center. No contacts were found. The search radius ended at the west edge of Houston Ship Channel.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction be deleted from the chart.

Recommended Position:

Recommended Least Depth:

*****^{concur}*****

COMPILATION NOTES

Charts

Applied As

Delete () Obstrn PA

AWOIS NO: 9356

Item Description: Obstruction (Platform Ruins)

Source: BP68549/65, CL1721/78

AWOIS Position: Lat - 29/32/26.00N Lon - 094/54/41.50W

Required Investigation: VS, BD -- 50m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5610

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.3m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter radius circle search around the AWOIS target center. Contacts were found consisting of 10 to 12 inch diameter piles. The piles were found scattered along the bottom within a 10-meter radius of position 5610. The obstruction does not constitute a danger to navigation as the piles rise off the bottom 0.3 meter. A least depth of 2.9 meters was obtained by lead line. Position 5610 has an azimuth of 101°00'47.49" with a range of 20.792 meters from the AWOIS target center.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted platform ruins be retained at the revised position recommended below.

Recommended Position: Lat- 29°32'25.9"N Lon- 094°54'40.7"W

Recommended Least Depth: 2.9m MLLW (Actual Tides) (8ft)

CENCUR

COMPILATION NOTES

Charts

Applied As

Revise [] Platform (ruins) to
[] Platform ruins (cov. 8ft at MLLW)
See p. 9 of DR also

AWOIS NO: 9357

Item Description: Obstruction (Submerged Dredge Pipe)

Source: LNM6/77

AWOIS Position: Lat - 20/32/35.82N Lon - 094/54/34.72W

Required Investigation: BD, S2 -- 100m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 11/15/95 (DN:319); 12/12/95 (DN:346)

Position Numbers: 6792, 7456

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 100-meter radius circle search around the AWOIS target center. A concrete anchor was found and positioned at PN 7456. The obstruction was identified as a concrete block (possibly an anchor) approximately three feet long by three feet wide rising out of the sediment 0.8 meters. A least depth of 2.3m was determined by lead line at the time of investigation. The area is scattered with metal debris within 10 meters of this item's location. The concrete anchor was the most prominent feature in this foul area. The obstruction is located 25.23 meters and bears 168°10'35.55" from the AWOIS target center.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted obstruction location and least depth be revised to those recommended below.

Recommended Position: Lat- 29°32'^{35.018}~~21.89~~"N Lon- 094°54'^{34.528}~~08.65~~"W

Recommended Least Depth: 2.2m MLLW (Predicted Tides) (6ft) ^{Actual}

Concur w/ conditions.

COMPILATION NOTES

Charts

Applied As

*Delete 0 subm pipe
Add (6) Obstrn
See also p.9 of AR*

AWOIS NO: 9358

Item Description: Wreck (TX 5095)

Source: NM26/67, CL1222/74

AWOIS Position: Lat - 29/33/00.82N Lon - 094/55/00.72W

Required Investigation: S2, BD,ES,SD -- 250m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 01/05/96 (DN:005)

Position Numbers: 7573-7776

Launch Number: 770

Investigation Used: SSS

Water Visibility: 1.0m

Position Determined By: DGPS

Investigation Summary: This item was investigated using side scan sonar with a range scale of 25 meters and line spacing of 20 meters. The first 100% coverage and half of the second 100% was completed. Time constraints for project completion prevented completion of the side scan sonar coverage. Contacts were found during post processing but were not investigated further.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck (PA) remain as charted.

Recommended Position: AWOIS position above

Recommended Least Depth:

***** *concur w/ condition* *****

COMPILATION NOTES

Charts

Applied As

Revise (III) PA to (III) EA

Plot Center: Scale 1:5000

LAT 029:33:00.820
N 33289.58

LON 094:55:00.720
E 23827.54

AVOIS# 935B

150° coverage

E24000

LON 94:55:10

LON 94:55:00

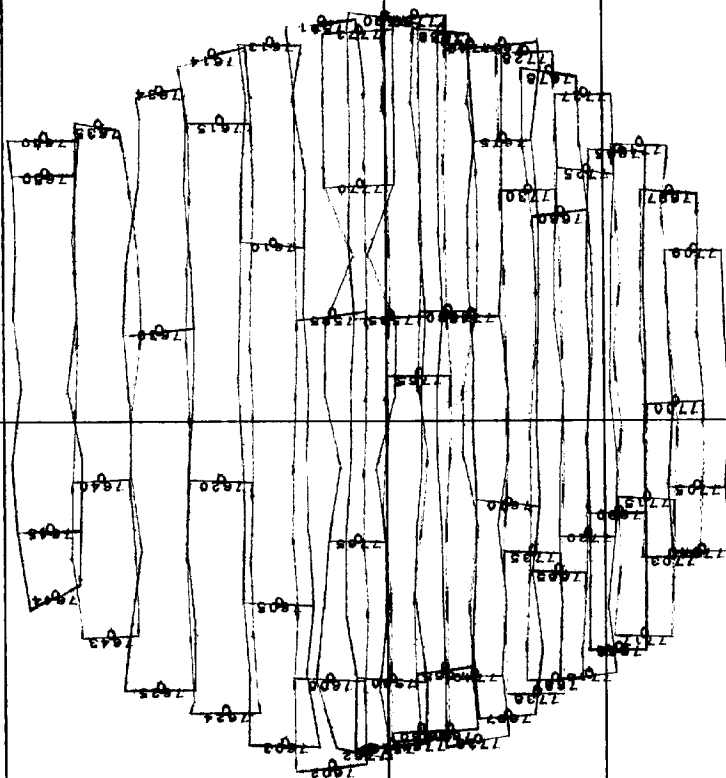
LON 94:54:50

LAT 29:33:10

LAT 29:33:00

LAT 29:32:50

N33000



AWOIS NO: 9359

Item Description: Obstruction (Pole)

Source: CL1222/74

AWOIS Position: Lat - 29/33/02.50N Lon - 094/54/57.00W

Required Investigation: VS, BD

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 11/15/95 (DN:319); 12/12/95 (DN:346)

Position Numbers: 6790, 7455

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter circle search around the AWOIS target center. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the pole be deleted from the chart.

Recommended Position:

Recommended Least Depth: *Concur*

COMPILATION NOTES

Charts

Applied As

Delete 0 pole rep

AWOIS NO: 9360

Item Description: Wreck (Seven Seas)

Source: LNM52/87

AWOIS Position: Lat - 29/33/22.82N Lon - 094/51/39.72W

Required Investigation: VS, BD, S2, ES, SD -- 200m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s):

Position Numbers:

Launch Number: 770

Investigation Used:

Water Visibility: 1.0m

Position Determined By: DGPS

Investigation Summary: No visible wreck was identified in the immediate area while collecting main scheme sounding data. Because of limited side scan sonar equipment resources and time constraints for completion of this project, this item was not investigated any further. The item remains unresolved.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted visible wreck be revised to a submerged wreck (PA) at the currently charted position.

Recommended Position: AWOIS position above


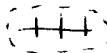
Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

Revise  PA to  PA

AWOIS NO: 9361

Item Description: Obstruction

Source: LNM04/92

AWOIS Position: Lat - 29/33/20.00N Lon - 094/53/18.00W

Required Investigation: ES

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 03/01/95 (DN:060), 03/28/95 (DN:079)
10/18/95 (DN:291), 05/03/96 (DN:127)

Position Numbers: 3129-3187; 3967-3970; 5466-5475, PN 8172-8465

Launch Number: 770

Investigation Used: ES

Position Determined By: DGPS

Water Visibility: 0.5m

Investigation Summary: Soundings acquired in the area were collected on the main scheme, main scheme splits, cross lines, and development hydrography. The bottom profile is irregular with sounding variance between 0.3 to 0.6 meters. The development conducted on DN 127 was performed by echo sounder investigation using 20-meter line spacing. The following list indicates the least depths and location found:

DEPTH M.	LATITUDE N	LONGITUDE W	DEPTH M.	LATITUDE N	LONGITUDE W
2.2	29°33'19.24"	094°53'12.83"	2.4	29°33'17.36"	094°53'14.11"
2.2	29°33'18.77"	094°53'11.95"	2.4	29°33'17.42"	094°53'12.74"
2.4	29°33'24.10"	094°53'17.27"	2.6	29°33'17.51"	094°53'14.83"
2.4	29°33'22.26"	094°53'15.12"	2.5	29°33'17.42"	094°53'12.63"
2.4	29°33'22.42"	094°53'14.03"	2.5	29°33'27.25"	094°53'16.79"
2.4	29°33'20.80"	094°53'12.65"	2.0	at 29-33-19.7	94-53-25.245 (6 Ft)

*See attached sounding plot.

