9783

Diag. Cht. Nos. 1117, 1282-2. & 1280

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey Hydrographic

Field No. MI-20-4-78

Office No. H-9783

LOCALITY

State Texas

General Locality Northwestern Gulf of Mexico

Locality Offshore Galveston

1978

CHIEF OF PARTY
James S. Midgley

LIBRARY & ARCHIVES

DATE April 25, 1979

☆U.S. GOV. PRINTING OFFICE: 1976—669-441

9783

FORM 77-28 (12) U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTER NO.

H-9783

HYDROGRAPHIC TITLE SHEET

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

FIELD NO.

MI-20-4-78

State TEXAS

General locality NORTH WESTERN GULF OF MEXICO

Locality ~~GALVESTON, TEXAS~~ OFFSHORE GALVESTON

Scale 1:20,000 Date of survey 9 August - ~~18 August~~ 4 October 1978

Instructions dated 9 December, 1977 Project No. OPR-K104-MI-78

Vessel NOAA SHIP MT. MITCHELL (2220)

Chief of party Captain James S. Midgley, NOAA

Surveyed by See Remarks

Soundings taken by echo sounder, ~~hand lead~~, ~~pole~~ Ross Model 5000 Fineline

Graphic record scaled by R.W., E.M.,

Graphic record checked by S.K., F.S.

Protracted by N/A Automated plot by AMC XYNETICS 1201 ~~HYDROPLOT SYSTEM~~

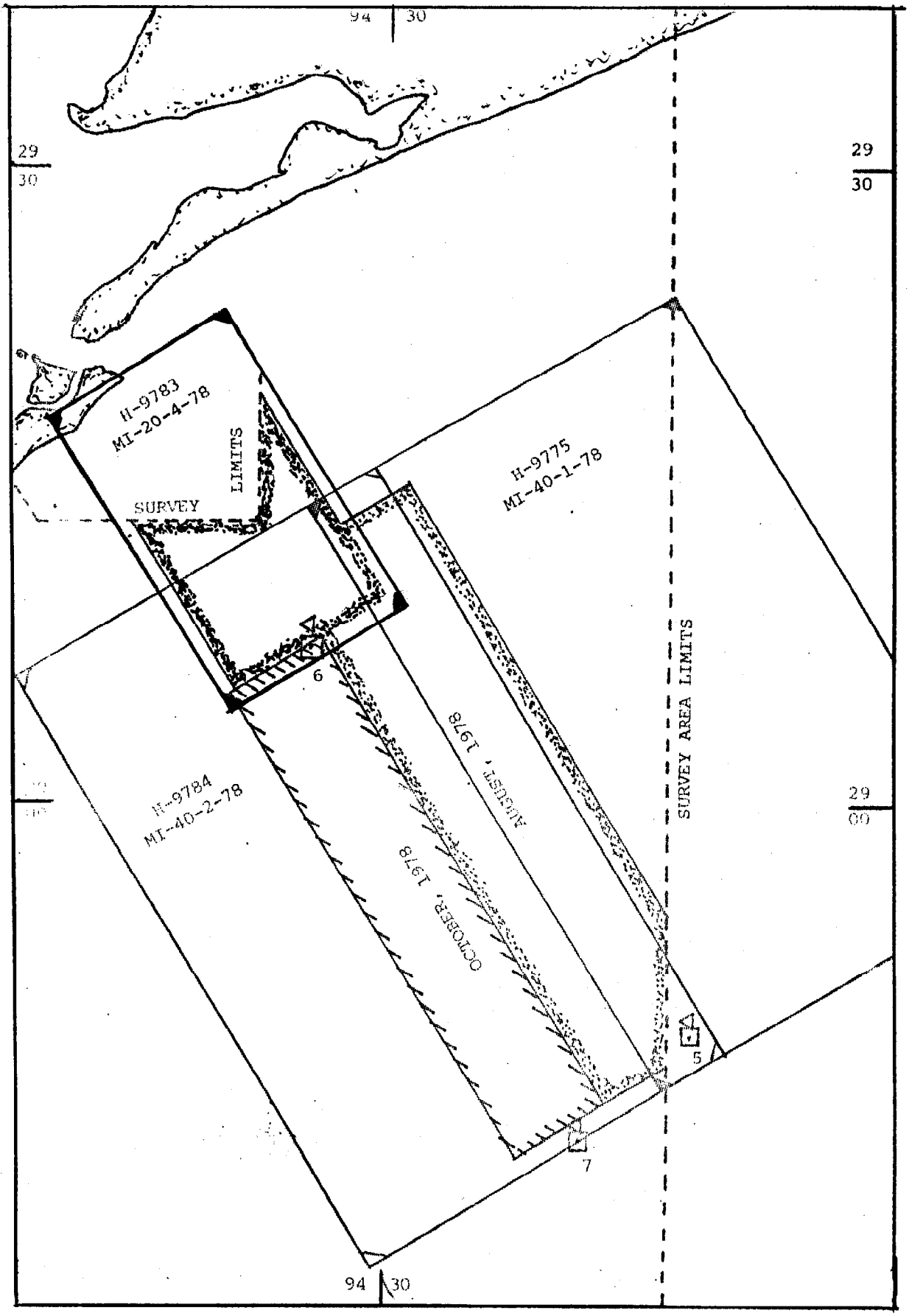
Verification by N/A

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

REMARKS: Lt. Cdr. Gerald B. Mills, Lt.(jg) John D. Wilder, Lt.(jg) Paul Daugherty, Lt.(jg) Timothy Rulon, Ens. William Pringle, Ens. Terri Bainbridge, Ens. Andrew Shepard, Ens. Paul S. Morton

