

9838

Diag. Cht. No. 1282-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic.....  
Field No. MI-20-1-79.....  
Office No. H-9838.....

LOCALITY

State Texas.....  
General Locality Gulf of Mexico.....  
Locality Galveston to Bermuda Beach.....

1979

CHIEF OF PARTY  
J.S. Midgley

LIBRARY & ARCHIVES

DATE May 5, 1980.....

★U.S. GOV. PRINTING OFFICE: 1980-668-537

9838

1282  
0113404  
0113404

HYDROGRAPHIC TITLE SHEET

H-9838

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-20-1-79

State TEXAS

General locality WESTERN GULF OF MEXICO

Locality GALVESTON TO BERMUDA BEACH *And Offshore*

Scale 1:20,000 Date of survey JD 183 215  
JULY 2, 1979 - AUG. 3, 1979

Instructions dated FEB. 22, 1979 Project No. OPR-K104-MI-79

Vessel LAUNCHES 1004 (2223) and 1002 (2225)  
*MT. MITCHELL*

Chief of party CAPTAIN JAMES S. MIDGLEY, NOAA

Surveyed by See Remarks

Soundings taken by echo sounder, ~~hand lead, pole~~ ROSS MODEL 5000

Graphic record scaled by P.W.S., D.M.F., E.M., F.S., R.W.

Graphic record checked by P.W.S., D.M.F., E.M., F.S., R.W.

Protracted by N/A Automated plot by HYDROPLOT SYSTEM (Field sheets)  
*Xynerics 1201(AMC) Smooth sheet*

Soundings penciled by \_\_\_\_\_

Soundings in ~~Xxxxxx~~ feet at ~~MEW MLEW~~ GCLWD

REMARKS: Lt. CDR. RONALD JONES, Lt. DOUG MASON, Lt. (jg) JOHN WILDER

Lt. (jg) BILL PRINGLE, Ens. ANDREW SHEPARD, Ens. STEVE MORTON

Ens. JIM LONG, Ens. RONALD K. DUTTON Jr., CO-OP RICHARD PEOPLES

CO-OP ROBIN SAINSBURY

*Applied to stds 9/16/80  
[Signature]*

DESCRIPTIVE REPORT

TO

HYDROGRAPHIC SURVEY H-9838

MI-20-1-79

1:20,000 SCALE

GALVESTON, TEXAS

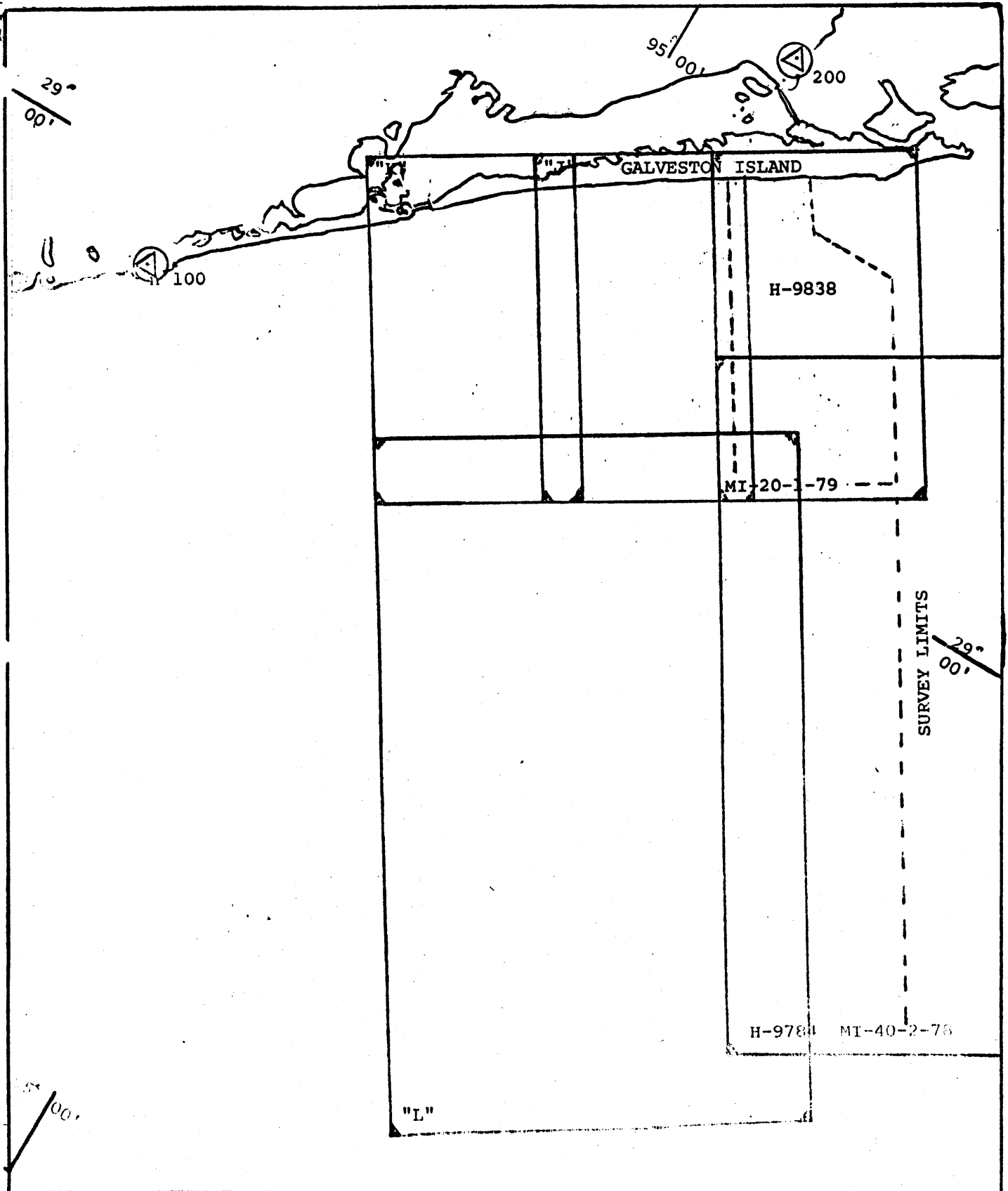
2 JULY 1979 TO 24 AUGUST 1979

NOAA SHIP MT. MITCHELL S-222

JAMES S. MIDGLEY

CAPTAIN, NOAA

COMMANDING OFFICER



104-R104-MI-79

PROGRESS SKETCH  
 HYDROGRAPHIC OPERATIONS  
 NOAA FIELD OFF. BUSHFIELD, TEXAS  
 JAMES S. MIDGLEY, CAPT., NOAA  
 COMMANDING

SCALE OF CHART 11300

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A. PROJECT

This survey was carried out in accordance with Project Instructions OPR-K104-MI-79 issued February 22, 1979 and ammended by changes 1 through 3 dated March 2, 1979, March 29, 1979 and June 18, 1979.