CHARTING RECOMMENDATION

The hydrographer recommends removing the PA notation and retaining the benthic recovery mound where currently charted. Do NOT CONAR

Recommended Position: AWOIS position above

Recommended Least Depth: 2.2⁰m MLLW (Predicted Tides) 6 Ft

COMPILATION NOTES

Charts

Depths inside obstn are only 1-2 Ft different from the Applied As surrounding soundings. They are not obstructions - only an area ~~are~~ with an irregular bottom.
Delete [] obstn PA Chart present survey soundings.

AWOIS NO: 9362

Item Description: Obstruction (Submerged Pipe)

Source: LNM28/90

AWOIS Position: Lat - 29/33/46.40N Lon - 094/54/30.70W

Required Investigation: BD -- 50m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 11/15/95 (DN:319)
12/12/95 (DN:346)

Position Numbers: 6789, 7454

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers performed a 50-meter circle search around the AWOIS target center. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged pipe be deleted from the chart.

Recommended Position:

Recommended Least Depth:

***** *Concur* *****

COMPILATION NOTES

Charts

Applied As

Delete subm pipe PA

AWOIS NO: 9363

Item Description: (Wreck)

Source: LNM51/88, CL389/92

AWOIS Position: Lat - 29/34/^{01.3}~~04.82~~N Lon - 094/55/^{01.0}~~05.72~~W

Required Investigation: BD, S2, ES, SD --200m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 00/00/000(DN:)

Position Numbers:

Launch Number: 770

Investigation Used:

Water Visibility: 1.0m

Position Determined By: DGPS

Investigation Summary: No intensive search was conducted. Item remains unresolved.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck (PA) remain as charted.

Recommended Position: Lat- 00/00/00.0N Lon- 000/00/00.0W

Recommended Least Depth:

Concur

COMPILATION NOTES

Charts

Applied As

No charting changes recommended

AWOIS NO: 9364

Item Description: ^{Subm} Visible Wreck (Unknown)

Source: LNM52/88

AWOIS Position: Lat - 29/34/04.82N Lon - 0094/55/05.72

Required Investigation: BD, S2, ES, SD -- 100m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 11/15/95 (DN:319); 12/12/95 (DN:346)

Position Numbers: 6788, 7453

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: A 100-meter radius diver circle search was conducted around the AWOIS target center on DN 319. No contacts were encountered.

CHARTING RECOMMENDATION

The hydrographer recommends that the ^{subm} ~~visible~~-wreck be deleted from the chart.

Recommended Position:

Recommended Least Depth:

*****^{concur}*****

COMPILATION NOTES

Charts

Applied As

Deute (H) PA

AWOIS NO: 9365

Item Description: Wreck (Unknown)

Source: CL1057/81, CL557/84

AWOIS Position: Lat - 29/34/41.82N Lon - 094/54/48.42W

Required Investigation: BD, S2, ES, SD -- 150m Radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 11/15/95 (DN:319); 12/12/95 (DN:346)

Position Numbers: 6787, 7445

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: The investigation on DN 319 included a diver investigation using the circle search technique, centered on the AWOIS target at PN 6787. The search was conducted with a 50-meter radius. No contacts were found. The survey data collected on DN 319 was lost due to a computer system crash. A position at the AWOIS target center was re-acquired on DN 346 (PN 7445). An intensive search with side scan sonar was not completed. This item remains unresolved.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck (PA) remain as charted.

Recommended Position: Lat- 00/00/00.0N Lon- 000/00/00.0W

Recommended Least Depth: *Concur w/ conditions*

COMPILATION NOTES

Charts

Applied As

Revise ~~(H)~~ PA to ~~(H)~~ ED

AWOIS NO: 9366

Item Description: Wreck (Mac)

Source: NM5/65, CL1406/73

AWOIS Position: Lat - 29/29/50.00N Lon - 094/54/36.00W

Required Investigation: VS, BD, SD -- 50m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5602 - 5603

Launch Number: 770

Investigation Used: VS

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: A visual identification of a barge wreck was confirmed at Eagle Point. The wreck is approximately 10-meters wide by 80-meters long. The wreck axis is 085° (east end) to 265° (west end). The barge is exposed 1.0 meter above the surface at time of survey at both the east and west ends. The south side and west end of the barge is located less than 10 meters from a wooden breakwater at the Eagle Point Marina entrance. Water depth is less than 1.0 meter on the offshore areas near the wreck. No other wrecks were visually identified in the immediate area during this investigation or while collecting sounding data.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck remain as charted.