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

☆ U.S. G.P.O. 1972-769-565/519 REG.#6



OPR-K104-MI-78 PROGRESS SKETCH SCALE OF CHART 11300

H-9783, MI-20-4-78

A. PROJECT

This survey was carried out in accordance with Project Instructions OPR-K104-MI-78 issued 9 December, 1977 and amended by changes 1 through 6 dated 24 February, 1978, 3 April 1978, 6 April 1978, 15 June 1978, 3 July and 20 July 1978 respectively.

B. AREA SURVEYED

This survey was conducted in the Gulf of Mexico between Bolivar Peninsula and Galveston Island, Texas. The limits of the survey area are roughly described by lines connecting the following points in a clockwise manner:

Latitude	Longitude
29°04.0' N	94°38.3' W
29°18.0' N	94°48.3' W
29°23.0' N	94°38.8' W
29°09.2' N	94°28.9' W

This survey was conducted between 9 August, 1978 (JD 221) to 18 August, 1978 (JD 230) and 3 October (JD 276) to 4 October, 1978 (JD 277).

C. SOUNDING VESSEL

Soundings for the survey were obtained by the NOAA Ship MT. MITCHELL S-222 (vessel number 2220).

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following equipment was used to obtain soundings for the Survey:

Equipment	VESNO 2220	Serial Number
Ross Model 5000 Fineline Depth Recorder		1050
Ross Model 4000 Transceiver		1050
Ross Digitizer		1050

Soundings for the MT. MITCHELL were taken with a skeg mounted transducer (antenna distance +32.0 m). All survey records were scanned by trained Survey Department personnel and checked by the officer in charge. Peaks and deeps considered significant that occurred between soundings were inserted and digitizing errors were corrected on the electronic corrector tape.

Phase calibration checks were made at frequent intervals. Any necessary adjustments were made and noted in the sounding volume and on the fathogram. Any departures of the trace from the calibration due to phase differences were corrected during the scanning process.

Velocity corrections were obtained from 1 Nansen cast at the following location and date:

Cast Number	Latitude	Longitude	Date
6	29°07'00.00"N	94°33'48.00"W	16 August 1978 (JD 228)

All velocity correctors were derived from the above cast. An explanation of how sound velocities were derived along with all tables and printouts of velocity tapes is included in Appendix D.

A draft of 14.0 feet was applied to all soundings collected by the MT. MITCHELL during the on-line process. To determine actual drafts for this survey, a straight line plot was constructed using the after draft from the beginning and ending dates of each trip. A draft correction was determined every 0.1 feet. The draft varied from 14.5 feet to 14.6 feet for this survey. Settlement and squat correctors for the ship were determined on 12 June 1978 (JD 163) at Galveston (Inner Bar Channel), Texas. A copy of the field data and settlement and squat correctors versus ship speed is included in the survey support data. The change in the ship's draft along with settlement and squat correctors for all survey vessels is incorporated into the TC/TI tape which is included in the survey data. A printout of this tape is included in Appendix D.

A vertical cast was conducted on 16 May 1978 (JD 136) at 29°31.3'N and 94°17.9'W to determine fathometer instrument error for the ship. The results are included in this report. The error was -0.08 feet and was considered to be zero due to the accuracy of the cast. It is generally agreed that the Ross fathometer has no instrument error and past experience indicates this to be true.

This survey was conducted using predicted tides based on daily predictions at Galveston, Texas, from the Tide Tables, 1978. Prezoned tide correctors were supplied by the Rockville Tides Branch in a letter dated 6 April 1978 (change #3). Tide correctors were applied to on-line data as follows: One hour and zero minutes was subtracted from the high water times, and 50 minutes was subtracted from low water times; the high and low water heights were multiplied by a factor of 1.50. A copy of the request for the actual tides in the survey area is included in Appendix B.

E. HYDROGRAPHIC SHEETS

This survey was plotted on 4 mylar complot roll plotter sheets by the MT. MITCHELL Hydroplot System with a skew of 122,21,60. The survey was plotted off line using an electronic corrector tape and a velocity corrector tape. Soundings on the field sheets are corrected for draft, predicted tides, initial and digitizing errors and sound velocity. They are not corrected for smooth tides, settlement and squat, and instrument error. The final smooth sheet will be plotted at the Atlantic Marine Center, Norfolk, Virginia.

All field records and the following tapes have been forwarded to the Atlantic Marine Center:

Master Range-Range Data Tapes
Electronic Corrector Tapes
Velocity Correction Tape
Parameter Tapes
ASC II Signal Tapes
Transducer Corrector/Table Inicating Tape

F. CONTROL STATIONS

Hydrotrac electronic control stations used for this survey were:

Signal Number and Signal Name		Latitude	Longitude
Station 200	H-1-TX-77	29°14'33.046"N	94°52'8.369"W
Station 300	H-27-TX-78	29°35'12.670"N	94°17'18.380"W

The above stations were located by personnel from the Operations Division, Atlantic Marine Center, with assistance from MT MITCHELL Officers. Stations were erected and maintained by ships's personnel.