B. AREA SURVEYED

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

29° 05.0' N	94° 36.5' W ✓
29° 18.9' N	94° 46.5' W ✓
29° 13.8' N	94° 55.8' W ✓
29° 00.0' N	94° 46.0' W

C. SOUNDING VESSELS

Soundings for the survey were obtained by the following launches:

Launch 1002	(VESNO 2225)
Launch 1004	(VESNO 2223)

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following equipment was aboard the respective vessels during this survey:

<u>Equipment, VESNO 2225</u>	<u>Serial Number</u>
Ross Model 5000 Fineline Depth Recorder	3780
Ross Model 4000 Transceiver	1050
Ross Digitizer	1039-2

<u>Equipment, VESNO 2223</u>	<u>Serial Number</u>
Ross Model 5000 Fineline Depth Recorder	1089
Ross Model 4000 Transceiver	1039
Ross Digitizer	1050

All survey records were scanned by trained Survey Department personnel and checked by 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

D. (Continued)

adjustments were made and noted in the sounding volume and on the fathograms. Any departures of the trace from the calibration due to phase differences were corrected during the scanning process.

Velocity corrections were obtained from two Nansen casts at the following locations:

<u>Cast Number</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Date</u>
3	29° 05' 48"N	94° 41' 54"W	9 July 1979
4	29° 14' 30"N	94° 46' 42"W	12 July 1979

All velocity correctors were derived from the number 3 cast. Number 4 cast was identical over its shallower range. Bar checks were taken as often as possible and in general show close agreement with Nansen cast velocities. The tables and printouts of velocity tapes explaining how sound velocities were derived are included in appendix D.

A draft of 1.6 feet was applied to all soundings taken by the launches during the on-line process and the smooth sheets. Changes in draft for the launches were insignificant. Settlement and squat correctors for the vessels 2225 and 2223 were determined on June 21, 1979 at the Galveston Corps of Engineers Dredge Dock. A copy of the field data and the settlement and squat correctors versus launch RPM's is included in the survey support data. These correctors are incorporated in the TC/TI tapes with printouts of these tapes included in appendix D.

This survey was conducted using predicted tides based on daily predictions of the reference station Galveston, Texas (#3277) and applied to off-line data only. The on-line survey was run without tide correctors. It should be noted that predicted tides did not correspond well with real tides as junctions varied by as much as 2 feet from day to day. The request for actual tides in the survey area is included in appendix B.

*The application of smooth tides during office processing at AMC resolved discrepancies caused by predicted tides*

E. HYDROGRAPHIC SHEETS

This survey was plotted on 5 paper field 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. Sounding on the field sheets are corrected for draft, predicted tides, initial and digitizing errors and sound velocity. Sheets are not corrected for smooth tides or settlement and squat. The final smooth sheet will be plotted at the Atlantic Marine Center, Norfolk Va.

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

Master Hyperbolic Data Tapes

E. (Continued)

Electronic Corrector Tapes  
Velocity Correction Tapes  
Parameter Tapes  
ASCII Signal Tapes  
TC/TT Tapes

F. CONTROL STATIONS

For purposes of this report, a platform is a large, multilegged structure rising from the ocean bottom that is usually inhabited and/or contains production equipment. A Jack-Up platform is used for exploratory drilling. It is a highly mobile structure as it can be floated into position and elevated out of the water on its legs. A wellhead is a small structure that terminates a well. It usually consists of only one or two vertical pipes with a helicopter pad or a walkway on top of it.

Hydrotrac electronic control stations used for this survey were:

<u>Signal Number and Name</u>	<u>Latitude</u>	<u>Longitude</u>
100; Captain (Slave 1)	28° 56' 05.032"N	95° 17' 58.364"W
200; H-66-TX-79 (Master)	29° 19' 48.169"N	94° 54' 07.649"W
300; H-27-TX-78 (Slave 2)	29° 35' 12.670"N	94° 17' 18.380"W

All the above stations were located by personnel from the Operations Division, Atlantic Marine Center, with assistance from Mt. Mitchell personnel. Electronic Control Stations were erected and maintained by ship's personnel.

Calibration stations used for this survey were:

<u>Number</u>	<u>Signal Name</u>	<u>Latitude</u>	<u>Longitude</u>
236	SW Wellhead	29° 15' 08.316"N	94° 48' 10.028"W
237	CTR Wellhead	29° 15' 29.591"N	94° 47' 34.245"W
238	NE Wellhead	29° 15' 51.418"N	94° 46' 57.729"W

These wellheads were located using the T-2 intersection method by Mt. Mitchell officers.

Hydrotrac lane values were checked at one of the above locations by circling the wellhead both in the morning and afternoon. Whole lane values were set into the receiver and partial lane correctors were calculated by comparing the average observed lane count to the actual lane count of the wellhead. For plotting purposes, the final partial correctors were derived by averaging these morning and afternoon partials.

While using Hydrotrac, the whole-lane counting was constantly monitored



F. (Continued)

by comparing the navigation interface readout with a running count on the sawtooth recorder and annotating the sawtooth recorder. No lane jumps occurred during the survey. An abstract of the calibration data is included with the records accompanying this report.

After the hydrographic field work was completed, a third (check) angle was observed to each of the three wellheads. The positions were adjusted slightly as listed below. All smooth plotting and calibrating were done with the unadjusted positions above. This adjustment resulted in a 0.01 lane (or less) shift and is considered negligible. *Concur*

<u>Number</u>	<u>Signal Name</u>	<u>Latitude</u>	<u>Longitude</u>
236	SW Wellhead	29° 15' 08.303"N	94° 48' 10.032"W
237	CTR Wellhead	29° 15' 29.585"N	94° 47' 34.248"W
238	NE Wellhead	29° 15' 51.409"N	94° 46' 57.731"W

*Stations 236 & 237 plotted on smooth sheet.*

*Signals described as oil well structures.*

G. HYDROGRAPHIC POSITION CONTROL

An Odum Offshore Hydrotrac system operating at a frequency of 1718.590KHz in hyperbolic mode was used to provide positioning control for launch hydrography on this survey, from July 2, 1979 to August 6, 1979. The equipment serial numbers used in the launches are as follows:

<u>Vessel</u>	<u>Equipment</u>	<u>Serial Number</u>
2225	Receiver Model 700	326
	Sawtooth Recorder	8501
	Interface Model 900	101
	Sola Power Supply	103
2223	Receiver Model 700	327
	Sawtooth Recorder	9299
	Interface Model 900	103
	Sola Power Supply	107

The equipment serial numbers used at the shore stations are as follows:

<u>Station</u>	<u>Equipment</u>	<u>Serial Number</u>
100	Slave drive Unit Model 701	214
	Linear Transmitter	537
	Coupler	133
	Sola Power Supply	753
200	Master Drive Unit	121
	Master Linear Transmitter	538
	Master Power Supply	104
	Coupler	722

G. (Continued)

<u>Station</u>	<u>Equipment</u>	<u>Serial Number</u>
300	Slave Drive Unit Model 701	226
	Linear Transmitter	539
	Coupler	131
	Power Supply	752

Due to flooding caused by tropical storm Claudette July 23 to July 27, the trailers of each shore station which contained the Hydrotrac equipment were hauled to a safe area. On return to the station sites on July 30, the electronic equipment for slave one and slave two were reversed. Hence the equipment serial numbers used after 30 July are:

<u>Station</u>	<u>Equipment</u>	<u>Serial Number</u>
100	Slave Drive Unit Model 701	226
	Linear Transmitter	539
	Coupler	131
	Sola Power Supply	752
200	Master Drive Unit	121
	Master Linear Transmitter	538
	Master Power Supply	104
	Coupler	722
300	Slave Drive Unit Model 701	214
	Linear Transmitter	537
	Coupler	133
	Power Supply	753

The partial lane correctors shifted after the storm. A major shift of 0.4 to 0.6 lane in the average partial was caused by the reversing of the slave stations. In addition, a transient period of six days followed the passage of the storm. This is assumed to be caused by velocity of propagation shift due to the saturation of the land mass and the unstable atmospheric conditions.

