

9765

Diag. Cht. 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-20-2-78
Office No..... H-9765

LOCALITY

State Texas
General Locality Gulf of Mexico
Locality Off Gilchrist

1978

CHIEF OF PARTY
Raymond L. Speer

LIBRARY & ARCHIVES

DATE Sept. 19, 1979

9765
9765

HYDROGRAPHIC TITLE SHEET

H-9765

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-20-2-78

State Texas

General locality ~~Northwestern~~ Gulf of Mexico

Locality ~~Offshore Gilchrist, Texas~~

Scale 1:20000 Date of survey ¹⁴³ ¹⁹¹ May 23 - July 10, 1978

Instructions dated December 9, 1978 Project No. OPR-K104-MI-78

Vessel NOAA Ship MT. MITCHELL (2220), launches MI-3 (VESNO 2223), MI-4 (VESNO 2224),

Chief of party CDR Raymond L. Speer, NOAA MI-5 (VESNO 2225), MI-6 (VESNO 2226)

Surveyed by See remarks

Soundings taken by echo sounder, ~~hand~~ pole Ross Models 5000 and 200C and Raytheon 723B

Graphic record scaled by RW, FS, EM, PS, DS, and PN

Graphic record checked by MH

Protracted by N/A Automated plot by ^{Xynerics 1201 Plotter (Amc)} HYDROPLOT SYSTEM

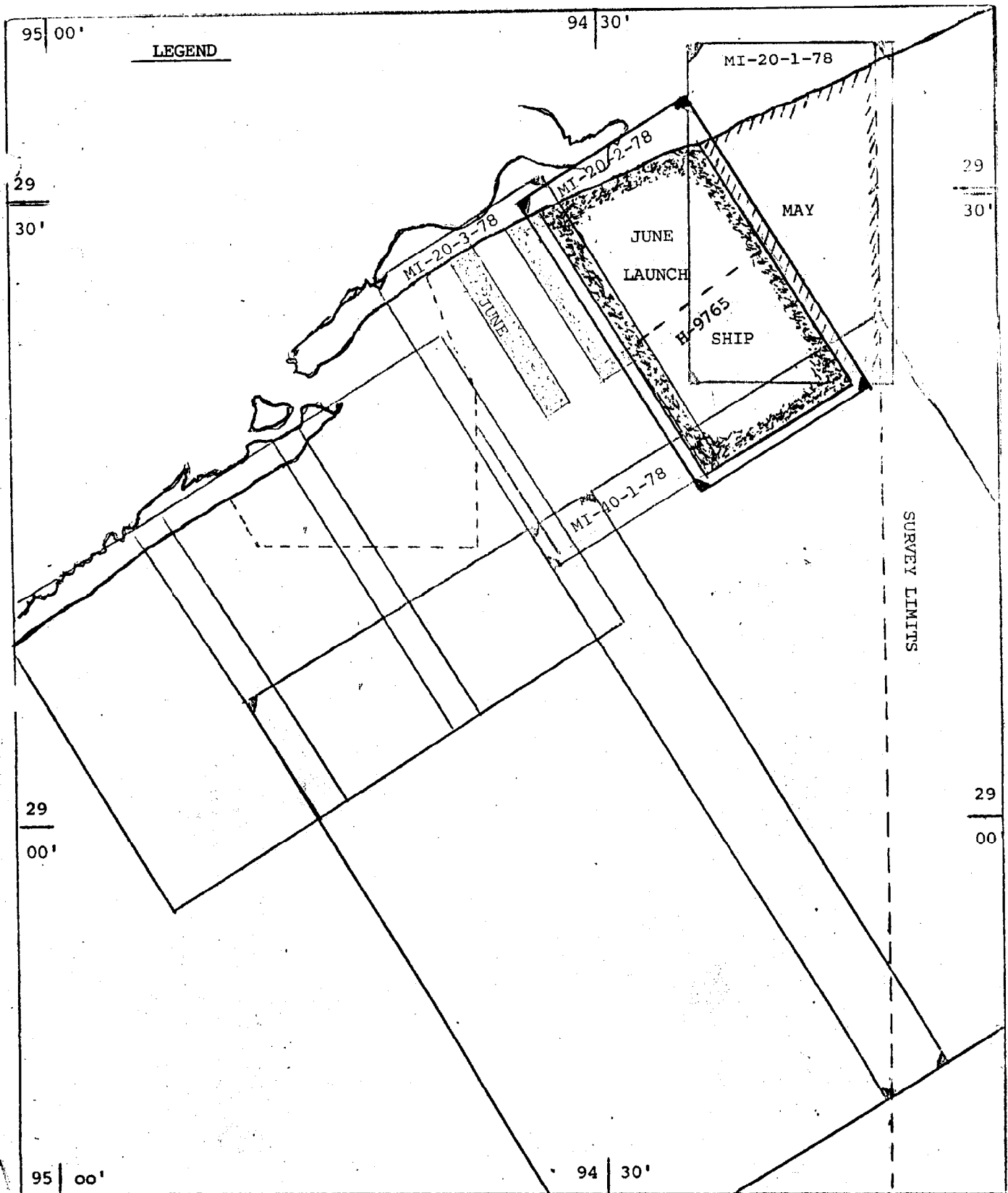
Verification by N/A R. R. Hill

Soundings in ~~XXXXXX~~ feet at ~~XXXX~~ ~~XXXX~~ GCLWD

REMARKS: LCDR G. Mills, LCDR L. Goodman, LT D. Waltz, LTJG M. Henderson,

LTJG J. Wilder, LTJG P. Daugherty, LTJG T. Rulon, ENS W. Pringle,

ENS T. Bainbridge



PROGRESS SKETCH OPR-K104-MI-78, GULF OF MEXICO (REVISED LAYOUT) PART OF CHART 1130

11300

H-9765, MI-20-2-78

NOAA SHIP MT MITCHELL

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 5 dated 24 February, 1978, 3 April, 1978, 6 April, 1978, 15 June, 1978 and 3 July 1978.

B. AREA SURVEYED

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

- | | | |
|----|------------|------------|
| 1) | 29° 20.7'N | 94° 15.4'W |
| 2) | 29° 34.5'N | 94° 25.1'W |
| 3) | 29° 29.6'N | 94° 34.5'W |
| 4) | 29° 15.8'N | 94° 24.6'W |

This survey was conducted between 23 May, 1978 (Julian Date 143) and 10 July (JD 191).

C. SOUNDING VESSEL

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

- | | |
|-------------|--------------|
| Launch 1002 | (VESNO 2225) |
| Launch 1004 | (VESNO 2226) |
| Launch 1204 | (VESNO 2224) |

Launch 1207 (VESNO 2223) was used only for presurvey review item investigation and chain drag operations. No soundings from this vessel were processed. Launch 1204 (VESNO 2224) was also used for the above tasks in addition to collecting bottom samples. Those depths were processed but all samples were taken while laying to precluding the need for settlement and squat correctors. Pole soundings were taken on JD 191 with VESNO 2224.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

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

<u>Equipment</u>		<u>Serial Number</u>
	(VESNO 2223)	
Raytheon 723 D Echo Sounder		2133
Raytheon Recorder		37019

(VESNO 2224)
Raytheon DE 723 B Echo Sounder 1360
Raytheon Recorder 1285

(VESNO 2225)
Ross Model 5000 Finline Depth Recorder 1053
Ross Model 4000 Transceiver 1053
Ross Digitizer 1039-2

(VESNO 2226)
Ross Model 200 C Finline Depth Recorder 1039 change to
Ross Model 5000 Finline Depth Recorder 1089 Julian Day 163
Ross Model 400 Transceiver 1039-1
Ross Digitizer 1053

(VESNO 2220)
Ross Model 5000 Finline 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). The antenna distance for all launches was zero. 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 3 Nansen casts at the following locations and dates:

<u>CAST NUMBER</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DATE</u>
1	29°30.3'N	94°18.2'W	10 May 1978 (Julian Day 130)
2	29°20.6'N	94°15.9'W	31 May 1978 (JD 151)
3	29°16.2'N	94°24.0'W	22 June 1978 (JD 173)

Good bar checks were very difficult to obtain with the Ross fathometer even under ideal conditions. Nevertheless, 25 bar checks were taken showing agreement with the nansen cast velocities of less than 0.4 feet. Because of these poor barchecks and the greater accuracy of the nansen casts, all velocity correctors were derived from the above three casts. An explanation of how sound velocities were derived along with all tables and printouts of velocity tapes is included in Appendix 4.

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 14.8 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 draft of 1.6 feet was applied to all soundings taken by the launches during the on-line process. Changes in draft for all launches was insignificant. Settlement and squat correctors for the launches 5 and 6 were determined on 15 May 1978 (JD 135) at Galveston Coast Guard Base Pier. A copy of the field data and settlement and squat correctors versus ship speed and launch RPM's 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 4.