G. HYDROGRAPHIC POSITION CONTROL

An Odum Offshore Hydrotrac System operating at a frequency of 1718.590 KHz in range-range mode was used to provide positioning control for ship hydrography (vessel number 2220) on this survey, from 9 August 1978 (JD 221) to 18 August 1978 (JD 230) and 3 October (JD 276) to 4 October (JD 277). The equipment serial numbers used are as follows:

G. (Continued)

Vessel or Shore Station		Serial Number
VESNO 2220	Master Drive Unit Model 702	121
	Linear Amplifier 74-87	538
	Receiver Model 700	327
	Coupler	135
	Sawtooth Recorder Model 8085	8502
	Interface	102
STATION 200	Slave Drive Unit Model 701	214
	Linear Amplifier	537
	Coupler	133
	Sola Power Supply	753
STATION 300	Slave Drive Unit Model 701	215
	Linear Amplifier	536
	Coupler	131
	Sola Power Supply	752

Hydrotrac calibration was accomplished using three point sextant fixes and comparing observed Hydrotrac range values with computed values obtained from the Hydroplot Calibration Program RK 561. A check fix was also used on each calibration. Only those fixes with an inverse distance of less than 5.0 meters were used on these calibrations.

Visual calibration was accomplished 2 times off High Island, Texas during the survey. The resultant correctors were used until a new calibration was obtained (partial correctors varied by less than 0.1 lanes for both P1 and P2).

In addition, the whole lane count was checked 3 times at offshore pipestand "C-18" using the circling technique described on page 4-28 of the Hydrographic Manual.

While using Hydrotrac positioning the lane count was constantly monitored by the Survey Department by comparing the navigation interface readout with a running count on the sawtooth recorder. No lane jumps occurred during this survey. An abstract of the calibration data is included with the records accompanying this report.

H. SHORELINES

There were no shorelines involved within the limits of this survey.

I. CROSSLINES

Crosslines were run at least 45 degrees to the main scheme sounding lines. Crossline mileage amounted to about 6.5 percent of the regular sounding lines. Crossline soundings generally agree within 1.0 foot of the regular lines. concur JPS

J. JUNCTIONS

This survey junctions with the following surveys:

Area of Junction	Field No.	Reg. No.	Scale	
East	MI-20-3-78	H-9774	1:20,000	1978 MT. MITCHELL
East	MI-40-1-78	H-9775	1:40,000	1978 MT. MITCHELL
South	MI-40-2-78	H-9784	1:40,000	1978 MT. MITCHELL
North	ECFP-20-2-62	H-8751	1:20,000	62-65 East Coast Field Party
North	ECFP-20-1-62	H-8752	1:20,000	63-65 East Coast Field Party

Good junctions were made with 20-3-78 and 40-2-78 with most depths agreeing within 1 to 2 feet.

K. COMAPARISON WITH PRIOR SURVEYS

Prior survey number H-6252 was conducted in 1937 at a scale of 1:40,000 within the area of this survey. Comparison between this prior survey and the present survey is fairly good with most selected soundings agreeing within 1-2 feet. Tidal differences are the most probable cause for these disagreements.

Presurvey review item 156 charted position approximate at 29°08'N 94°41'W; and item 157 charted position approximate at 29°08.8'N, 94°41'W were not found. All fathometer records near the positions were scanned carefully. No shoal soundings were discovered.

These two PSI items are not within the limits of this survey ✓

L. COMPARISON WITH THE CHART See Verifier's Report

This area is covered by the following NOAA charts:

Chart Number	Edition	Date	Scale
11323	40th	7 January 1978	1:80,000

Charted depths generally agree with this survey within 2-3 feet, with predicted tide differences again the most probable cause for disagreement.

The platform charted at 29°10.85'N, 94°31.2'W was verified by vessel number 2220 (detached position 91). The calculated position is 29°10'49.623"N, 94°31'16.925"W. It is an eight legged structure approximately 50 meters high at the top of the derrick tower. It is equipped with multiple lights and has signs which read: SHELL RIG II, and SH-HI-179A. It is recommended that the platform be retained on the chart. See Q.C. Critique ✓ Concur

A black, lighted buoy was positioned by vessel number 2220 (detached position 92) at 29°10'11.151"N 94°30'38.470"W. It is a standard radar reflecting buoy marked as "HI-193-EXXON WELL-1" and it is recommended that it be charted as a privately maintained buoy. ✓ Concur

The platform charted at 29°09.27'N, 94°40.55'W was verified by vessel number 2220 (detached position 1692). The calculated position is 29°09'16.789"N, 94°40'34.350"W. It is a multiple legged structure approximately 25 meters high with four storage tanks. It is equipped with multiple lights and has signs reading: "C&K PETROLEUM INC. PLATFORM A", and "BLOCK 189-L GALVESTON AREA." It is recommended that this platform also be retained on the chart, charted at its corrected position. See Q.C. Critique Concur

All other charted obstructions within the survey limits were not readily apparent. The fathometer records were carefully scanned with no evidence of shoal soundings at or near the positions of the 7 charted obstructions. See Q.C. Critique

See section # G&7 in Hit Report

M. ADEQUACY OF THE SURVEY

This survey is considered complete and adequate to supercede prior surveys for charting. ✓

N. AIDS TO NAVIGATION

There were no fixed or floating aids to navigation with in the limits of this survey. The two platforms are lighted.