H. SHORELINE

Sounding lines were run parallel to the shore at the inshore limit of safe navigation of the sounding vessels. Several more lines were run farther offshore to allow a safe turning margin for the launches running main scheme lines toward the shore.

Shoreline details were transferred to the field sheet in blue from TP 00227 and TP 00228. Field edit was not done by ship's personnel, therefore shoreline was not inked in black.

*See Verifier's Report*

I. CROSSLINES

Crosslines were run at approximately 60° to the main scheme sounding lines. Crossline mileage amounted to about 11% of the main scheme lines. Crossline soundings generally agree to within one foot of the regular lines, with some discrepancies of two feet which are believed to be the result of using predicted tides.

J. JUNCTIONS

This survey junctions with the following surveys:

Northeast:	ECEP-20-2-62	H-8752	1:20,000	1962
East:	MI-20-4-78	H-9783	1:20,000	1978, Mt. Mitchell
South:	MI-40-2-78	H-9784	1:40,000	1978, Mt. Mitchell

Soundings from this survey junctioned well with soundings from MI-20-4-78 (H-9783), MI-40-2-78 (H-9784) and ECEP-20-2-62 (H-8752). Depths agreed to within 1-2 feet.

K. COMPARISONS WITH PRIOR SURVEYS

The following prior surveys were conducted within the area of this survey:

H-6252	1:40,000	1937
H-5522	1:20,000	1933-34

Comparison with these surveys was good, with 50% of the soundings agreeing to within 1-2 feet and the remaining agreeing to within 4 feet. The differences greater than 2 feet were all found inside the 30 foot curve, indicating that along shore erosion processes contributed to these differences over the past 30 years since the prior surveys. The use of predicted tides instead of smooth tides would account for the remaining 1-2 foot discrepancy.

The following are completed investigation items of the Presurvey Review (PSR) for OPR-K104-MI-79:

Item 97: •

The piles charted in latitude 29° 14.8' N and longitude 94° 51.2' W (source unknown) were investigated by VESNO 2225 on JD 201 and described as 3 piles forming a dolphin, 6 feet above water, each 1-1.5 feet in diameter and 175 yards offshore. The detached position of these piles (Pos 2117) is 29° 14' 49.722" N and 94° 51' 17.501" W. It is recommended that it be charted as a "piles" at the above position.

*dolphin      Concur      PH*

Item 98: •

\* The visible wreck, PA, charted at latitude 29° 14.7' N and longitude 94° 51.2' W (source unknown) was investigated by VESNO 2223 and VESNO 2224

\* *Chart 11923, dated Dec 2, 1978, shows dangerous submarine wreck, PA, at present survey location. Chart as shown on present survey.*

K. (Continued)

(launch 1012) on JD 214 using a 200 foot chain drag. All control for the drag was handled by VESNO 2223 as VESNO 2224 has no onboard navigational systems. Drags were made parallel to the shoreline with the vessels approximately 50-60 meters apart. The drag hung in 10 feet of water and divers followed the chain down to investigate. A general maze of metal wreckage was found. Due to a strong alongshore current and less than one foot of visibility, the divers were unable to determine either the total extent of the wreckage or the least depth.

A detached position (VESNO 2223, Pos 6811) marks the hang with a fathometer ~~least~~ depth of  $10\frac{1}{2}$  feet. The calculated position of this item is  $29^{\circ} 14' 44.35\frac{1}{2}''$  N and  $94^{\circ} 51' 11.95\frac{1}{2}''$  W. It is recommended that the visible wreck (PA) charted at  $29^{\circ} 14.7'$  N and  $94^{\circ} 51.2'$  W be deleted and charted as a dangerous submerged wreck at the new position.

*See page 6 for charting recommendations.* Concar RH  
The following are completed information items of the PSR. They "do not require specific investigations unless noted on the fathograms while sounding in the area":

Item 156:

The 20 foot pleasure craft reported sunk at approximately  $29^{\circ} 08'$  N and  $94^{\circ} 41'$  W in 57 feet of water was not detected by any notation of the fathograms while sounding in the area.

*See ~~the~~ report ✓  
Verifier's*

Item 157:

The pleasure craft CAPT DOC reported sunk at approximately  $29^{\circ} 08.8'$  N and  $94^{\circ} 41.0'$  W in 57 feet of water with three feet of superstructure sticking out of the water, was not detected by any notation on the fathograms while sounding in the area, nor was it sighted visually.

*See ~~the~~ report ✓  
Verifier's*

L. COMPARISON WITH THE CHART

<u>Chart Number</u>	<u>Edition</u>	<u>Date</u>	<u>Scale</u>
11323	39th	9 April 1977	1:80,000

Comparison with the chart was good, with 85% of the soundings agreeing to within 1-2 feet and the remainder agreeing to within 3 feet. Items investigated for comparison with this chart follow:

Item 1:

West Beach Fishing Pier, charted at  $29^{\circ} 14' 51''$  N and  $94^{\circ} 51' 12''$  W was verified by Mt. Mitchell personnel using three-point sextant fixes. The centermost, seaward end of West Beach Fishing Pier was calculated at  $29^{\circ} 14' 53.349''$  N and  $94^{\circ} 51' 04.762''$  W. It is recommended that the pier remain on the chart and be shown as delineated by TP-00227 (1977-79)

*Concar RH*

L. (Continued)

Item 2:

A charted platform, CSGP-GA-255-A, at 29° 00' 06" N and 94° 45' 47" W was verified by VESNO 2225 (Pos 2016-2020, JD 200). The platform has eight legs, is dark red in color with green superstructure. The NE leg of the permanent structure is at 29° 00' 01.747" N and 94° 45' 53.539" W; the SE leg at 29° 00' 02.933" N and 94° 45' 51.402" W; the SW leg at 28° 59' 59.242" N and 94° 45' 52.592" W and the NW leg at 28° 59' 59.040" N and 94° 45' 54.793" W. The calculated center of this is 29° 00' 00.364" N and 94° 45' 52.421" W. It is a rectangular platform approximately 50 meters wide and 70 meters long and 40 meters high. This item was outside the limits of the survey, but close enough to warrant verification. It has flashing white lights and a horn.