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. Past experience indicates this to be true. Bar checks agreed with nansen cast derived velocities within 0.4 feet. This residual is believed to be due to the poor quality of bar checks with the narrow beam Ross fathometer. The instrument errors for both Ross fathometers was therefore considered to be zero for this survey.

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 were subtracted from the high water times, and 50 minutes were subtracted from low water times; the high and low water heights were multiplied by a factor of 1.50.

It should be noted that predicted tides did not correspond well with real tides. On JD 140 near predicted high tide (+1.0' at 1100 CDT) the water level was observed to be near low water by a shore party and verified by local residents to be very low. This discrepancy is possibly due to the local effects of the wind on the water level. A copy of the request for the actual tides in the survey area is included in Appendix 2.

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. In addition a 1:1000 scale sheet was drawn up to delineate work on PSR item numbers 132 and 133. The survey was plotted off line using an electronic corrector tape. Soundings on the field sheets are corrected for draft, predicted 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
TC/II Tapes

F. CONTROL STATIONS

Hydrotrac electronic control stations used for this survey were:

<u>Signal Number and Signal Name</u>	<u>Latitude</u>	<u>Longitude</u>
Station 100: CAPTAIN	28°56'05.032"N	95°17'58.364"W
Station 300: H-27-TX-78	29°35'12.670"N	94°17'18.380"W

Del Norte control stations used for this survey were:

<u>Number</u>	<u>Signal Name</u>	<u>Latitude</u>	<u>Longitude</u>
261	H-5-TX-78	29°27'16.439"N	94°37'33.952"W
266	H-9-TX-78	29°28'52.370"N	94°33'51.860"W
269	H-10-TX-78	29°29'14.185"N	94°32'56.506"W
270	H-11-TX-78	29°29'34.919"N	94°32'03.726"W
271	H-12-TX-78	29°29'56.884"N	94°31'09.670"W
272	H-13-TX-78	29°30'19.260"N	94°30'16.260"W
273	H-14-TX-78	29°30'40.904"N	94°29'14.797"W
274	H-15-TX-78	29°31'03.129"N	94°28'19.456"W
275	H-16-TX-78	29°31'20.416"N	94°27'32.126"W
277	H-17-TX-78	29°32'10.846"N	94°25'20.110"W
278	H-18-TX-78	29°32'37.438"N	94°24'13.355"W
279	H-19-TX-78	29°32'53.232"N	94°23'25.225"W
286	H-7 (COE)	29°32'25.248"N	94°24'50.658"W

All 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 ship'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 6 June (JD 157) to 22 June (JD 173). The equipment serial numbers used are as follows:

<u>Vessel or Shore Station</u>	<u>Equipment</u>	<u>Serial Number</u>
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 100	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 four 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 4 times at offshore pipe-stand "B-2" and wellhead "B-6" using the circling technique on page 4-28 of the Hydro Manual. *Use G.P. (Lat. 29°21'52.946"N, Long. 94°23'36.843"W)*

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. *Use G.P. Lat. 29°21'31.776"N Long. 94°28'14.493"W*

Del Norte positioning was used for vessel numbers 2226, 2225, 2224 and 2223 from 23 May 1978 (JD 143) to 10 July 1978 (JD 191). The following equipment was used in the launches.

<u>Vessel Number</u>	<u>Equipment</u>	<u>Serial No.</u>	<u>360° Antenna</u>	<u>Dates</u>
Launch 1207 (VESNO 2223)	DMU	395	SN 0002	6/5-7/10/78
	Master	185		
	Parallel Buffer	None		
Launch 1204 (VESNO 2224)	DMU	180	SN 175	6/4-7/10/78
	Master	169		
	Parallel Buffer	None		
Launch 1002 (VESNO 2225)	DMU	190	SN 053	5/23-6/16/78
	Master	1068		
	Parallel Buffer	128		
Launch 1004 (VESNO 2226)	DMU	162	SN 146	5/23-6/17/78
	Master	1066		
	Parallel Buffer	123		

Numerous moves were made with the various Del Norte remotes. AMG OORDER 18 states that switching antennas with remotes will have no effect on the measured range and field experience has shown this to be true. The antennas used on this survey were as follows:

ANTENNA TYPE AND SERIAL NUMBER

- 90° (SN 0003)
- 90° (SN 1134)
- 180° (SN 126)
- 180° (SN 0001)
- 180° (SN 0002)

The following table shows the location of the various Del Norte remotes used for this survey by day:

<u>DATE (JD)</u>	<u>72 (218)</u>	<u>74 (220)</u>	<u>76 (1322)</u>	<u>78 (253)</u>
23 May (143)	---	277	278	286
1 June (152)	273	277	---	---
2 June (153)	273	277	---	---
3 June (154)	273	277	279	---
4 June (155)	273	277	269	276
Change @ 1800	273	275	269	276
Change @ 1910	273	275	269	274

05 June (156)	273	277	269	278
13 June (164)	269	275	275	277
14 June (165)	269	275	273	277
Change @ 1700	269	275	273	287
Change @ 1830	269	275	273	274
15 June (166)	269	*	273	272
Change @ 1600	269	---	271	272
Change @ 1715	269	---	271	270
Change @ 1900	269	---	266	270
16 June (167)	269	275	---	---
17 June (168)	269	275	---	---
10 July (191)	261	---	---	269

*On Julian Day 166 the 74 remote (SN 220) broke down and was replaced by 74 remote (SN 1134) and installed at station 275. SN 220 was repaired and back at station 275 on JD 166.

Each Del Norte Master/DMU pair was calibrated with each remote over a baseline of 5999.743 meters between stations JACINTO and TS-01. These stations are on either side of Bolivar Roads (all water path) at the following locations:

STATION:	LATITUDE:	LONGITUDE:
TS-01	29° 22'57.710"N	94° 43'28.528"W
JACINTO	29° 20'03.945"N	94° 45'09.213"W

These baseline calibrations took place on May 1 (JD 121), May 26 (JD 146), June 26 (JD 177) and July 24 (JD 205). The results of the calibrations are in the calibration volume. Maximum drift observed from these calibrations was 6 meters except from May 1 to May 26 with DMU/Master 395/185 when indicated drift was as great as 12 meters. Large correctors also occurred for 395/185 and 180/169 on July 24 due to repairs that were made to the units in the field after the previous baseline calibrations.

In addition, positions were determined for various wellheads within the limits of this survey to be used to check Del Norte correctors and Hydrotrac lane count. They are listed below with their position and method of location.

<u>DESIGNATION</u>	<u>NAME</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>METHOD</u>
B-1	Inshore Wellhead (near Shorty's Pier)	29° 31'44.699"N	94° 25'00.026"W	T-2 Intersection ✓
B-2	Offshore Pipestand	29° 29'52.946"N	94° 23'36.843"W	T-2 Intersection ✓

B-6	Wellhead	29°21'31.776"N	94°28'14.493"W	Del Norte rates ✓
B-7	Station 268	29°28'13.316"N	94°31'43.548"W	T-2 Intersection ✓

Rates were checked at one of the above locations by pulling alongside the wellhead both in the morning and afternoon. Final correctors for each unit used were derived by averaging these morning and afternoon correctors. Results of these daily calibrations showed changes in correctors of up to 8 meters from day to day and up to 6 meters from morning to afternoon.

H. SHORELINE *See verifier's Report Sections 2b.*

Sounding lines were run parallel to the shore at the inshore limit of safe navigation of the sounding vessels. A second line was run offshore of this to allow a safe turning margin for launches running mainscheme line toward the shore.

Shoreline details were transferred to the field sheet in blue from TP-00230 and TP-00231. A field edit was performed by Atlantic Marine Center personnel inshore of the surf zone and no changes were found. Because ship personnel did not do the field edit the shoreline was not inked in black. Small changes ^{two jetties} around Rollover Pass were inked in red on the field sheet.

I. CROSSLINES *See Verifier's Report Section 3a.*

Crosslines were run at least 45 degrees to the main scheme sounding lines. Crossline mileage amounted to about 8.2 percent of the launch regular sounding lines and 5.7 percent of the ship mainscheme lines. Crossline soundings generally agree within one foot of the regular lines, with some discrepancies of 2 feet, due primarily to tidal variations.