O. STATISTICS

	Ship	Total
Linear nautical miles of hydrography	631.5	631.5
Linear nautical miles of crosslines	41.	41
Linear nautical miles of development	0	0
Total linear miles of hydrography	672.5	672.5
Total miscellaneous miles	324	342
Total miles run	996.5	996.5
Square miles of hydrography	67.65	67.65
Total number of positions	1814	1814
Nansen casts	1	1
XBT's	0	0
Bottom samples	55	55

P. MISCELLANEOUS

Problems with the on line punch contributed to the large volume of Edited Master Tapes.

Disagreement in the smooth plotted bottom sample soundings with the main scheme soundings can be attributed to the fact that the bottom sample soundings were taken without an on-line predicted tide tape. The smooth plotted bottom sample soundings were not corrected for tides. Subsequent plotting should be done with an appropriate tides tape.

Q. RECOMMENDATIONS

NONE

R. AUTOMATED DATA PROCESSING

The following Hydroplot Programs were used to acquire and process the survey data:

Program Name	Version
RK 111 Range-range Real Time Plot	1/30/76
RK 201 Grid, Signal, and Lattice Plot	4/18/75
RK 211 Range-Range Non-Real Time Plot	1/15/76
RK 300 Utility Computations	2/10/76
RK 330 Data Reformat and Check	5/04/76

R. (continued-Program Name)

PM 360 Electronic Corrector Tape Abstract	2/02/76
RK 530 Velocity Corrections Computations	5/10/76
RK 561 H/R Geodetic Calibration	5/19/75
RK 602 Extended Line Oriented Editor	5/20/75

S. REFERENCE TO REPORTS

Horizontal Control Report, Operation K-104-MI-78.

Respectfully submitted,

Paul S. Morton

Paul S. Morton
Ensign, NOAA

APPROVAL SHEET

MI-20-4-78

H-9783

The field work on this Hydrographic Survey was under my daily supervision. The boat sheet and records have been reviewed and approved by me.

James S. Midgley

Captain, NOAA

COMMANDING OFFICER

VELOCITY TAPE PRINTOUT

#6

MI-20-4-78

CAST # 6

TABLE # 1

VESNO 2220

```
000158 0 0000 0001 000 222000 020478
000192 0 0002
000226 0 0004
000260 0 0006
000294 0 0008
000328 0 0010
000362 0 0012
000394 0 0014
000428 0 0016
000462 0 0018
000496 0 0020
000530 0 0022
000564 0 0024
999999 0 0000
```

NOAA FORM 76-21 (10-72) U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY

TABLE I

VELOCITY CORRECTIONS

Ship NOAA SHIP MT MITCHELL S-222

J.S. MIDGLEY, CAPT, NOAA Comdg.

These corrections are to be used

between 9 AUGUST 1978 and 18 AUGUST 1978

in the locality NORTH WESTERN GULF OF MEXICO GALVESTON TEXAS

for hydrographic surveys Nos. MT-20-4-78

CORRECTIONS IN FEET, ~~FATHOMS~~

0.8 1.6 2.4 3.2 4.0 4.8

DEPTHS IN ~~FATHOMS~~ FEET

(For deep water add a 0 to these figures)

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

~~10~~ ~~20~~ ~~30~~ ~~40~~ ~~50~~ ~~60~~ ~~70~~ ~~80~~ ~~90~~ ~~100~~ ~~110~~ ~~120~~ ~~130~~ ~~140~~ ~~150~~ ~~160~~ ~~170~~ ~~180~~ ~~190~~ ~~200~~

46 1240

20 X 20 TO THE INCH • X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

#6

VESSEL =2220

DATE =JD 228

TIME =1856

LATITUDE = 029/07/00.00

LONGITUDE = 094/33/48.00

TYPE OF OBSERVATION =NANSEN

CAST-DEPTH (SURFACE) (M)	TEMP (DEG C)	SALINITY (0/00)	SND VEL (M/SEC)
0000.0	30.34	33.71	1545.16
0012.0	29.91	33.74	1544.51

VELOCITY CORRECTION TABLE OPTIONS:
0) NO TABLE
1) IN FEET
2) IN FATHOMS
3) IN METERS
1
DRAFT = 14.0

ACTUAL DEPTH (SURFACE) MINUS VELOCITY CORRECTION (FT)	VELOCITY CORRECTION (FT)
0019.37	0000.32
0056.54	0002.51

MID-DEPTH (M)	SND VEL (M/SEC)	LAYER THICKNESS (M)
0000.00	1545.16	0006.00
0012.00	1544.51	0012.00

SIGNAL NAMES LIST
MI-20-4-78
VESNO 2220

EAST & WEST SHEETS

100	CAPTAIN	FIELD PARTY G18
200	H-1-TX-77	AMC OPS
225	SOUTH JETTY LIGHT	290943 #1101
233	PELICAN ISLAND TALL RADIO MAST	MT MITCHELL
235	CG LORAN "A" TOWER	AMC OPS
240	BOLIVAR LIGHTHOUSE USE	290943 #1050
280	HIGH ISLAND MUNICIPAL WATER TANK	AMC OPS
282	HIGH ISLAND MICROWAVE TOWER	AMC OPS
288	H-21-TX-78	AMC OPS
290	H-22-TX-78	AMC OPS
295	H-23-TX-78	AMC OPS
300	H-27-TX-78	AMC OPS