Recommended Position: Lat- 29/29/50.00N Lon- 094/54/36.00W

Recommended Least Depth: -1.2⁴m MLLW (Predicted Tides) (4.59ft)

COMPILATION NOTES

Charts

Applied As

Revise  PA to 

AWOIS NO: 9367

Item Description: Visible Wreck (Unknown)

Source: CL1406/73

AWOIS Position: Lat - 29/29/41.00N Lon - 094/54/32.00W

Required Investigation: VS, SD, SD -- 30m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5599 - 5601

Launch Number: 770

Investigation Used: VS

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: Two barge wrecks were visually identified near the AWOIS target position. Position 5599 was acquired at the intersection of two barges. Position 5600 was taken at the south end of the most easterly wreck (barge No. 1), while position 5601 was obtained at the northwesterly end of the west wreck (barge No. 2). The axis of wreck No. 1 is 185° (south end) to 005° (north end). Wreck No. 2 axis is 160° (south end) to 340° (north end). Barge No. 1 is approximately 50-meters in length, while barge No. 2 is approximately 55-60 meters in length. Both wrecks are 10 meters wide.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted visible wreck be revised to the position listed below.

Recommended Position: Lat- 29/29/40.38N Lon- 094/54/32.33W - *DO NOT chart*

Show wrecks in positions below at fix 5601 and 5600

Recommended Least Depth: -1.7 MLLW (Predicted Tides)

concur w/ condition

COMPILATION NOTES

Charts

Applied As

Delete charted Δ AA

Add Δ in 29-29-38.81N, 94-54-32.78W Fix 5600

Add Δ in 29-29-42.02N, 94-54-33.54W Fix 5601

AWOIS NO: 9368

Item Description: Wreck (Unknown)

Source: LNM40/89

AWOIS Position: Lat - 29/29/00.83N Lon - 094/54/52.72W

Required Investigation: VS, BD, SD -- 50m radius

Charts Affected: 11327

INVESTIGATION

Date(s)/DN(s): 10/26/95 (DN:299)

Position Numbers: 5598

Launch Number: 770

Investigation Used: DI

Water Visibility: 0.5m

Position Determined By: DGPS

Investigation Summary: AHP divers conducted a 50-meter radius circle search around the AWOIS target center. No contacts were found.

CHARTING RECOMMENDATION

The hydrographer recommends that the visible wreck be deleted from the chart.

Recommended Position:

Recommended Least Depth:

Concur
COMPILATION NOTES

Charts

Applied As

Delete 1 PA

CONTROL STATIONS as of 11 Jan 1995

No	Type	Latitude	Longitude	M	Cart	Freq	Vel Code	MM/DD/YY	Station Name
----	------	----------	-----------	---	------	------	----------	----------	--------------

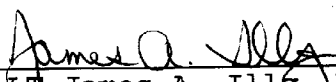
CONTROL STATIONS as of 11 Jan 1995

No	Type	Latitude	Longitude	M	Cart	Freq	Vel Code	MM/DD/YY	Station Name
001	0	029:19:45.092	094:44:10.484	13	250	0.0	0.0	11/09/94	GALVESTON DGPS RADIOBEACON
002	0	029:33:26.006	095:01:44.306	2	254	0.0	0.0	12/09/94	CAL 1

APPROVAL SHEET
Basic Hydrographic Survey
OPR-K204-AHP
AHP-10-1-95
H-10588
1995-96

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. Castle E. Parker, hydrographer in charge of daily operations. The descriptive report was reviewed by 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.