J. JUNCTIONS *See Verifier's Report Section 5*

This survey junctions with the following surveys:

Area of Junction	Field No.	Reg. No.	Scale	Date	Ship
East	MI-20-1-78	H-9769	1:20000	1978	MT. MITCHELL S-222 ✓
West	MI-20-3-78	H-9774	1:20000	1978	MT. MITCHELL S-222 ✓
South	MI-40-1-78	H-9775	1: 20000 40,000	1978	MT. MITCHELL S-222 ✓

Generally good junctions were made with MI-20-1-78 (H9769), with most depths agreeing to within 1 to 2 feet. Soundings from this survey junctioned excellently with both MI-20-3-78 and MI-40-1-78 with most depths agreeing within 1 foot. Soundings between launch 5 and 6 agreed within one foot. Ship soundings agreed within 1-2 feet with both launches.

After applying a draft correction of near +0.5 feet for the ship and a +0.5 feet correction for ship settlement and squat this discrepancy reduces to about 1 foot. The rest of this disagreement is attributed to the previously mentioned poor agreement between real and predicted tides.

K. COMPARISON WITH PRIOR SURVEYS

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

Survey Number:	DATE:	Scale:
H-5511	1933	1:20000
H-6304	1937	1:20000
H-6251	1937	1:40000

Comparison with all these prior surveys was good with most soundings agreeing from the 1:20000 scale surveys within 2 feet and from H-6251 within 3 feet. Areas offshore generally agreed within one foot. However, comparison of nearshore areas shows generally deeper depths on this survey and a corresponding inland movement of the shoreline due to erosion, as evidenced by several beach houses in the surf zone and conversations with local residents.

The following are findings regarding presurvey review items for OPR-K104-MI-78. The item numbers are labeled on the field sheet for ease in identification.

Items 1 and 2

Presurvey review item #132 at 29°31.6'N and 94°25.1'W reported as platform ruins, PA, and presurvey review item #133 at 29°31.8'N and 94°25.0'W reported as pier ruins, PA, were investigated in conjunction with each other, due to their close proximity. All of the investigations of this area are plotted on a 1:1000 scale sheet which is included in this survey data. On JD 146 MT. MITCHELL personnel located the platform wellhead ("B-1" for identification) by T-2 theodolite intersection. The computed position is 29°31'44.699"N and 94°25'00.026"W. Three days were spent investigating the area around the platform wreckage and the pier ruins. The first day (JD 154), vessel numbers 2223 and 2224 began operations with a 200-foot chain-drag. The two vessels worked northward towards Shorty's Longest Pier, approximately 60-70 meters apart. Since the Del Norte unit was faulty in 2223, all control for JD 154 was handled by 2224 (Detached Positions 3998-4000). The drag-boats encountered a hang and divers investigated. Underwater visibility was very poor (less than one foot), however, a general maze of pipes and other platform wreckage was discovered when divers attempted to free the chain-drag. The drag could not be readily freed, owing to the entangled wreckage and the increasing sea-state. The drag itself was buoyed, until further efforts could be made.

*No bathogram for positions
3998-4000 - no work*

On the second day of investigation (JD 156), vessels 2223 (pos. 9005-9027) and 2224 (4023-4068) returned to the site of the previous hang and divers freed the chain-drag, and at the same time attached a buoy in order to obtain an accurate least depth. No lead line depth was taken since it was too dangerous to have the launches directly above the diver's in such shallow water with poor visibility and strong currents. A detached position (VESNO 2224, position 4023) marks the hang with a fathometer *pos 4023 is very close to wellhead & is not shown on the S.S.* least depth of 13 feet. Next vessel 2223 moved inshore to take detached positions on the pilings of the pier ruins. The outermost piling was fixed by position 9005 at 29°31'49.635"N and 94°24'58.236"W. The seaward extent of the stable portion of Shorty's Longest Pier was located by D.P. 9028 at 29°32'03.479"N and 94°24'58.731"W. in 16 feet of water. At this same time vessel 2225 ran a 50 meter grid over the area between the platform ruins and the pier ruins obtaining depths in the 14-to-16 foot range. Meanwhile, vessel 2224 attached one end of the chain-drag to the wellhead itself (Note: This wellhead has about 20° - 30° angle from the vertical towards the shoreline, indicating that this structure is abandoned and is non-functional.) and began a circular drag to clear the surrounding area from a point approximately NW of the wellhead to a point south of the wellhead. This drag, with a radius of 50-60 meters, indicated no obstructions, although divers did check a hang which turned out to be only a small rise of mud.

Operations continued on a third day (JD 164) with 2223 (positions 9028-9049) and 2224 (position 4070). Vessel 2223 attempted to complete the circular drag with one end of the chain attached to the wellhead, while working the area immediately east of the structure. The chain was quickly hanged, requiring divers to go down and free the drag. Despite poor visibility (less than one-half foot), divers managed to discover a large section of sheet metal which created the hang (Detached Position 4070, vessel 2224) in addition to the afore-mentioned network of old pipes and wreckage. Again, no lead-line measurement was attempted, due to the strong currents and the heavy surf in the area.

In conclusion, the entire area around the wellhead is considered to be littered with platform wreckage, pipes and debris. A total of 3½ hours of dive-time, as well as 20 man-days were involved with the investigations of these two items. The least depth found in the area was 13 feet.

see Verified Report

Item 3 ✓

Presurvey review information item #123 at 29°29.0'N and 94°30.0'W, reported as wreckage remains of a drilling platform in Notice to Mariners 39(1968) was investigated by vessel number 2226 on JD 166. Using 50-meter line spacing (positions 3172-3196), the area was developed with no indication of an obstruction. No specific investigation was done as per Presurvey Review, since fathograms did not indicate any peaks. It is recommended that this item ~~be removed from the chart.~~

R.H.
be retained for charting

*concur
JPS*

L. COMPARISON WITH THE CHART

See also the Verifier's Report

This area is covered by the following NOAA charts:

<u>Chart Number</u>	<u>Edition</u>	<u>Date</u>	<u>Scale</u>
11332	15th	31 December 77	1:80K
11323	40th	7 January 78	1:80K

Charted depths generally agree with this survey within 1 to 2 feet, except along the shoreline where there are disagreements of 2 to 4 feet. ✓

These disagreements are mainly due to beach erosion with some movements inland of the shoreline of near 150 feet. ✓

Items investigated for comparison with these charts follow. The term platform is used for all multi-leg structures and wellhead is used for single vertical pipes.

Item 1 ✓ *See verifier's Report Presurvey Review Item 132*

PSR Item 132
Platform ruins, PA, charted at 29°31'36"N and 94°25'06"W was verified by MT. MITCHELL personnel with T-2 theodolite intersection. The calculated position is 29°31'44.699"N and 94°25'00.026"W and it is recommended that it be retained on the chart (see Section K for write up of investigation).
95 a wellhead
Chart the abandoned wellhead & foul area as shown on the present survey
Concur JPS

PSR Item #133
Item 2 ✓
Pier ruins, PA, charted at 29°31'48"N and 94°25'00"W was verified by vessel numbers 2223 and 2224. The most seaward piling in the ruins is 29°31'49.635"N and 94°24'58.236"W (see Section K). It is recommended that the pier ruins be retained on the chart. *charted as shown on this survey*
Concur ✓

Item 3 ✓
PSR Item #123
The obstruction, PD, at 29°29.0'N and 94°30.0'W was investigated (see Section K) and it is recommended that it be removed from the chart.
retained for charting Rb

Item 4 ✓
An uncharted wellhead ("B-2") was located by MT. MITCHELL personnel on JD 146 by T-2 theodolite intersections. The position is 29°29'52.946"N and 94°23'36.843"W, approximately 2.4 miles offshore in 3129 feet of water. It is recommended that this wellhead be added to the chart.
A wire-drag survey may be necessary to verify or disprove this item # 3.
Concur ✓

Item 5 ✓
(pipestand)
A pier charted at 29°31'09"N and 94°27'30"W was verified by vessel number 2225. Detached Position 772 positioned the outermost end of Gulf Haven
Concur

pier at 29°31'10.125N and 94°27'30.995"W. It is recommended that this item be ~~retained on the chart~~. *charted as shown on TP-00231* Concur ✓

Item 6 ✓ *See verifier's Report, Section #6*

A charted 12-foot shoal at 29°31.0'N and 94°26.6'W was investigated on JD 166 by vessel number 2225 (positions 739-770) using 50-meter line spacing. Results indicated no shoal area, since the bottom profile was a gradual slope. It is recommended that this item be removed from the chart. *12 ft. sdg is considered discredited by present survey depths* Concur
Items 7 and 8 ✓ JPS