FIELD TIDE NOTE

Field tide reductions of soundings was based on predicted tides from Galveston (Pier 21), Texas and were interpolated by a PDP8/E computer utilizing program AM500. All times of both predicted and recorded tides are GMT. Tide gages were installed at four locations in the project area. The location of these gages and period of operation is as follows:

SITE	LOCATION	PERIOD
Galveston (Pier 21), TX (877-1450)	29°18.6' N 94°47.2' W	July 1977 to present
Galveston (Pleasure Pier), TX (877-1510)	29°17.2' N 94°47.4' W	July 1977 to present
Freeport, Texas (877-2440)	28°56.8' N 95°18.5' W	September 1977 to present
Sabine Pass, Texas (877-0590)	29°42.3' N 93°51.2' W	January 1970 to present

GALVESTON (PIER 21), Texas

An ADR gage was installed and began operation in JULY 1977. East coast Tides Party 753 serviced the gage and ran levels on March 8, 1978.

GALVESTON (PLEASURE PIER), Texas

An ADR gage was installed and began operation in July 1977. East coast Tides Party 753 serviced the gage and ran levels on March 8, 1978. A bubbler was installed in addition to the ADR by the East Coast Tides Party and ship's personnel on July 6, 1978 (JD 187).

FREEPORT, Texas

An ADR gage was installed and began operation in September 1977. East coast Tides Party 753 serviced the gage and ran levels on March 14, 1978.

SABINE PASS, Texas

A bubbler gage was installed and began operation in January 1970. East coast Tides Party 753 serviced the gage and ran levels on February 16, 1978.

MT. MITCHELL personnel visited all the gages and advised observers to contact us as soon as possible after a gage failure. Observers were contacted during inport periods and all gages reportedly worked very well throughout the survey.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship MT. MITCHELL S-222
439 West York Street
Norfolk, Virginia 23510

Date: 6 November 1978

To: Chief, Tides and Water Levels Branch C331

From: Commanding Officer, NOAA Ship MT. MITCHELL S-222

Subject: Tidal Data for Survey H-9783

It is requested that verified hourly heights of tides (using Greenwich Mean Time) from operating tide gages listed below be forwarded to the Processing Division (CAM3), Atlantic Marine Center, Norfolk, Virginia 23510.

Galveston, (Pier 21) Texas	877-1450	29°18.6' N	94°47.2' W
Galveston, (Pleasure Pier) Texas	877-1510	29°17.2' N	94°47.4' W
Sabine Pass, Texas	877-0590	29°42.3' N	93°51.2' W

It is requested that the times and height corrections for each gage be zoned as per Project Instructions for the area described within the following corner points:

1.	2.	3.	4.
29°04.0' N 94°38.3' W	28°18.0' N 94°48.3' W	29°23.0' N 94°38.8' W	29°09.2' N 94°28.9' W

This information is requested for the following periods:

0000 August 9, 1978 (JD 221) thru 2359 August 18, 1978 (JD 230) and
0000 October 3, 1978 (JD 276) thru 2359 October 4, 1978 (JD 277)

February 5, 1979

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 877-1510 Galveston Pleasure Pier, Tx.

Period: August 9 - October 4, 1978

HYDROGRAPHIC SHEET: H-9783

OPR: K104

Locality: Texas coast, vicinity of Galveston

Plane of reference (~~mean lower low water~~ Gulf Coast Low Water Datum): 2.86

Height of Mean High Water above Plane of Reference is 2.1 ft.

Remarks: Zone direct.

James E Hubbard
Chief, Datums and Information Branch

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-9783

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
GALVESTON (TITLE)										1
GULF OF MEXICO										2
										3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
				Approved:						19
										20
										21
				Chief Geographer - C3x5						22
				31 MAY 1979						23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

APPROVAL SHEET
FOR
SURVEY H- 9783

A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has not~~ been made. A new final sounding printout has/~~has not~~ been made.

B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: 4/9/79

Signed: [signature]

Title: Chief, Verification Branch

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA | HYDROGRAPHIC SURVEY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-9783

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	X 6
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	2

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES Accordian	X		1 with fathos.			
CAHIERS						2-bundles of strip records
VOLUMES	1					
BOXES						

T-SHEET PRINTS (List) none

SPECIAL REPORTS (List) Horizontal Control Report (K-104-MI-78

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS: PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			2056
POSITIONS CHECKED		200	
POSITIONS REVISED		1	
SOUNDINGS REVISED		5	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	
	TIME — HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	2		
VERIFICATION OF CONTROL		1	
VERIFICATION OF POSITIONS		12	
VERIFICATION OF SOUNDINGS		10	
COMPILATION OF SMOOTH SHEET		12	
APPLICATION OF TOPOGRAPHY		0	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		2	
COMPARISON WITH PRIOR SURVEYS & CHARTS		20	
VERIFIER'S REPORT		5	
OTHER		16	
TOTALS	2	78	80