*Outside general limits of hydrography, however  
shown on small sheet.* Concur RH

Item 3:  
A charted platform, HOM-GA-214L (Jack-up) at 29° 07' 33" N and 94° 49' 10" W was removed prior to the beginning of this survey. Its position was developed by VESNO 2225 for a least depth of 50 feet (Pos 2176, JD 201). Results using 25 meter line spacing indicated no hazard to navigation and it is recommended that this item be removed from the chart.

Concur RH

Item 4:

An uncharted platform, PENROD 66 (Jack-up), was investigated by VESNO 2223 and located by detached positions of its three legs (Pos 6699-6704, JD 212). The SE leg is at 29° 07' 25.301" N and 94° 41' 52.877" W; the N leg is at 29° 07' 26.801" N and 94° 41' 57.102" W; and the SW leg at 29° 07' 24.635" N and 94° 41' 57.935" W. The calculated center for this item is 29° 07' 25.587" N and 94° 41' 55.999" W. This platform was removed after the survey so it is recommended that this item not be added to the chart.

Concur RH

Item 5:

A charted obstruction (fish haven) at 29° 08' 24" N and 94° 42' 06" W was developed by VESNO 2223 on JD 213 (Pos 6769-6774, 6792-6798). The privately maintained lighted buoy marking this obstruction was not found. The least depth recorded over this area during development was 56 feet indicating no real hazard. It is recommended that the buoy be removed from the chart. see Verifier's Report

*Buoy does not appear on Chart 11323, dated Dec. 3, 1978.* Concur RH

Item 6:  
A privately maintained white/orange buoy with the letter "C" for identification (no light list number) is charted on 11323 at 29° 10' 06" N and 94° 43' 06" W. This buoy was not found in the working area. ~~and it is recommended that it be removed from the chart.~~

Concur RH

Item 7:

A privately maintained white/orange buoy with the letter "D" for identification (no light list number), is charted on 11323 at 29° 10' 06" N and 94° 45' 51" W. This buoy was not found in the working area, ~~and it is recommended that it be removed from the chart.~~

*Items 6 and 7 are referred to the Chart compiler for further consideration.* Concur RH

L. (Continued)

Item 8: -

The charted jack-up platform, RANGER I (C&K-GA-189L-3) at 29° 08' 38" N and 94° 40' 47" W collapsed and sank in May 1979. Due to salvage operations in the area, investigation of this hazard to navigation was delayed. The sinking was reported as:

Local Notice to Mariners No. 21 of 16 May 1979  
Eighth Coast Guard District, New Orleans, La.  
Page 15, IX General, Item 11

"TEXAS COAST - GULF OF MEXICO - RIG COLLAPSE - HAZARD TO NAVIGATION

The jack-up rig RANGER I was collapsed and sunk in approximate position Lat. 29-08-38N, Long. 94-40-47W (Block GA 189L) in 57 feet of water. The least clear depth over rig is 10-15 feet and the site is marked by an unlighted orange buoy"  
Charts: 11323, 11340

VESNO 2225 located an uncharted wellhead (Pos 2331, JD 250) and two 18 inch diameter vertical pipes 2 feet apart from each other and 43 meters away from the wellhead (Pos 2332, JD 250). Both the wellhead and the pipes appear to be the remains of RANGER I after salvage operations. The original platform was removed and was seen in Galveston harbor.

The wellhead has a triangular base, 4 feet on each side and a helicopter pad on top of it which is approximately 60 feet above the water. Its calculated position is 29° 08' 37.589" N and 94° 40' 46.909" W. It is equipped with flashing white lights and a horn. It has no identification sign or markings.

extend

The vertical pipes are attached together and approximately 50 feet above the water. Its calculated position is 29° 08' 38.799" N and 94° 40' 48.852" W. It is equipped with a flashing white light and a horn. It has no identification sign or markings.

Survey lines were run around and between the wellhead and the pipes to detect wreckage after salvage operations were complete (VESNO 2223, JD 236, Pos 6900-6914). Wreckage from RANGER I was not noted on the fathogram. The development was smooth plotted on a 1:2,500 field sheet.

The unlighted orange buoy referred to by NM No. 21 of 16 May 79 has been removed. Since these structures are apparently not in use, it is anticipated that work will continue in this area in the future. It is recommended that the wellhead and the pipes be charted separately at their respective positions until future construction necessitates a change.

Conserv *PK*

Item 9: 1

An 18 foot sounding spike in 50 feet of water was noted on fathogram

L. (Continued)

at 29° 09' 25" N and 94° 48' 06" W (Pos 336-337, JD 186). VESNO 2225 investigated this area on JD 201 and developed it for least depth. No indication of an obstruction was found on the fathogram. In addition to this development, a 1:2,500 scale wire drag survey was done by VESNO 2223 on JD 226 over this same area. The drag consisted of a 20 meter 1/4 inch stainless steel wire tensioned by an otter board at each end. Line spacing was 10 meters resulting in an approximate 1/3 overlap to insure total coverage. No indication of an obstruction was found and a 1:2,500 field sheet and all associated records are provided for verification. It is recommended that this item not be charted.

*Concur LH*

Item 10:

A 39 foot sounding spike in 54 feet of water was noted on the fathogram at 29° 07' 40" N and 94° 46' 59" W (Pos 386-387, JD 186). VESNO 2225 investigated this area on JD 201 and developed it for least depth. No indication of an obstruction was found on the fathogram and it is therefore recommended that this item not be charted.

*Concur LH*

Item 11:

A 34 foot sound spike in 46 feet of water was noted on the fathogram at 29° 10' 35" N and 94° 48' 37" W (Pos 234-235, JD 186). VESNO 2223 investigated this area on JD 213 and developed it for least depth. No indication of an obstruction was found on the fathogram. This item was also investigated by wire drag in the same manner as Item 9. VESNO 2225 conducted the survey on JD 227 and no indication of an obstruction was found. It is recommended that this item not be charted.

*Concur LH*

Item 12:

On JD 186 in an area approximately 3 miles long and 0.3 miles wide, a series of 9 spikes from 6 to 9 feet shoaler than surrounding depths were noted on the fathogram at:

<u>Latitude</u>	<u>Longitude</u>	<u>Position</u>	<u>Depth</u>
29° 04' 40"	94° 44' 43"	355-356	55' in 61' water
29° 02' 30"	94° 43' 12"	363-364	56/61
29° 04' 35"	94° 44' 32"	277-278	52/61
29° 03' 24"	94° 43' 42"	273-274	55/61
29° 03' 33"	94° 43' 47"	273-274	54/61
29° 03' 14"	94° 43' 46"	272-273	56/61
29° 03' 01"	94° 43' 17"	264-265	57/62
29° 03' 20"	94° 43' 30"	263-264	54/61
29° 04' 14"	94° 43' 08"	260-261	56/61

This entire area was investigated by VESNO 2225 on JD 200 and developed for a least depth. No indication of any obstructions was found on the fathogram and it is therefore recommended that these items not be charted.