Two sets of pier ruins, both east of Rollover Pass were verified. The older set of ruins were investigated on JD 166 by vessel numbers 2226, 2224 and 2223. Reconnaissance dives were made in the area, and no obstructions were found other than the pilings, which were 6 inches in diameter and extended 2 to 3 feet above the water. The most seaward piling is 75 meters NNE of Detached Position 3207 (29°30'22.446"N and 94°29'44.422"W) and is located in 7 to 8 feet of water. The "newer" set of ruins consists of 21 pilings, which also extend 2 to 3 feet above the water. Divers investigated this area and found no further obstructions. Vessel number 2223 fixed the most seaward piling at this set at 29°30'25.380"N and 94°29'45.822"W (Detached Position 9051). The chart for this area has only one set of ruins, which is positioned at 29°30'18"N and 94°29'48"W. No wire-drag of either area was attempted since the ruins were inshore of the normal traffic area and near the surf zone. *Although shown as jetty ruins on TP-00231 it would appear that they are more properly classified as pier ruins*

One hour of dive-time and eight man-days were devoted to the investigation of these two items. It is recommended that they be added to the chart. *Chart pier ruins as shown on the present survey* Concur
Items 9 and 10 ✓ JPS

Two uncharted groins at the entrance of Rollover Pass were investigated by vessel number 2226 on JD 166, while running shoreline hydrography. The most seaward end of the eastern groin is 20 meters NNE of Detached Position 3204 (29°30'21.423"N and 94°29'53.071"W). The outermost portion of the western groin is 100 meters NNE of Detached Position 3241 (29°30'18.747"N and 94°29'56.739"W). No further investigation was performed and it is recommended that these items be added to the chart. *"groins" are considered to be jetties and are noted as* Concur

Item 11 ✓ *Jetties on the smooth sheet* JPS

~~A wellhead~~ ^{platform} ("B-3") ^{35"} charted at 29°21'57"N and 94°28'~~21~~'²¹"W, was verified ^{as a well head} by vessel number 2226 (Detached Position 3423). The calculated position is 29°22'03.305"N and 94°28'16.063"W, and is equipped with a whistle and a quick flashing white light. Approximately 12 meters high, this wellhead ^{bare} (34 ft at) has a sign which reads: "Kilroy Co. of Texas", "State Tract #98-L", "Well MHW) No. 1". It is recommended that this structure be charted at the new position. *Wellhead only, no platform* Concur ✓

Item 12 ✓

about 15 m square ~~and approx 15 m above C.C.L.W.~~

A large platform¹ ("B-4") charted at 29°21'39"N and 94°28'24"W was verified by vessel number 2226 (Detached Positions 3424 to 3427) in 42 feet of water. ^{platform} The platform has 4 legs and is identified as "KCOT", "HI-98L-A", has a ^{bare 43 ft} whistle and a flashing white light. The NW leg of the permanent structure ^{at MHW} is at 29°21'56.817"N and 94°28'21.967"W, the SW leg at 29°21'56.300"N and 94°28'22.039"W, the SE leg at 29°21'56.515"N and 94°28'21.361"W, and the NE leg at 29°21'56.917"N and 94°28'21.527"W. The approximate center of the structure is 29°21'56.637"N and 94°28'21.724"W. It is recommended that this item be relocated on the chart, ^{as shown on the present survey.} _{7PS} ^{Concur}

Item 13 ✓

^{platform} A ~~wellhead~~ ("B-5") charted at 29°21'54"^{0?}N and 94°28'26"^{5?}W was verified, ^{as a wellhead} by vessel number 2226 using Detached Position 3449. A computed position of ^(wellhead) 29°21'53.445"N and 94°28'33.473"W was derived for this wellhead, which is ^{bare 34 ft} equipped with a flashing white light and a whistle. The structure is approx- ^{at MHW} imately 10 meters high and has no markings or identification. It is recom- ^{Concur K. Roy 102-3} mended that this item be ~~retained on the~~ charted ^{as shown on} the present survey. _{7PS}

Item 14 ✓

^{not now} A wellhead ("B-6") ^{located} charted ~~29°20'48"N and 94°28'57"W~~ was ~~verified~~ by vessel number 2226 and Detached Position 3450. A calculated position of 29°21'31.900"N and 94°28'14.385"W was computed for this wellhead, which has a whistle and a flashing white light. Approximately 10 meters in height, this wellhead has no markings of identification. It is recommended that this structure, located in 42 feet of water, be ~~relocated to this new position on the~~ charted ^{as shown on the present survey.} _{7PS} ^{Concur}

Item 15 ✓

^{Revised Pos of Plat Same} A ~~wellhead~~ ^{platform} ("B-7") charted at 29°28'12"N and 94°31'42"W was verified, ^{as a wellhead} by AMC Operations using T-2 theodolite intersection. The calculated position ^(wellhead) of 29°28'13.316"N and 94°31'43.548"W was derived for this wellhead, which ^{bare 43 ft at} served as Signal Station 268 for this survey (see Signal Tape printout). ^{MHW)} Identified as "Houston Oil and Minerals Corp.", "State Tract 1485 Lease", "Well No. 1", this structure is equipped with a whistle, a white flashing light and is approximately 15 meters high. It is recommended that this item be ~~retained on the~~ charted ^{as shown on the present} survey. _{7PS} ^{Concur}

Item 16 ✓

^{Revised Pos of Platform} A ~~wellhead~~ ^{platform} ("B-8") charted at 29°28'33"N and 94°33'09"W was verified, ^{as a wellhead} by AMC operations using T-2 theodolite intersection. The calculated position of 29°28'37.181"N and 94°33'09.652"W was derived for this wellhead, which

served as Signal Station 267 for this survey (see Signal Tape printout). *(wellhead bares 43 ft at MHW)*
This structure has no identifying marks, but it is equipped with a whistle and a white flashing light. Approximately 15 meters high, this wellhead is located in 14 feet of water, and it is recommended that it be charted at this new position. *A name "SW Pipeline Platform Lt, 1978" is misleading, a wellhead is here, but no platform.* *Concur*

Item 17

Removed Box of Platform 10ft square

A charted platform, located at 29°28'27"N and 94°32'58"W was verified by vessel number 2225 (Detached Position 957). A calculated position of 29°28'44.065"N and 94°32'56.934"W was derived for this structure, which carries the caution: "Warning-High Pressure Gas Line". This wellhead is 10 meters high, has 4 legs about 3 meters apart and is located in 15 feet of water. It is recommended that it be charted at this new position, *as shown on the present survey.* *(platform bares 34 ft at MHW)* *Concur*

Item 18

Small Pile

An uncharted obstruction was investigated on JD 191 by vessel number 2224 (Detached Positions 9058-9060). The obstruction consists of concrete pilings with steel reinforcements and wooden supports. Divers spent 30 minutes reviewing the foul area and verified that no further obstructions existed in the area. Position 9058 was the least depth obtained, marking a piling which extended above the surface 2 feet. This outermost piling is at 29°29'11.657"N and 94°32'51.630"W and it is recommended that this item be charted *as shown on the present survey.* *(ruins uncovered 3 ft at GCLW)* *Concur*

Item 19

Removed from chart 2/19/80

A privately maintained white/orange buoy with the letter "E" for identification (no Light List number), was charted on #11332 at 29°21.0'N and 94°27.0'W in 44 feet of water. This buoy was not observed in the working area, and it is recommended that it be removed from the chart.

Also no mention is made of white/orange buoy "F" in the survey records. *Concur*

M. ADEQUACY OF THE SURVEY

This survey is considered complete and adequate to supercede prior surveys for charting. *Concur* *JPS*

N. AIDS TO NAVIGATION

There are no fixed or floating aids to navigation within the survey area.

O. <u>STATISTICS</u>	Ship	Launch	Total
Linear nautical miles of hydrography	514	625	1139
Linear nautical miles of crosslines	31	56	87
Linear nautical miles of development	0	9	9
Total linear miles of hydrography	545	690	1235
Total miscellaneous miles	332	453	785
Total miles run	877	1143	2020
Square miles of hydrography	58	58	116
Total number of positions	1454	2669	4123
Nansen cast	3	0	3
Bottom samples	38	90	128

P. MISCELLANEOUS

On 6 June 1978 (JD 157) the MT. MITCHELL was anchored in 34 feet of water 3 1/2 nautical miles off Gilchrist, Texas at 29°27.4'N and 94°27.4'W. At 0520 GMT the 49 foot shrimp boat SEA FEVER approached the MT. MITCHELL listing very badly. The ship's submersible pump was passed to the vessel but was unable to keep up with the inflow of water. The SEA FEVER capsized at about 0540 GMT and drifted off on course 261°T from the ship. It disappeared from visual contact at an estimated range of one mile. Twenty knot winds precluded sending a launch to follow the vessel that night. Due to continuing poor weather conditions and other operational demands a search for the vessel was not conducted until 16 June (JD 167). On that date launches 3, 4 and 5 ran a systematic scheme from 29° 27.5'N 94° 28.4'W to 29°26.9'N 94°32.4'W a total of 3.6 nautical miles. Launch 5 provided control (position numbers 958-1037) and was flanked on either side by launch 3 and 4 at a distance of 15 meters. An area 450 meters wide was covered with no indications of the wreck found. However, a wrecked shrimp boat was discovered by the MT. MITCHELL on June 14 at 29°31'00.5"N, 94°19'20.2"W in 31 feet of water with a least depth of 14 feet. No positive identification could be made by divers. Although this location is 9 nautical miles from the last sighted position of the SEA FEVER, along shore currents could have carried it there. For further information see MI-20-1-78 (H-9769). *216*

Q. RECOMMENDATIONS

None

R. AUTOMATED DATA PROCESSING

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

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 Computions	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

Respectfully Submitted,

Gerald B. Mills

for Michael E. Henderson
Lieutenant (jg) NOAA

Determination of Velocity Corrections

Three Nansen Casts were used to compute the velocity corrections for MI-20-2-78. From Nansen Cast#1, taken on JD 130, Velocity Table I was obtained. This table is for MT. MITCHELL Launch 2225 only. It is to be used for hydro done on JD 143. The second Nansen Cast, taken on JD151, yielded Velocity Tables II and III for ship and launch work respectively. Tables II and III are to be used for hydro done on Julian Days 152-163. The third and last Nansen Cast was done on JD 173 and was used to obtain Velocity Tables IV and V which apply to Julian Days 164-173.