Pre-Verification by X R. Keene, K. Ainsley, R. Roberson		Beginning Date 11/22/78	Ending Date 03/7/79
Verification by R.Hill		Beginning Date 03/20/79	Ending Date 03/30/79
Verification Check by R. Roberson		Time (Hours) 6	Date 04/02/79
Marine Center Inspection by Hydrographic Inspection Team		Time (Hours) 8	Date 04/04/79
Quality Control Inspection by F.P. SAULSBURY		Time (Hours) 47	Date 5-1-79
Requirements Evaluation by [signature]		Time (Hours) 2	Date 6-15-79

E. Myers Photo. 6/14/79

Reg. No. H-9783

The Computer and Excess Sounding ards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE_____ TIME REQ'D_____ INITIALS_____

REMARKS:

Reg. No. 9783

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE 9-23-82 TIME REQ'D._____ INITIALS JHC

REMARKS:

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9783 FIELD NO. MI-20-4-78

Texas, North Western Gulf of Mexico, Offshore Galveston

SURVEYED: August 9 through October 4, 1978

SCALE: 1:20,000 PROJECT NO.: OPR-K104

SOUNDINGS: Ross Digital Echo Sounder CONTROL: Hydrotrac (Range-Range)

Chief of Party ..... J.S. Midgley
Surveyed by ..... G.B. Mills
..... J.D. Wilder
..... P. Daugherty
..... T. Rulon
..... W. Pringle
..... T. Bainbridge
..... A. Shepard
..... P.S. Morton
Automated Plot by ..... XYNETICS 1201 Plotter (AMC)
Verified and Inked by ..... R.R. Hill
March 21, 1979

1. Introduction

a. The velocity table provided with this survey was not deep enough to cover the entire sounding range. The last depth entry on this table was changed from 56.4 feet to 100 feet in order to accommodate all soundings.

b. A new projection parameter was determined for the smooth sheet during verification. Also, the red changes in the Descriptive Report were made by the verifier.

c. An antenna distance correction (ANDIST) of 32.0 meters has been applied to all positions.

2. Control and Shoreline

a. The control was adequately described in Sections F. and G. of the Descriptive Report.

b. There is no shoreline within the limits of this survey.

3. Hydrography

a. Depths at crossings are in good agreement. occasional 1 ft differences

b. Due to the depth range of this survey, the standard and supplemental depth curves were not necessary. sdgs are between depth curves - deeper than 36 ft & shoaler than 61 ft.

c. The development of the bottom configuration and the investigation of least depths are adequate. ✓

4. Condition of Survey

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual. ✓

5. Junctions

An adequate junction has been effected with H-9784 (1978) on the south. On the east, junctions with H-9774 (1978) and H-9775 (1978) were not possible, due to the preliminary processing stage that these surveys are in at this time. Junctions with H-9774 and H-9775 will be considered at the time of verification of these surveys. There are no contemporary surveys on the west. ✓

No junctional surveys are registered 1/30/79

6. Comparison with Prior Surveys

a. H-6252 (1937) 1:40,000

Adequate junction made with H-9774 on the east. 7/24/80 CDH

A comparison with prior survey depths reveals the prior survey to be in agreement or 1 to 2 feet shoaler. The differences are attributable to sounding instruments of the present versus the prior surveys, and possible natural changes that may have occured in the area. ✓

The present survey is adequate to supersede the prior survey within the common area. ✓

b. H-9298 WD 1:40,000 1971-72

A comparison reveals no conflicts between the effective depths of the above wire-drag survey and the present survey. Several hangs and least depths found by this wire-drag survey were brought forward to supplement the present survey. ✓

7. Comparison With Chart #11323 (40th Edition, January 7, 1978)

a. Hydrography

The charted hydrography originates with the previously discussed prior survey, which requires no further consideration. The present survey is considered adequate to supersede these charted depths within the common area. ✓

Attention is directed to the following:

(1) The following charted obstructions originate with preliminary information from H-9298 WD (1971-72) which was revised during subsequent processing by Quality Control.

See P.C. Critique

	Charted Cleared Depth (Ft.)	Latitude	Longitude	Cleared Depth (Ft.)
a.	46	29°11.32'	94°40.08'	+48
b.	48	29°09.11'	94°38.07'	49
c.	49	29°09.25'	94°39.37' (pos. approx)	50
d.	50	29°08.95'	94°38.99'	49

Item "C" above was recorded by divers without a position fix and described as a pipe 4 feet off the bottom. This item should be charted as PA with a cleared depth of 50 feet. It is recommended that all other listed items be revised on the chart to agree with the actual cleared depths listed above.

(2) The obstruction charted in latitude 29°10.9', longitude 94°37.3', originates with wire-drag survey H-9298 WD (1971-72) No indication of this obstruction, a 48 foot hang, was found by the present survey. It is recommended that the cleared depth of 46 feet be charted.

(3) The obstruction charted in latitude 29°09.4', longitude 94°35.2', originates with wire-drag survey H-9298 WD (1971-72). No indication of this obstruction, a 49 foot hang, was found by the present survey. It is recommended that the chart be revised to show the cleared depth of 48 feet.

(4) The obstruction, cleared by 48 feet, charted in latitude 29°07.77', longitude 94°36.41', originates with wire-drag survey H-9298 (1971-72) No indication of this obstruction was found by the present survey and it is recommended that it be retained as charted.