With the exception of deficiencies noted in section N. and P. of this report, 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

Castle E. Parker
Hydrographer-in-charge of daily operations



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 28, 1997

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-K204-AHP

HYDROGRAPHIC SHEET: H-10588

LOCALITY: Galveston Bay, Texas, Red Fish Bar to Eagle Point

TIME PERIOD: January 26 - May 9, 1995
October 18, 1995 - January 5, 1996; May 2 - 6, 1996

TIDE STATION USED: 877-0613 Morgans Point, Tx.
Lat. $29^{\circ} 40.9' N$ Lon. $94^{\circ} 59.1' W$
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. $29^{\circ} 28.8' N$ Lon. $94^{\circ} 55.1' W$
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: GB69, GB73, GB84, GB106, GB109,
GB110 & GB112


Refer to attachment(s) for zoning information.

Note: Provided time series data are provided 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-10588

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 GB69				
-94.914355	29.444055	877-1013	-36	1.08
-94.88407	29.468622			
-94.852125	29.48524			
-94.814372	29.493911			
-94.780353	29.494994			
-94.781183	29.477292			
-94.819351	29.475125			
-94.848577	29.467148			
-94.874528	29.452365			
-94.894856	29.435024			
-94.914355	29.444055			
Zone GB73				
-94.92651	29.456163	877-1013	-18	1.05
-94.925424	29.47237			
-94.893579	29.488103			
-94.861474	29.502241			
-94.823084	29.511613			
-94.779108	29.513058			
-94.780353	29.494994			
-94.814372	29.493911			
-94.852125	29.48524			
-94.88407	29.468622			
-94.914355	29.444055			
-94.920935	29.447138			
-94.92651	29.456163			
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 GB110

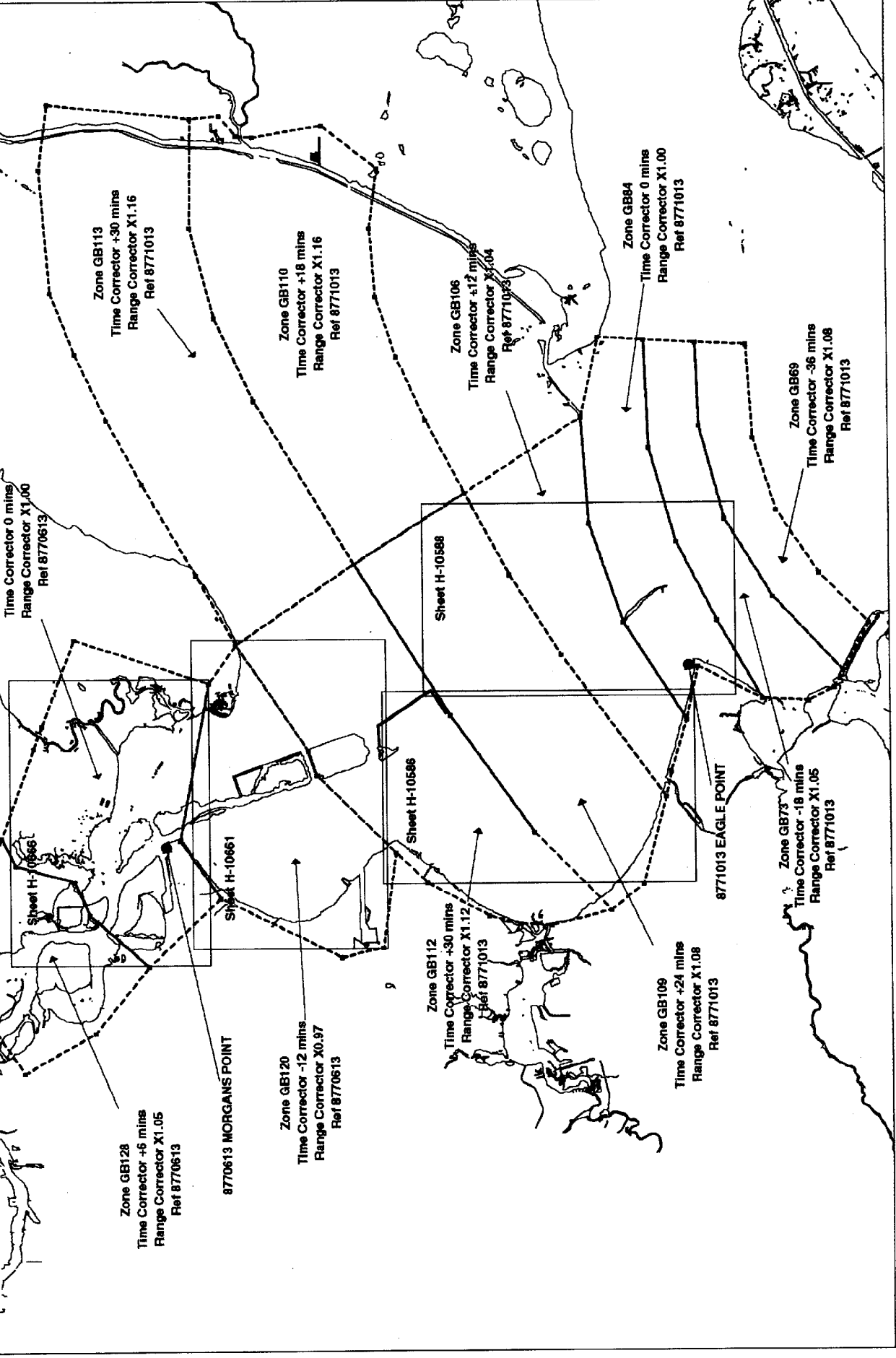
-94.869904 29.615248	877-1013	18	1.16
-94.803295 29.649906			
-94.769487 29.663506			
-94.732652 29.671841			
-94.688248 29.671402			
-94.687219 29.661112			
-94.695224 29.655314			
-94.695891 29.649516			
-94.691247 29.625339			
-94.708936 29.606036			
-94.733157 29.608668			
-94.761091 29.606868			
-94.785622 29.599894			
-94.811361 29.589804			
-94.841137 29.576204			
-94.869904 29.615248			