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>JULIAN DAY</u>
1	29°30.3' N	94°18.2'W	130
2	29°20.6' N	94°15.9'W	151
3	29°16.2' N	94°24.0'W	173

In addition to the nansen casts, bar checks were taken whenever weather permitted. These bar checks showed correctors that agree with the nansen cast data within 0.4 feet. This discrepancy is due to the poor quality of the bar checks. Salinities for the nansen casts were obtained by the use of a Beckman salinometer.

VESSEL =2220

DATE = 10 MAY 78 (JD 130)

TIME =1200Z

LATITUDE = 029/30/18.00 N

LONGITUDE = 094/17/40.00 W

TYPE OF OBSERVATION = NANSEN #1

CAST-DEPTH (SURFACE) (M)	TEMP (DEG C)	SALINITY (0/00)	SND VEL (M/SEC)
0000.0	23.79	22.94	1518.53
0005.0	23.76	22.88	1518.47
0010.0	23.71	23.01	1518.56

VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

1

DRAFT = 01.6

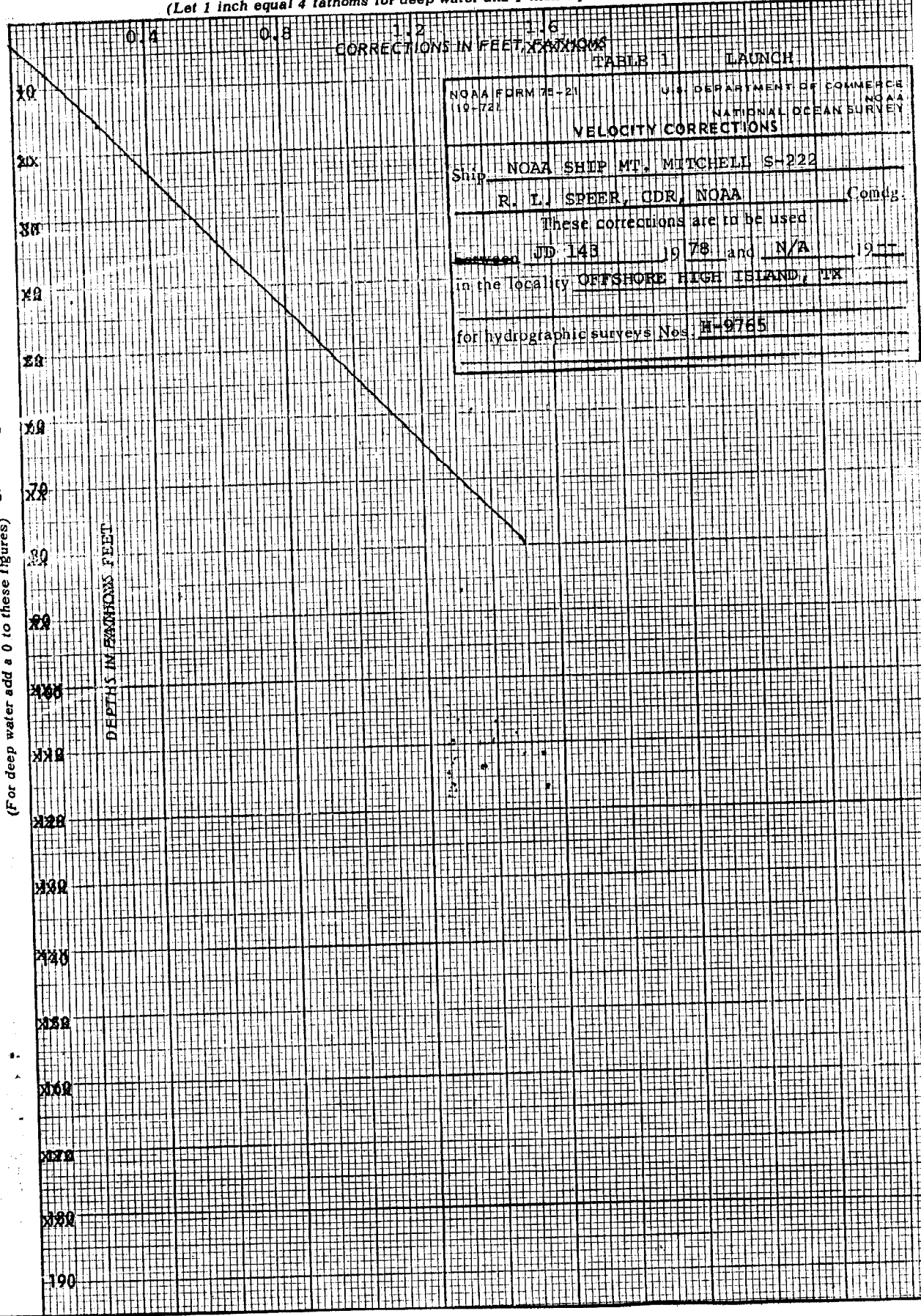
ACTUAL DEPTH (SURFACE)
MINUS VELOCITY
CORRECTION
(FT)

VELOCITY
CORRECTION
(FT)

0007.95
0023.73
0039.52

0000.25
0000.87
0001.49

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)



NOAA FORM 75-21 (10-72)	U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY
VELOCITY CORRECTIONS	
Ship <u>NOAA SHIP MT. MITCHELL S-222</u>	
<u>R. L. SPEER, CDR, NOAA</u>	Comdg.
These corrections are to be used	
<u>JD 143</u>	19 <u>78</u> and <u>N/A</u> 19 <u>77</u>
in the locality <u>OFFSHORE HIGH ISLAND, TX</u>	
for hydrographic surveys Nos. <u>H-9765</u>	

KE
 20 X 20 TO THE INCH 46 1240
 MADE IN U.S.A.
 KEUFFEL & ESSER CO.

(For deep water add a 0 to these figures)

DEPTH IN FATHOMS FEET

CORRECTIONS IN FEET, FATHOMS

TABLE 1 LAUNCH

VESSEL = 2220

DATE = JD 151 *May 31*

TIME = 2036

LATITUDE = 029/20/36.00

LONGITUDE = 094/15/54.00

TYPE OF OBSERVATION = NANSEN * Z

CAST-DEPTH (SURFACE) (M)	TEMP (DEG C)	SALINITY (0/00)	SND VEL (M/SEC)
0000.0	28.37	26.18	1533.01
0006.0	28.18	26.18	1532.63
0013.0	26.97	27.23	1531.09

VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

1

DRAFT = 14.0

CAST #2 SHIP - TABLE 2

ACTUAL DEPTH (SURFACE)
MINUS VELOCITY
CORRECTION
(FT)

VELOCITY
CORRECTION
(FT)