L. (Continued)

The spikes referred to in items ~~9, 10, 11~~ and 12 merged with the bottom trace of the fathograms in only a few cases. The remaining were clear of the bottom. The subsequent fathometer developments and wire drags failed to detect any obstructions. These strays are assumed to be fish or electronic noise in the fathometer and should be ignored.

*Spikes at items 9, 10 and 11 do not merge with bottom trace.*

Concur R W

M. ADEQUACY OF THE SURVEY

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

N. AIDS TO NAVIGATION

There are no fixed or floating aids to navigation within the survey area except the previously discussed, privately maintained buoys which have been removed.

O. STATISTICS

Linear nautical miles of hydrography	1001.7
Linear nautical miles of crosslines	120.5
Linear nautical miles of development	92.9
Total linear miles of hydrography	1215.1
Total miscellaneous miles	463.0
Total miles run	1454.5
Square miles of hydrography	99.0
Total number of positions	4699
Nansen casts	2
Bottom samples	59

P. MISCELLANEOUS

Numerous punch problems required that many master tapes be edited for processing purposes.

Data obtained from investigation of PSR item 98 and wire drag developments are plotted on separate larger scale field sheets. None of this work was plotted on the smooth 1:20,000 field sheets. The fathometer records of the wire and chain drags were not adjusted for wave action or missed soundings for smooth plotting purposes.

Q. RECOMMENDATIONS

None.



R. AUTOMATED DATA PROCESSING

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

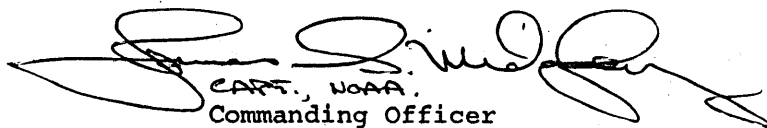
RK 110	Hyperbolic Real Time Plot	1/30/76
RK 201	Grid, Signal and Lattice Plot	4/18/75
RK 210	Hyperbolic Non-Real Time Plot	1/15/76
RK 300	Utility Computations	2/05/76
RK 330	Data Reformat and Check	5/04/76
PM 360	Electronic Corrector Tape Abstract	2/02/76
RK 530	Velocity Corrections Computations	5/10/76
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

APPROVAL SHEET

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



CAPT. NOAA.  
Commanding Officer

## SIGNAL NAMES TAPE LISTING

MI-20-1-79

OPR-K104-MI-79

NUMBER	NAME	SOURCE
100	CAPTAIN (SLAVE 1)	FIELD PARTY G18
105	BFILGE	AMC OPS FIELD COMP
110	LUIS USE	AMC OPS FIELD COMP
115	NETTO 1933	29052 1028 (HG2 L24406)
120	H-65-TX	AMC OPS FIELD COMP
125	H-63-TX	AMC OPS FIELD COMP
130	H-62-TX	AMC OPS FIELD COMP
135	WEST BEACH	AMC OPS FIELD COMP
140	G-400 RESET	HG2 L24406
145	H-61-TX	AMC OPS FIELD COMP
150	H-60-TX	AMC OPS FIELD COMP
155	H-59-TX	AMC OPS FIELD COMP
160	DAMG	AMC OPS FIELD COMP
165	H-58-TX	AMC OPS FIELD COMP
170	H-57-TX	AMC OPS FIELD COMP
175	OSTER 1933	290943 1043 (HG2 L24406)
180	H-56-TX	AMC OPS FIELD COMP
185	H-55-TX	AMC OPS FIELD COMP
190	CABLE T.V. MAST	AMC OPS FIELD COMP
195	H-53-TX	AMC OPS FIELD COMP
197	H-52-TX	AMC OPS FIELD COMP
200	H-66-TX (MASTER)	AMC OPS FIELD COMP
205	H-51-TX	AMC OPS FIELD COMP
210	H-50-TX	AMC OPS FIELD COMP
215	GALVESTON S.W. MUN. TANK	AMC OPS FIELD COMP
220	50 + 100 USE	AMC OPS FIELD COMP
225	H-168	HG2 L24406
230	MOODY METH. CH. SPIRE	AMC OPS FIELD COMP
235	CROCKETT 1942 RM2 1975	290943 1007 (HG2 L24406)
236	SW WELLHEAD	MM/TRAV 790628
237	CTR WELLHEAD	MM/TRAV 790628
238	NE WELLHEAD	MM/TRAV 790628
240	MOODY PRESS FLATTOP TANK	290943 1082
245	USPHS STACK	290943 1086
250	PIEF 34 TANK	290943 1083
255	EUCANEER 1933	290943, 1004 (HG2 L24406)
260	GALVESTON MUN. TANK	290943 1083
265	USCG RADIO MAST	290943 1063
270	SOUTH JETTY LIGHT	290943 1101
275	BOLIVAR LIGHTHOUSE USE	290943 1050
280	TRAVIS	290943 1027
290	BOLIVAR RADIO TOWER	AMC OPS FIELD COMP
300	H-27-TX-78 (SLAVE 2)	AMC OPS FIELD COMP

SIGNAL TAPE LISTING  
MI-20-1-79  
OPR-K104-MI-79

100	4	28	56	05032	095	17	53364	250	0000	171859
105	4	29	04	39882	095	07	34948	139	0000	000000
110	4	29	05	31926	095	06	40347	139	0000	000000
115	4	29	05	44338	095	06	39416	139	0000	000000
120	4	29	06	29738	095	05	12531	139	0000	000000
125	4	29	07	17104	095	04	05450	139	0000	000000
130	4	29	07	54924	095	03	08966	139	0000	000000
135	4	29	08	04502	095	02	58608	139	0000	000000
140	4	29	08	35882	095	02	12709	139	0000	000000
145	4	29	08	38812	095	02	00533	139	0000	000000
150	4	29	09	30986	095	00	35547	139	0000	000000
155	4	29	09	57263	094	59	51349	139	0000	000000
160	4	29	10	41510	094	58	36911	139	0000	000000
165	4	29	11	40938	094	56	57010	139	0000	000000
170	4	29	12	08447	094	56	09509	139	0000	000000
175	4	29	12	25863	094	56	08365	139	0000	000000
180	4	29	12	31553	094	55	31361	139	0000	000000
185	4	29	13	07179	094	54	29512	139	0000	000000
190	4	29	14	02016	094	54	34712	139	0000	000000
195	4	29	13	33152	094	53	37869	139	0000	000000
197	4	29	14	01512	094	52	59644	139	0000	000000
200	4	29	19	43169	094	54	07649	250	0000	171859
205	4	29	14	33033	094	52	03443	139	0000	000000
210	4	29	15	01709	094	51	10384	139	0000	000000
215	4	29	16	01065	094	50	57460	139	0000	000000
220	4	29	15	32706	094	50	20489	139	0000	000000
225	4	29	15	58730	094	49	32438	139	0000	000000
230	4	29	16	29659	094	49	17194	139	0000	000000
235	4	29	16	20228	094	48	54301	139	0000	000000
236	4	29	15	08310	094	48	10000	139	0000	000000
237	4	29	15	29590	094	47	34248	139	0000	000000
238	4	29	15	51413	094	46	57709	139	0000	000000
240	4	29	17	34041	094	49	16628	139	0000	000000
245	4	29	17	24980	094	48	53200	139	0000	000000
250	4	29	18	19254	094	48	28897	139	0000	000000
255	4	29	17	24598	094	47	17279	139	0000	000000
260	4	29	18	49346	094	46	23523	139	0000	000000
265	4	29	20	01935	094	46	05559	139	0000	000000
270	4	29	19	39258	094	41	32837	139	0000	000000
275	4	29	21	59597	094	46	01263	139	0000	000000
280	4	29	21	58592	094	45	22208	139	0000	000000
290	4	29	23	40360	094	44	13479	139	0000	000000
300	4	29	35	12670	094	17	18330	250	0000	171859