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

Final Zoning for OPR K204-AHP, Galveston Bay, TX



GEOGRAPHIC NAMES

H - 10588

Name on Survey	ON CHART NO. 11327 ON PREVIOUS SURVEY NO. 11326									
	A	B	C	D	E	F	G	H	K	
	CON U.S. QUADRANGLE MAPS FROM LOCAL INFORMATION ON LOCAL MAPS P.O. GUIDE OR MAP RAND McNALLY ATLAS U.S. LIGHT LIST									
EAGLE POINT	X		X							1
GALVESTON BAY	X		X							2
HOUSTON SHIP CHANNEL	X		X							3
RED FISH BAR	X		X							4
RED FISH ISLAND	X		X							5
SAN LEON (pp1)	X		X							6
TEXAS (title)	X		X							7
TRINITY RIVER CHANNEL	X		X							8
UPPER GALVESTON BAY (title) X										9
WEST PASS	X		X							10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25

APPROVED

Dennis J. Rosenberg
Chief Geographer

SEP 24 1997

LETTER TRANSMITTING DATA

N/CS33-26-98

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

MAR 31, 1998

NUMBER OF PACKAGES

ONE TUBE AND ONE BOX

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-10588

TEXAS, GALVESTON BAY, RED FISH BAR TO EAGLE POINT

1 (ONE) TUBE CONTAINING THE FOLLOWING:

- 1 SMOOTH SHEET (H-10586)
- 1 COMPOSITE DRAWING FOR NOS CHART 11327
- 1 H-DRAWING FOR NOS CHART 11327

1 (ONE) BOX CONTAINING THE FOLLOWING:

- 1 ORIGINAL DESCRIPTIVE REPORT
- 4 DRAWING HISTORYS (NOAA FORM #76-71) FOR NOS CHART 11327
- 1 RECORD OF APPLICATION TO CHART (NOAA FORM #75-96) FOR SURVEY H-10588

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

03/30/98

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10588

NUMBER OF CONTROL STATIONS		2
NUMBER OF POSITIONS		8219
NUMBER OF SOUNDINGS		31798
	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	63	05/02/97
VERIFICATION OF FIELD DATA	180	03/27/98
EVALUATION AND ANALYSIS	160.50	
FINAL INSPECTION	39	03/18/98
COMPILATION	189.50	03/30/98
TOTAL TIME	632	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		03/20/98

**ATLANTIC HYDROGRAPHIC SECTION
EVALUATION REPORT FOR H-10588 (1995-96)**

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 (HPS)
NADCON, version 2.10
MicroStation 95, version 5.05
SiteWorks version 2.01
I/RAS B, version 5.01

The smooth sheet was plotted using a Hewlett Packard Design Jet 350C 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 datum, move the projection lines 0.827 seconds (25.461 meters or 2.55 mm at the scale of the survey) north in latitude and 0.722 seconds (19.441 meters or 1.94 mm at the scale of the survey) west in longitude.