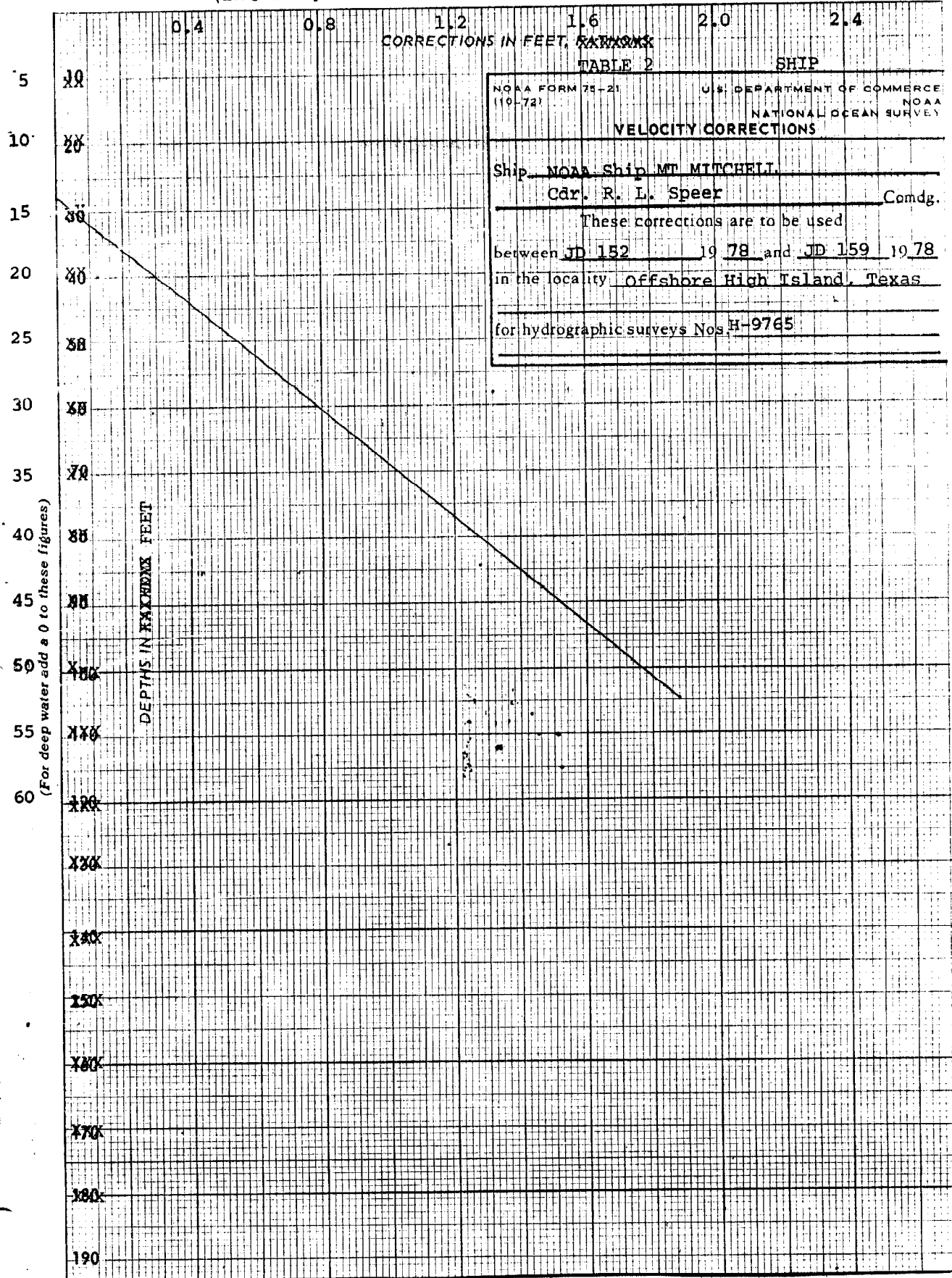
0009.84
0030.35
0052.25

0000.00
0000.82
0001.88

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

46 1240

K Σ 20 X 20 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.



VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

1

DRAFT = 1.6

CAST #2 LAUNCH - TABLE 3

ACTUAL DEPTH (SURFACE)
MINUS VELOCITY
CORRECTION
(FT)

VELOCITY
CORRECTION

(FT)

0009.45

0000.39

0029.76

0001.41

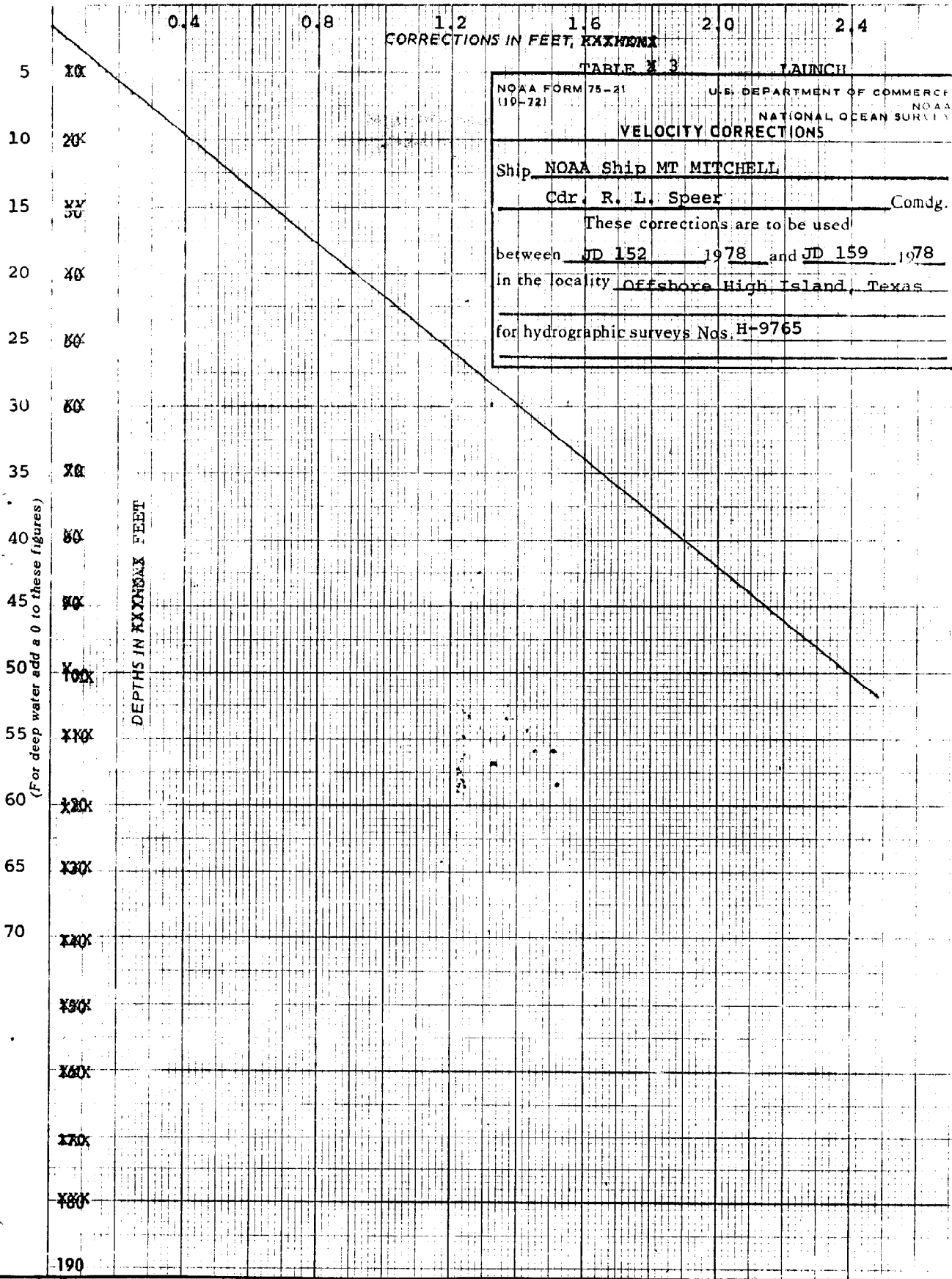
0051.66

0002.48

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

46 1240

30 X 20 TO THE NCH. X 10 INCHES
NEUFFEL & ESSER CO. MADE IN U.S.A.



DEPTHS IN ~~XXXXXX~~ FEET
(For deep water add a 0 to these figures)

5
10
15
20
25
30
35
40
45
50
55
60
65
70
190

VESSEL =2220

DATE =22 JUNE 78 (JD 173)

TIME =1200

LATITUDE = 029/16/12.00 N

LONGITUDE = 094/24/00.00 W

TYPE OF OBSERVATION =NANSEN #3

CAST-DEPTH (SURFACE)
(M)

TEMP
(DEG C)

SALINITY
(0/00)

SND VEL
(M/SEC)

0000.0
0007.0
0014.0

30.25
29.04
26.92

21.51
26.45
30.29

1532.37
1534.89
1534.34

VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

1

DRAFT = 14.0

CAST #3 SHIP - TABLE 4

ACTUAL DEPTH (SURFACE)
MINUS VELOCITY
CORRECTION
(FT)

0011.48
0033.44
0055.29

VELOCITY
CORRECTION
(FT)