243

\*FIELD  
vat

FORM

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

LANDMARKS FOR CHARTS

REPORTING UNIT  
Coastal Mapping Div.  
A.M.C. Norfolk, Va.

STATE  
Texas

LOCALITY  
Sabine Pass to  
Cavallio

DATE  
8/28/79

- ORIGINATING ACTIVITY
- HYDROGRAPHIC PARTY
  - GEODETIC PARTY
  - PHOTO FIELD PARTY
  - COMPILATION ACTIVITY
  - FINAL REVIEWER
  - QUALITY CONTROL & REVIEW GRP.
  - COAST PILOT BRANCH
- (See reverse for responsible personnel)

The following objects HAVE  BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS.  
 TO BE CHARTED  
 TO BE REVISED  
 TO BE DELETED

OPR PROJECT NO. K-104  
 JOB NUMBER CM-7702  
 SURVEY NUMBER TP-00227  
 DATUM N.A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE		LONGITUDE		METHOD AND DATE OF LOCATION (See instructions on reverse side)	FIELD	CHARTS AFFECTED
		D.M. Meters	SEC	D.P. Meters	SEC			
RADIO TOWER	✓ *	29 14	10.19	94 54	14.90	77E(P) 9597 - March 7, 1977	F-V-Vis. - July 9, 1979	11322 - 11323 -
TV TOWER	✓ *	29 14	01.98	94 54	34.65	" "	" "	" "
TANK	✓ *	29 16	05.08	94 50	54.54	77E(P) 9601 - March 7, 1977	" "	" "
			156.3		1472.5			

See L-201 (80)



001 VELOCITY TAPE LISTING

002 MI-20-1-79

003 IN FEET

004

005 VESNOS 2223 & 2225

006 CAST # 3

007 TABLE #1

008

009

010 000063 0 0002 0001 000 222500 020179

011 000102 0 0004

012 000140 0 0006

013 000177 0 0008

014 000215 0 0010

015 000256 0 0012

016 000295 0 0014

017 000333 0 0016

018 000370 0 0018

019 000409 0 0020

020 000448 0 0022

021 000487 0 0024

022 000526 0 0026

023 000563 0 0028

024 000600 0 0030

025 000636 0 0032

026 000673 0 0034

027 000711 0 0036

028 000747 0 0038

029 000783 0 0040

030 999999 0 0000

TC/TI TAPE PRINTOUT  
OPR-K104-MI-79  
MI-20-1-79  
H-9838  
VENSO 2225

150827	0	0000	0001	183	222500	001979
172506	0	1002				
183721	0	0000				
185831	0	1002				
151959	0	1002	0001	184	222500	001979
144500	0	1002	0001	186	222500	001979
154450	0	0001	0001	187	222500	001979
155028	0	0002				
162449	0	0001				
163018	0	0002				
163853	0	0001				
164923	0	0000				
164953	0	0001				
165617	0	0002				
165735	0	1002				
144520	0	1002	0001	190	222500	001979
151353	0	1002	0001	191	222500	001979
141356	0	1002	0001	192	222500	001979
140713	0	1002	0001	194	222500	001979
144457	0	0000				
145417	0	0001				
151740	0	1002				
151955	0	0000				
170129	0	1001	0001	197	222500	001979
141246	0	1001	0001	198	222500	001979
155113	0	0002				
140411	0	1001	0001	199	222500	001979
134608	0	1001	0001	200	222500	001979
182459	0	0000				
183848	0	1001				
142431	0	0002	0001	201	222500	001979
145150	0	0000				
145310	0	0002				
145949	0	0000				
165500	0	1001				
173025	0	0000				
175823	0	1001				
183943	0	0000				
190928	0	1001				
152102	0	0000	0001	212	222500	001979
195656	0	1002				



TC/TI TAPE PRINTOUT  
OPR-K104-MI-79  
MI-20-1-79  
H-9838  
VESNO 2223

143422	0	1002	0001	186	222300	001979
155818	0	0002	0001	187	222300	001979
161433	0	1002				
143713	0	0002	0001	190	222300	001979
151925	0	1002				
142531	0	1002	0001	191	222300	001979
140915	0	1002	0001	192	222300	001979
140700	0	1002	0001	193	222300	001979
135709	0	1001	0001	194	222300	001979
150607	0	1002	0001	197	222300	001979
155031	0	1002	0001	198	222300	001979
140210	0	1002	0001	199	222300	001979
140144	0	1002	0001	200	222300	001979
135015	0	1002	0001	201	222300	001979
175604	0	0000				
141745	0	0000	0001	212	222300	001979
135704	0	1002	0001	213	222300	001979
145444	0	0000	0001	214	222300	001979

## FIELD TIDE NOTE

Field tide reduction of soundings were based on predicted tides from GALVESTON , TEXAS, corrected to area per Project Instructions and were interpolated on a PDP8/E Computer utilizing program AM500. All times of both predicted and recorded tides are GMT.

The number and type of tide gages installed, thier geographic locations, dates of installation/removal, leveling, plane of reference and period of operation are appended to this note, along with a copy of a letter to C331 requesting verified hourly heights of tides from gages listed in this report.

Contact with respective tide gage observers was made in person by Mt: Mitchell personnel upon arrival in the project area, There after, observers were contacted during inport periods to ascertain the status of the respective gages.

The respective gages reportedly operated properly during this project, with any exceptions listed under "Remarks" on the appended tide gage sheets.