All geographic positions listed in this report are on NAD 83 unless stated otherwise.

J. SHORELINE

The shoreline originates with unreviewed digital shoreline manuscript DM-10128 (1992).

L. JUNCTIONS

H-10586(1994)	1:10,000	to the west
H-10664(1996)	1:10,000	to the southwest
H-10614(1996)	1:10,000	to the southeast

A standard junction was effected between H-10586 (1996), H-10664 (1996), and H-10614 (1996) and the present survey.

There are no junctional surveys to the north or east. Present survey depths are in harmony with the charted hydrography to the north and east.

M. COMPARISON WITH PRIOR SURVEYS

Hydrographic

H-8695 (1962) 1:12,500
H-8743 (1962-65) 1:20,000

The prior surveys listed above cover the present survey area in its entirety.

H-8695 (1962) covers the southern portion of the present survey. The present survey compares favorably with the prior survey. Prior survey depths differ plus or minus (\pm) 2 feet (0⁶ m) from present survey depths. The following should be noted:

1) Three dolphins charted in Latitude 29°30'37"N, Longitude 94°52'15"W, originate with the prior survey. The present survey neither verified nor disproved the existence of the dolphins. The dolphins have been brought forward from the prior survey to supplement the present survey. It is recommended that the dolphins be retained as charted but that the label be revised to submerged dolphins.

2) The following charted depths originate with the prior survey and are not considered disproved:

<u>DEPTH</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
5-FT (1 ⁵ m)	29°31'25"	94°53'38.3"
2-FT (0 ⁶ m)	29°31'22.8"	94°53'37.8"
3-FT (0 ⁹ m)	29°31'21"	94°53'34.5"
1-FT (0 ³ m)	29°31'21.5"	94°53'35.9"
5-FT (1 ⁵ m)	29°31'18.6"	94°53'28"
4-FT (1 ² m)	29°30'24"	94°51'55"
1-FT (0 ³ m)	29°30'23.3"	94°52'17.6"
1-FT (0 ³ m)	29°30'23"	94°52'12.5"

The depths listed above have been brought forward from the prior survey to supplement the present survey. No change in charting status is recommended.

H-8743 (1962-65) covers the northern portion of the present survey. The present survey compares favorably with the prior survey. Prior survey depths differ plus or minus (\pm) 2 feet (0⁶ m) from present survey depths. The following should be noted:

1) The following charted depths originate with the prior survey and are not considered disproved by the present survey:

<u>DEPTH</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
6-FT (1 ⁸ m)	29°34'06.5"	94°55'10.5"
5-FT (1 ⁵ m)	29°32'27.5"	94°54'29.3"

The depths listed above have been brought forward from the prior survey to supplement the present survey. No change in charting status is recommended.

Except as noted above, the present survey is considered adequate to supersede the prior surveys.

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

Hydrography

The charted hydrography originates with 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) The following charted features originate from miscellaneous sources subsequent to the present survey and appear on the 1997 edition of Chart 11327. These features are to be retained as charted:

<u>FEATURE</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Piles PA	29°29'24"	94°51'36"
submerged obstruction PA (less than 9ft rep)	29°28'49.8"	94°51'35.7"
island	29°30'17.6"	94°53'04.07"
sunken wreck PA	29°31'30"	94°51'07"
submerged pipe PA (uncovers)	29°31'36.2"	94°53'36"
sunken wreck PA	29°33'00"	94°54'00"
visible wreck PA	29°33'30"	94°53'58"
obstruction PA (35ft rep 95)	29°33'31.4"	94°54'55.5"
obstructions (PA)	29°34'06"	94°55'24"

pile	29°29'55.7"	94°55'27"
pile	29°29'53.7"	94°55'03.6"
pile	29°29'30.3"	94°54'37"
3 piles	29°29'29.5"	94°54'38.5"

2) A rock awash charted in Latitude 29°29'32.8" N, Longitude 94°54'39.5"W, originates with an unknown source and was neither verified nor disproved by the present survey. It is recommended that the rock awash be retained as charted.

3) A rock awash charted in Latitude 29°29'35.14"N, Longitude 94°54'37.30"W, originates with an unknown source and was neither verified nor disproved by the present survey. It is recommended that the rock awash be retained as charted.