0000.00
0001.00
0002.12

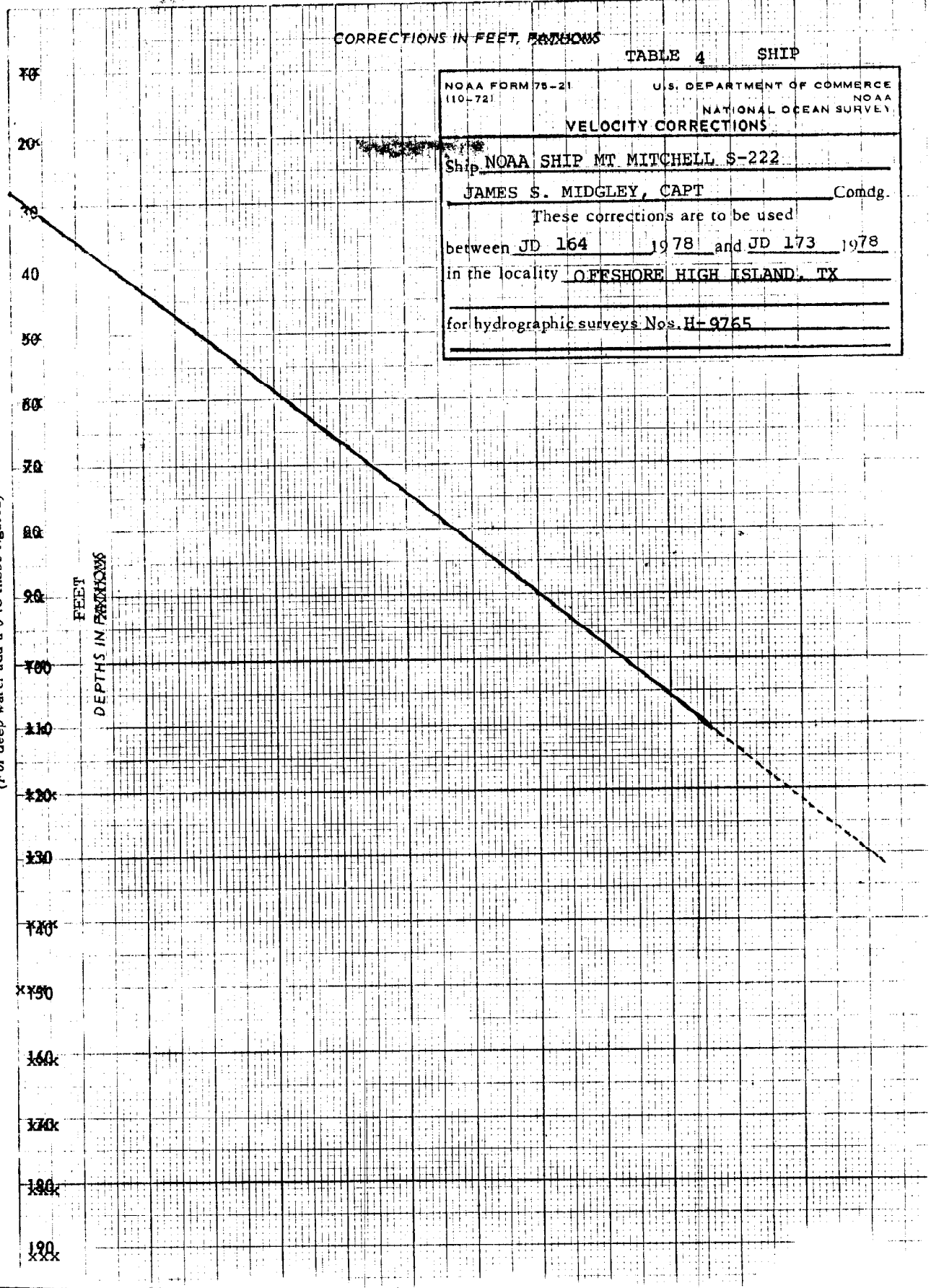
CORRECTIONS IN FEET, FATHOMS TABLE 4 SHIP

NOAA FORM 75-21 (10-72)	U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY
VELOCITY CORRECTIONS	
Ship <u>NOAA SHIP MT MITCHELL S-222</u>	
Comdg. <u>JAMES S. MIDGLEY, CAPT</u>	
These corrections are to be used between JD <u>164</u> 1978 and JD <u>173</u> 1978 in the locality <u>OFFSHORE HIGH ISLAND, TX</u> for hydrographic surveys Nos. <u>H-9765</u>	

46 1240

REDUCED TO THE INCHES BY THE
NATIONAL BUREAU OF STANDARDS & ESSER CO. MADE IN U.S.A.

(For deep water add a 0 to these figures)



VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

1

DRAFT = 1.6

CAST #3 - LAUNCH - TABLES

ACTUAL DEPTH (SURFACE)
MINUS VELOCITY
CORRECTION
(FT)

VELOCITY
CORRECTION
(FT)

0011.01
0032.85
0054.70

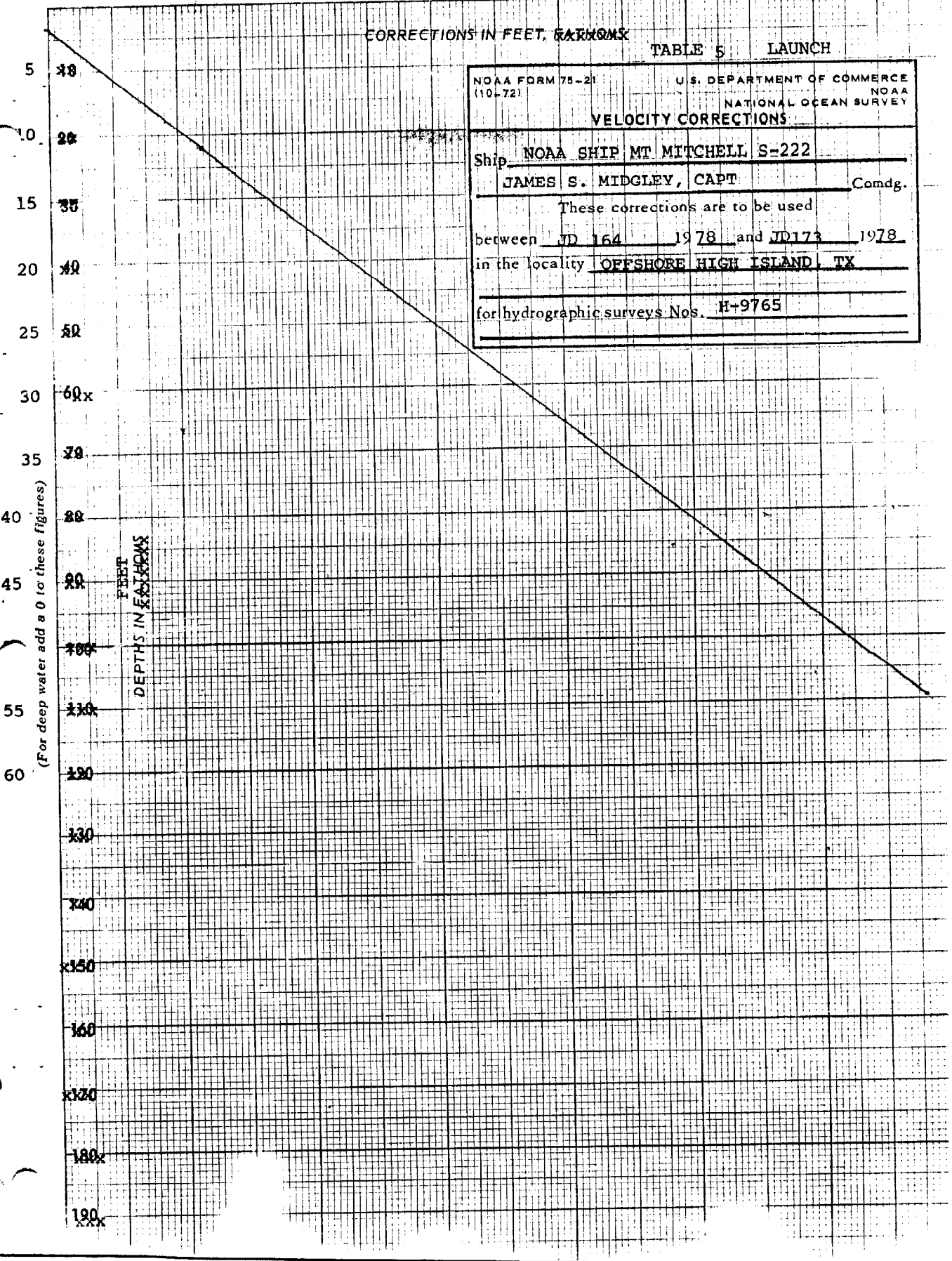
0000.47
0001.60
0002.72

CORRECTIONS IN FEET, FATHOMS TABLE 5 LAUNCH

NOAA FORM 75-21 (10-72)	U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY	
VELOCITY CORRECTIONS		
Ship <u>NOAA SHIP MT MITCHELL S-222</u>		
JAMES S. MIDGLEY, CAPT		Comdg.
These corrections are to be used		
between <u>JD 164</u> 19 <u>78</u> and <u>JD 173</u> 19 <u>78</u>		
in the locality <u>OFFSHORE HIGH ISLAND, TX</u>		
for hydrographic surveys Nos. <u>H-9765</u>		