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

b. Aids to Navigation

There are no official (LIGHT LIST) fixed or floating aids to navigation located within the limits of the present survey, however a privately maintained lighted black buoy was located at latitude 29°10'1X", longitude 94°30'38". It is recommended that this aid be charted. The two platforms on the survey are lighted.

8. Compliance With Instructions

This survey adequately complies with the Project Instruction.

9. Additional Field Work

This survey is considered to be excellent basic survey and no additional work is recommended.

Position of ~~charted~~ obstruction (sobm pipe, 4 ft. off bottom) should be determined on a future survey.

Inspection Report
H-9783

Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the survey have been incorporated within the Verifier's Report.

Examined and Approved:
Hydrographic Inspection Team
Date: April 4, 1979

Robert A. Trauschke, CDR, NOAA
Chief, Processing Division

Absent
Carl W. Fisher, CDR, NOAA
Chief, Operations Division

R. D. Sanocki
Technical Assistant
Processing Division

Maureen R. Kenny
Maureen Kenny, LT, NOAA
Chief, Electronic Data
Processing Branch

Robert G. Roberson
Team Leader
Verification Branch

Approved/Forwarded

Robert C. Munson
RADM, NOAA
Director, Atlantic Marine Center

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

OA/C352:FPS

May 1, 1979

TO: for R.H. Carstens
A. J. Patrick
Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control Branch

FROM: F. P. Saulsbury F. P. Saulsbury
Quality Evaluator

SUBJECT: Quality Control Report for H-9783 (1978), Texas, Northwestern Gulf of Mexico, Offshore Galveston

A quality control inspection of H-9783 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data.

A pipe charted on a 1963 edition of chart 1282 from CL-334 (1961) in latitude 29°09.08', longitude 94°39.00' as bare at M.H.W. is considered the original feature now charted as an obstruction. The pipe was not found by a sweep of the area to 52 feet on F.E. No. 1, 1965 W.D. It was therefore deleted on a subsequent edition of the chart. Later information provided by a diver's investigation on H-9298 W.D. (1971-72) determined the existence of a pipe protruding 4 feet off the bottom in general depths of 57 feet in this area; however, a detached fix was not obtained. Preliminary data for H-9298 W.D. (CL-1227, 1972) reported the feature to be located at latitude 29°09.27', longitude 94°39.35' with a least depth of 50 feet at M.H.W. (probably based on predicted tides). The information was charted accordingly; however, the feature was not plotted on the smooth sheet due to the lack of an accurate position. Though there is no positive source for the charted location of the obstruction (submerged pipe), this feature is considered to be in the vicinity of its charted location.

The probable least and cleared depths over this pipe are considered to be 53 and 52 feet, respectively.

The obstruction charted in latitude 29°08.92', longitude 94°39.98' from preliminary data of H-9298 W.D. (CL-1227, 1972) is superseded by smooth sheet information. It should be charted as shown on the wire-drag survey.

In general, the survey was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report, the HIT Report, and as follows:

1. Detached positions recorded in the sounding volume were not accompanied by geographic positions.

2. A discussion of two lighted platforms located in latitude 29°09.30', longitude 94°40.56' and latitude 29°10.82', longitude 94°31.27' on the present survey is as follows:

Each of the two platforms were located by single fixes but additional information relative to the orientation of the platforms was not furnished. The geographic orientation of these platforms, 20 meters by 40 meters and 40 meters by 70 meters in size, could have been shown at scale on the smooth sheet if the hydrographer had furnished necessary positional information.

The charted positions of these platforms, from H-9298 W.D. (1971-72), are in conflict with their positions shown on the present survey. It may be that the hydrographers located the easternmost sides of the platforms on the wire-drag survey and the westernmost sides on the present survey.

The names of these platforms, plus additional descriptive information, omitted during verification, were annotated on the smooth sheet during quality control inspection.

3. The color of the lighted buoy plotted in latitude 29°10.16', longitude 94°30.64' was omitted during verification. This was added during quality control inspection.

4. Geographic positions of charted obstructions listed in the Verifier's Report in items 7.a.1.a, b, and d are erroneous and do not coincide with the geographic positions of these obstructions scaled from the chart during quality control inspection. The geographic positions were apparently copied from a tabulation in the Descriptive Report of H-9298 W.D. (1971-72) rather than scaled from the chart mark-up used during verification. Geographic positions were corrected during quality control inspection.