4) A submerged breakwater charted in Latitude 29°29'51.89"N, Longitude 94°54'24.47"W, originates with an unknown source and was neither verified nor disproved by the present survey. It is recommended that the submerged breakwater be retained as charted.

5) Automated Wreck and Obstruction Information System (AWOIS) Item #9225, Markers charted in Latitude 29°30'01.53"N, Longitude 94°54'49.41"W originate with Chart Letter 1406 of 1973 (CL1406/73). These features were located and delineated by the field unit as piles instead of markers. Nine (9) markers are currently charted; 12 piles were located by the field unit. It is recommended that the area be revised to show the present survey delineation.

6) Two shoals charted in Latitude 29°30'26"N, Longitude 94°52'14.6"W originate with an unknown source and are considered disproved by the present survey. The present survey found no indication of either shoal. It is recommended that the above two shoals be removed from the chart.

8) A shoal charted in Latitude 29°30'34" N, Longitude 94°52'14"W originates with an unknown source and was neither verified nor disproved by the present survey. It is recommended that the charted shoal be retained as charted.

9) A sunken wreck charted in Latitude 29°30'45.5"N, Longitude 94°52'15.6"W originates with an unknown source and was neither verified nor disproved by the present survey. It is recommended that the charted sunken wreck be revised to a sunken wreck ED.

10) A sunken wreck PD charted in Latitude 29°31'19"N, Longitude 94°53'24.7"W originates with an unknown

source and was neither verified nor disproved by the present survey. It is recommended that the charted sunken wreck PD be retained as charted.

11) A 3-ft depth (0³m) charted in Latitude 29°31'45"N, Longitude 94°53'18"W originates with an unknown source and was neither verified nor disproved by the present survey. It is recommended that the 3-ft depth be retained as charted.

12) A submerged stake charted in Latitude 29°32'33.4"N, Longitude 94°54'04.3"W originates with an unknown source and was neither verified nor disproved by the present survey. No changes in charting are recommended.

13) Two shoals charted in Latitude 29°33'49"N, Longitude 94°54'39.5"W and Latitude 29°33'59.5"N, Longitude 94°54'53.5"W originate with an unknown source and fall inside a spoil area. The present survey found no indication of either shoal. It is recommended that the above two shoals be removed from the chart.

14) A submerged pile charted in Latitude 29°34'02.5"N, Longitude 94°55'08.5" originated from an unknown source and was neither verified nor disproved by the present survey. No changes in charting are recommended.

15) A submerged stake charted in Latitude 29°34'16.6"N, Longitude 94°55'24.3"W originates with an unknown source and falls inside the present survey limits. This item was disproved by junctional survey H-10586 (1997). It is recommended that the submerged stake be deleted from the chart.

16) The following charted pile symbols and pipes originate with unknown sources and are not considered disproved by the present survey:

<u>FEATURE</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
visible pipe	29°30'04.5"	94°53'55.5"
pile	29°29'50.5"	94°54'58.2"

The features listed above were neither verified nor disproved by the present survey. It is recommended that no changes in charting be made, except that the visible pipe be revised to a submerged pipe.

17) The following charted soundings originate with unknown sources and are not considered disproved by the

present survey:

<u>DEPTH (FT/M)</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
1/0 ³	29°34'14.0"	94°55'09.0"
5/1 ⁵	29°34'01.4"	94°55'10.5"
7/2 ¹	29°29'47.2"	94°51'27.5"
6/1 ⁵	29°29'35.0"	94°52'10.5"

The depths listed above were neither verified nor disproved by the present survey. It is recommended that they be retained as charted.

Difference between the present survey and charted depths can be attributed to natural and cultural change, numerous hurricanes and tropical storms, subsidence due to the withdrawal of gas and oil from the region, and improved hydrographic surveying methods and equipment.

Except as noted the present survey is considered adequate to supersede the charted hydrography in the common area.

P. ADEQUACY OF SURVEY

This is an adequate hydrographic survey. Additional work is recommended in sections N. and O. of this report.

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



for

Franklin L. Saunders

Cartographic Technician
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET
H-10588

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 disproval 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: March 17, 1998

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: March 20, 1998

Final Approval:

Approved: Andrew A. Armstrong, III

Date: April 27, 1998

Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