FIELD TIDE NOTE

TIDE GAGE REPORT

NOS TIDE TABLE NUMBER: 3290 TIME MERIDIAN 90 ° W

GEOGRAPHIC LOCALE: Galveston, Tx. - Pleasure Pier

NAME: Galveston, Tx. - Pleasure Pier STATION NUMBER: 877-1510

LATITUDE: 29° 17.2 N, LONGITUDE: 94° 47.4 W

TYPE OF GAGE:  ADR,  BUBBLER,  OTHER (                      )

PLANE OF REFERENCE:  MLW,  MLLW,  GCLWD,  OTHER, CORRESPONDS

TO 50 FEET ON THE TIDE STAFF FOR THE PERIOD JD 183 TO JD 215

DATED INSTALLED: 7/5/77 BY: TP 753

DATE REMOVED: N/A BY: N/A

DATE LEVELED: 3/8/78 BY: TP 753

REMARKS: An additional gage (bubbler) was installed in tide house 8-78 by MH Mitchell personnel.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_




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 ; AUGUST,6 1979

To : Chief, Tides and Water Levels Branch, C331

From :   
Commanding Officer  
NOAA Ship Mt. Mitchell S-222

Subj. : Tidal Data for Hydrographic Survey H-9838, OPR-K104-MI-79,  
Gulf of Mexico, Texas

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

<u>GAGE NAME</u>	<u>NUMBER</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
Galveston (Pier 21)	877-1450	29°18.6'N	94°47.2'W
Galveston (Pleasure Pier)	877-1510	29°17.2'N	94°47.4'W
Sabine Pass (USCG)	877-0590	29°42.3'N	93°51.2'W

It is requested that the Time and Height Corrections for each  
gage be zoned as per Project Instructions for the area described  
within the following points:

LATITUDE 29°05.0'N, 29°18.9'N, 29°13.8'N, 29°00.0'N  
LONGITUDE 94°36.5'W, 94°46.5'W, 94°55.8'W, 94°46.0'W

This information is requested for the following periods:

0000GMT 2 July 1979 (JD 183) through 2359 GMT 3 August 1979 (JD 215)



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

December 14, 1979

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: July 2-August 3, 1979

HYDROGRAPHIC SHEET: H-9838

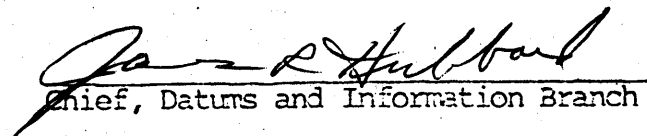
OPR: K104

Locality: Texas outer coast, vicinity of Galveston

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

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

REMARKS: Zone direct.

  
Chief, Datums and Information Branch

GEOGRAPHIC NAMES

H-9838

Name on Survey	Source of Information										
	A	B	C	D	E	F	G	H	K		
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND McNALLY ATLAS	U.S. LIGHT LIST			
Bermuda Beach	X										1
Galveston	X										2
Galveston Island	X										3
Gulf of Mexico	X										4
West Beach			X								5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25

Approved:

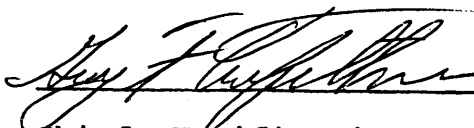
*Chas. E. Harrington*  
Chief Geographer - C3x5

22 July 1980

APPROVAL SHEET  
FOR  
SURVEY H-9838

- 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: 4/3/80

Signed:   
Title: Chief, Verification Branch

HYDROGRAPHIC SURVEY STATISTICS

H-9838

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		10	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS & ARC, EXCESS		3	
DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						1-Misc Data
CAHIERS	3 with raw P/O					
VOLUMES	2					
BOXES			2-smooth			

T-SHEET PRINTS (List) TP-00227 and TP-00228 not received (4/5/80)

SPECIAL REPORTS (List) 1 copy of H-8752

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			4699
POSITIONS CHECKED		450	
POSITIONS REVISED		5	
SOUNDINGS REVISED		40	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)			
VERIFICATION OF CONTROL		2	
VERIFICATION OF POSITIONS	4	40	
VERIFICATION OF SOUNDINGS		65	
COMPILATION OF SMOOTH SHEET		24	
APPLICATION OF TOPOGRAPHY		3	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		6	
COMPARISON WITH PRIOR SURVEYS & CHARTS		24	
VERIFIER'S REPORT		16	
OTHER		189	
TOTALS	4	369	373

Pre-Verification by J. B. Wilson, M. W. Holloway Beginning Date 9/25/79 Ending Date 2/15/80

Verification by R. R. Hill Beginning Date 2/16/80 Ending Date 3/28/80

Verification Check by B. J. Stephenson Time (Hours) 4 Date 3/27/80

Marine Center Inspection by Hydrographic Inspection Team (AMC) Time (Hours) 10 Date 3/28/80

Quality Control Inspection by G.K. Myers Time (Hours) 18 Date 7/14/80

Requirements Evaluation by D.S. Hill Time (Hours) 2 Date 8/20/80

G.K. Myers 1 hr 7/14/80



REGISTRY NO. \_\_\_\_\_

The Computer and Excess Sounding Cards 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 REQUIRED \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

REGISTRY NO. H-9838

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 \_\_\_\_\_ TIME REQUIRED \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

ATLANTIC MARINE CENTER  
VERIFIER'S REPORT

REGISTRY NO.: H-9838

FIELD NO.: MI-20-1-79

Texas, Gulf of Mexico, Galveston to Bermuda Beach and Offshore

SURVEYED: July 2, 1979 through August 3, 1979

SCALE: 1:20,000

PROJECT NO.: OPR-K104

SOUNDINGS: Ross Digital  
Echo Sounder

CONTROL: Odum Hydrotrac  
(Hyperbolic)

Chief of Party . . . . . James S. Midgley  
Surveyed by . . . . . Ronald Jones  
. . . . . C. Douglas Mason  
. . . . . John D. Wilder  
. . . . . William G. Pringle  
. . . . . Andrew A. Shepard  
. . . . . Paul S. Morton  
. . . . . James L. Long  
. . . . . Ronald K. Dutton

Automated Plot by . . . . . Xynetics 1201 Plotter (AMC)

Verified and Inked by . . . . . R. R. Hill  
March 28, 1980

1. Introduction

During verification of this survey no unusual problems were encountered. All red notes in the Descriptive Report were made by the verifier.

2. Control and Shoreline

a. The source of control is adequately described under sections "F" and "G" of the Descriptive Report.

b. Shoreline was transferred from Class I manuscripts TP-00227 and TP-00228 of 1977-79.

*See OL 1484 (80)*

3. Hydrography

a. Depths at crossings are in good agreement.

b. The standard depth contours were adequately delineated.

c. The development of the bottom configurations and the investigation of least depth were considered 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 with the following exceptions:

a. The hydrographer failed to obtain a least depth on a wreck (PSI #98) charted at Latitude  $29^{\circ}14.7'$ , Longitude  $94^{\circ}51.2'$  (See Section "K" of the Descriptive Report).

b. In sounding volume #1 (page 10), the hydrographer makes note of a stick exposed approximately 2 feet near Position #336 (Latitude  $29^{\circ}09'37.65''$ , Longitude  $94^{\circ}48'15.02''$ ). The disposition of this stick was not later noted in the hydrographic records.

It was ascertained via telephone conversation with the hydrographer that the stick in question was investigated shortly after its sighting but no further indications of its existence were found, and it is not considered a navigational hazard.