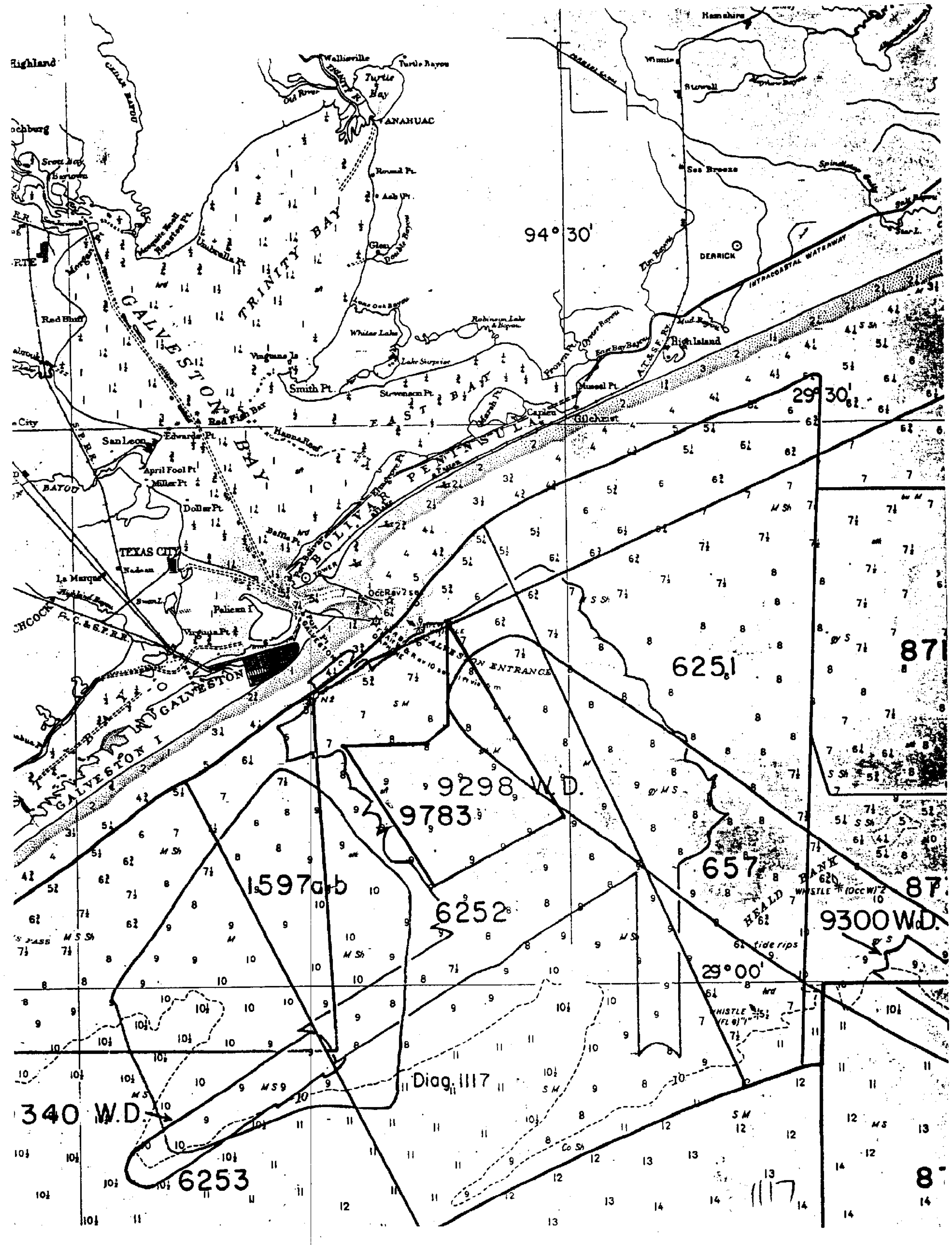
5. All hang-depths, brought forward to the present survey during verification, were annotated on the smooth sheet as obstructions during quality control inspection.

The positions of some hang-depths, brought forward to the present survey during verification, were in error and were correctly positioned during quality control inspection.

6. The following obstructions, apparently charted from preliminary information on H-9298 W.D. (1971-72), are in conflict with information on the smooth sheet of H-9298 W.D. and should be charted as shown on the wire-drag survey.

	Latitude	Longitude
charted obstruction in:	29°11.32'	94°40.08'
	29°10.90'	94°37.30'
	29°09.11'	94°37.98'
	29°09.40'	94°35.20'
	29°07.77'	94°36.41'

cc:
OA/C35
OA/C351


Highland
Wallisville
Turtle Bayou
Turtle Bay
ANAHUAC
Round Pt.
TRINITY BAY
GALVESTON BAY
EAST BAY
BOLIVAR PENINSULA
94° 30'
DERRICK
INTRACOASTAL WATERWAY
Sea Breeze
High Island
Smith Pt.
Stevenson Pt.
Gilchrist
Red Bluff
San Leon
Edwards Pt.
April Fool Pt.
Miller Pt.
Dollar Pt.
TEXAS CITY
La Marque
Pelican I.
GALVESTON
GALVESTON I.
GALVESTON ENTRANCE
29° 30'
29° 00'
6251
9298 W.D.
9783
1597a-b
6252
657
HEALD BANK
9300 W.D.
Diag. 1117
340 W.D.
6253
1117

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

CHECKED FOR NM 7-26-79 RAD

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9783

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
11324 (1:25,000)	9/14/79	M.J. Freese	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 17 Consider hydro fully appld throughout the common area
11323	11/14/79	A.H. WILLS	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 60
11340	12/2/79	J. OWYANG	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 58
11300	1-8-80	Richard Hoyne	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 37 thru chart 11340
11332	3-25-80	O. Williams	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 23
11324	4-8-80	D. Wyllie	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 18
411	6-5-80	D. Wyllie	Full Part Before After Verification Review Inspection Signed Via Drawing No. 55 N.C. 3 EA Area
11326	2-26-81	J. OWYANG	Full Part Before After Verification Review Inspection Signed Via Drawing No. #18 NO CORRECTION AT THIS SCALE.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63