#### 5. Junctions

An adequate junction was effected with the following surveys:

H-9783	(1978)	to the east
H-9843	(1979)	to the west
H-9851	(1979)	to the south

A partial butt junction was effected with H-8752 (1963-65) on the northeast. Depth differences of from 1 to 3 feet were encountered in the junctional areas inside the 30-foot contour. The hydrography from the present survey (H-9838) supersedes H-8752 (1963-65) within this common area which is delineated by a dashed line on H-8752 (1963-65). \*The remaining area junctions adequately. AMC Processing Division requests Quality Control Branch, Hydrographic Surveys Division to delineate the superseded area on the original smooth sheet of H-8752 (1963-65) as shown on the copy provided.

*\* Completed by Quality Control*

#### 6. Comparison With Prior Surveys

a.	H-5522	(1933-34)	1:20,000
	H-6252	(1937)	1:40,000

The above prior surveys provide the most recent complete coverage of the area common to the present survey. A comparison between these surveys and the present survey reveals the present survey to be generally 1 to 3 feet deeper than the prior surveys. The greatest differences up to 8 feet, occur within the 12-foot contour, where apparent shoreline and inshore area erosion has taken place. Shoreline erosion varies from 50 meters on the western limits to 120 meters on the eastern limits of the survey area. Differences in the offshore area are attributed to different survey methods and equipment and possible natural causes.

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

b.	F.E. No. 1	(1965)	1:40,000
	H-9298WD	(1972)	1:40,000

F.E. No. 1, (1965) - A comparison reveals no conflicts with the effective depths of this wire-drag survey and the present survey. However, a hang depth of 54 feet in Latitude  $29^{\circ}03.96'$ , Longitude  $94^{\circ}40.62'$ , which was subsequently cleared to 53 feet, was brought forward to the present survey.

H-9298 WD - A comparison reveals no conflicts with the effective depths of this wire-drag survey.

7. Comparison with Chart #11323 (4th Edition, December 2, 1978)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration.

Attention is directed to the following:

(1) - A sunken wreck, PA, reported sunk at Latitude  $29^{\circ}08'N$ , Longitude  $94^{\circ}41'W$ , in 57 feet of water, originate with Local Notice to Mariners #36 of 1977. The disposition of the Presurvey Review Item (#156) was not verified or disproved by the present survey. It is recommended that a submerged dangerous wreck PA be retained as charted.

(2) - A sunken wreck with mast visible, PA (Presurvey Review Item #157) reported sunk at Latitude  $29^{\circ}08.8'N$ , Longitude  $94^{\circ}41.0'W$ , originate with Local Notice to Mariners #2 of 1978. The hydrographer did not get any indication of this wreck from sounding lines run in the area nor was the mast visually sighted while in the area. It is recommended that this wreck be charted as a sunken dangerous wreck PA, at the charted location.

(3) - The obstruction, Fish Haven (Auth. min. depth 50 ft.), charted in Latitude  $29^{\circ}08'24''$ , Longitude  $94^{\circ}42'06''$  is not considered disproved by this survey and should remain charted.

(4) - The wreck, cleared by 53 feet, charted in Latitude  $29^{\circ}03.96'$ , Longitude  $94^{\circ}40.62'$  originating with F.E. No. 1, 1965WD is not considered verified or disproved and should remain as charted.

The present survey is considered adequate to supersede the charted information within the common area.

b. Aids to Navigation

There are no aids to navigation maintained by the U.S. Coast Guard within the limits of the present survey area.

8. Compliance with Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work

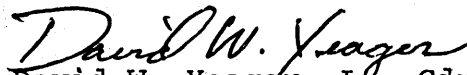
This is considered an excellent basic survey and no additional field work is recommended.

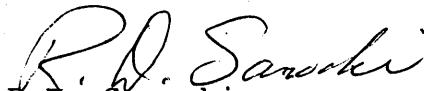
Inspection Report  
H- 9838

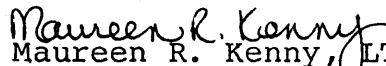
Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. Inspection comments regarding quality of field work, compliance with instructions, and adequacy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


Examined and Approved:  
Hydrographic Inspection Team  
Date: March 28, 1980

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

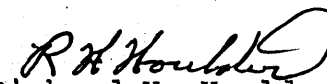
  
David W. Yeager, Lt. Cdr., NOAA  
Field Procedures Officer  
Operations Division

  
R.D. Sanocki  
Technical Assistant  
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Maureen R. Kenny, LT, NOAA  
Chief, Electronic Data  
Processing Branch

  
Harry R. Smith  
Team Leader  
Verification Branch

Approved/Forwarded

  
Richard H. Houlder  
RADM, NOAA  
Director, Atlantic Marine Center



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

OA/C352:GKM

July 14, 1980

TO: Glen R. Schaefer *GRS*  
Chief, Hydrographic Surveys Division

FROM: *G. K. Myers*  
G. K. Myers  
Chief, Quality Control Branch

SUBJECT: Quality Control Report for H-9838 (1979), Texas, Gulf of Mexico,  
Galveston to Bermuda Beach

A quality control inspection of H-9838 was accomplished to monitor the survey for adequacy with respect to data acquisition, delineation of the bottom, determination of least depths and navigation hazards, junctions, shoreline transfer, sounding line crossings, smooth plotting, decisions and actions by the verifier, and cartographic presentation of data.

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

1. The note "above GCLWD" affixed to heights of high water features on the verified smooth sheet was changed to reference these objects to Mean High Water during quality control.
2. Calibration points identified by Station Numbers 236, 237, and 238 on the present survey that fall within the limits of the smooth sheet should have been smooth plotted during verification. Locations of these signals mark oil well structures at latitude 29°15.14'N, longitude 94°48.17'W; latitude 29°15.5'N, longitude 94°47.57'W; and latitude 29°15.85'N, longitude 94°46.96'W.
3. A platform plotted on the verified smooth sheet at latitude 29°07.44'N, longitude 94°41.91'W is stated to have been removed after the survey in the hydrographic records. This additional information was noted on the smooth sheet during quality control.

cc:  
OA/C35  
OA/C351





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

OA/C351:DJ

AUG 29 1980

TO: OA/CAM - Richard H. Houlder

FROM:  OA/CS - Roger F. Lanier

SUBJECT: H-9838 (1979), OPR-K104, Texas, Gulf of Mexico, Galveston to Bermuda Beach, Report of Compliance with Project Instructions

The smooth sheet and Descriptive Report for the subject survey have been examined. This survey, except as noted in the Verifier's Report and the Quality Control Report, dated July 14, 1980 (copy attached), is complete and adequate for the purposes intended and is in compliance with Project Instructions OPR-K104-MI-79, dated February 22, 1979.

Attachment

cc:  
OA/C352 w/o att.



**10TH ANNIVERSARY 1970-1980**  
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National Ocean Survey  
Rockville, Maryland

Hydrographic Index No. 89 G