46 1240

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



VELOCITY PRINTOUT*TABLE 1*VESNO 2225

000040 0 0000 0001 000 222500 020278
000089 0 0002
000142 0 0004
000193 0 0006
000245 0 0008
000295 0 0010
000347 0 0012
000397 0 0014
999999 0 0014

TABLE 2*VESNO 2220

000159 0 0000 0002 000 222000 020278
000200 0 0002
000241 0 0004
000282 0 0006
000323 0 0008
000364 0 0010
000405 0 0012
000446 0 0014
000487 0 0016
999999 0 0018

TABLE 3*VESNO 2226

000036 0 0000 0003 000 222600 020278
000076 0 0002
000117 0 0004
000157 0 0006
000198 0 0008
000238 0 0010
000279 0 0012
000319 0 0014
000360 0 0016
000400 0 0018
000441 0 0020
000481 0 0022
999999 0 0024

VELOCITY TAPE PRINTOUT*PAGE #3*TABLE 4*VESNO 2220

000157 0 0000 0004 000 22200 020278
000196 0 0002
000235 0 0004
000274 0 0006
000313 0 0008
000351 0 0010
000390 0 0012
000428 0 0014
000468 0 0016
000507 0 0018
000546 0 0020
000587 0 0022
999999 0 0022

TABLE 5*VESNO 2226

000036 0 0000 0005 000 222600 020278
000115 0 0002
000154 0 0004
000193 0 0006
000232 0 0008
000271 0 0010
000310 0 0012
000350 0 0016
000388 0 0018
000426 0 0020
000455 0 0022
999999 0 0022

TABLE 5*VESNO 2225

000036 0 0000 0005 000 222500 020278
000115 0 0002
000154 0 0004
000193 0 0006
000232 0 0008
000271 0 0010
000310 0 0012
000350 0 0016
000388 0 0018
000426 0 0020
000455 0 0022
999999 0 0022

VELOCITY PRINTOUT*PAGE #4*TABLE 5*VESNO 2224

000036 0 0000 0005 000 222400 020278
000115 0 0002
000154 0 0004
000193 0 0006
000232 0 0008
000271 0 0010
000310 0 0012
000350 0 0016
000388 0 0018
000426 0 0020
000455 0 0022
999999 0 0022

TABLE 5*VESNO 2225

000036 0 0000 0005 000 222300 020278
000115 0 0002
000154 0 0004
000193 0 0006
000232 0 0008
000271 0 0010
000310 0 0012
000350 0 0016
000388 0 0018
000426 0 0020
000455 0 0022
999999 0 0022

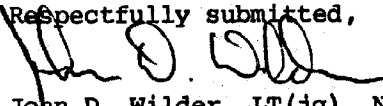
SETTLEMENT AND SQUAT
MT. MITCHELL 1978 FIELD SEASON
JENSEN #1002 and 1004

Settlement and squat tests were run for MT. MITCHELL launches 1002 and 1004 (vessel #2225, 2226 respectively) on May 15, 1978 off the Galveston Coast Guard Base Pier. Corrections were determined with a Zeiss Ni2 Level (s/n 142936) positioned at the end of the pier and a Philadelphia leveling rod positioned directly above the transducer on the starboard side of each launch. The water level alongside of the pier was measured before, during, and after the level sightings. During the first test with launch 1002, a change of +0.1 feet in water level was observed between the first and last sighting and correctors were applied accordingly. During the second test with launch 1004, no appreciable change was observed. The seas were calm with moderate wind.

Two sets of ten high and low rod readings were recorded for each speed, and the average reading of each set was then calculated. The final corrector was determined by taking the mean of the averages of both sets. A maximum difference of 0.7 feet was observed between high and low readings, which was caused by the wake of passing vessels. The maximum distance for the sightings was approximately one-quarter mile with the minimum distance about 25 meters. A "C" shot was done on the level before the tests were run to ensure small errors due to varying distances. "C" was found to be .02 mm/m or 10 mm for distant differences of one-quarter mile.

The leveling runs were made at 600, 1600, 2100, and 2500 RPM for each launch. Measurements were made with each launch laying to before and after the tests were run. Both launches carried a crew of three and all hydrographic survey equipment. Both launches had full fuel tanks. Attached is an abstract of the data obtained including a graph for each launch.

Respectfully submitted,

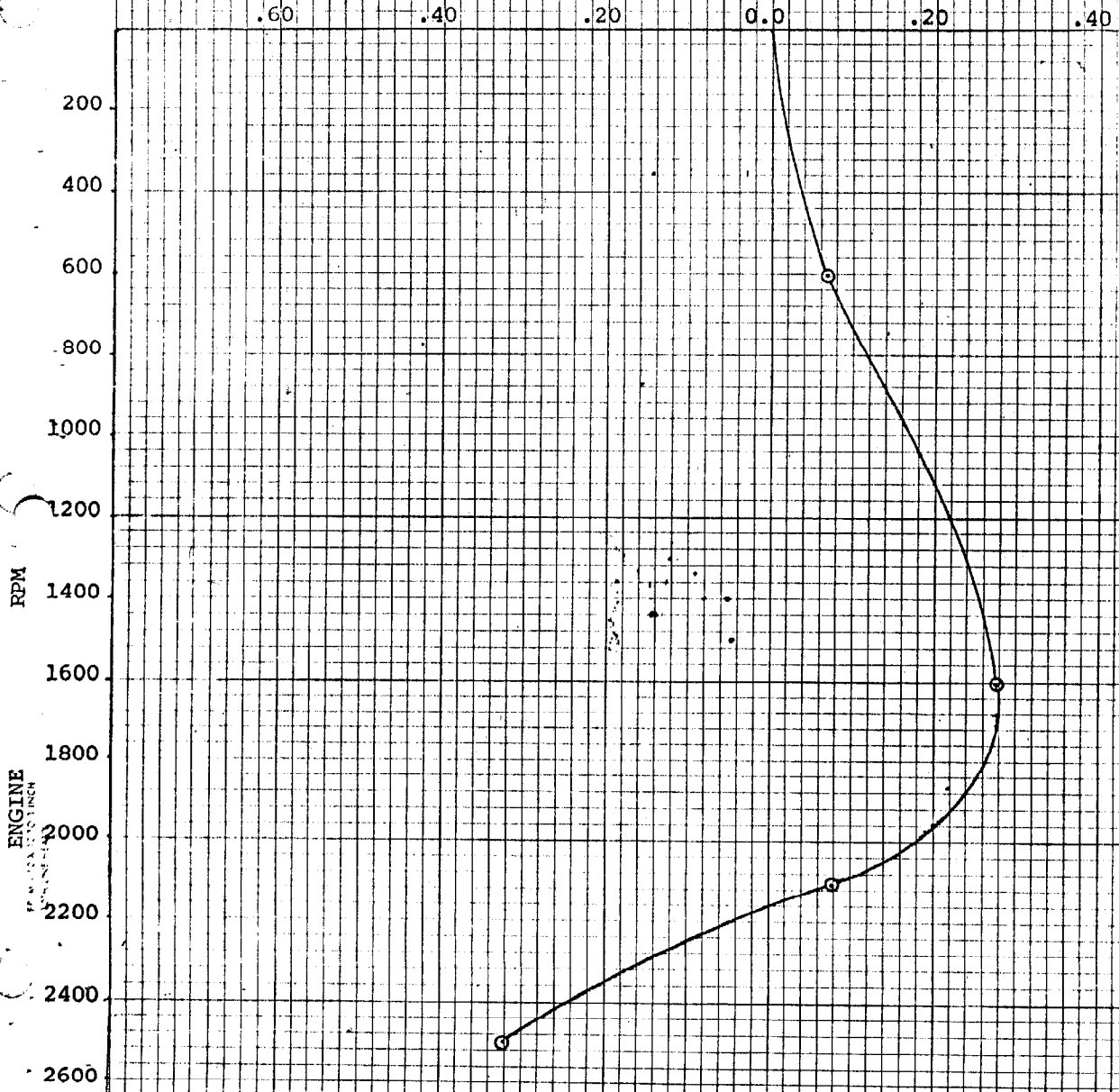

John D. Wilder, LT(jg), NOAA

SETTLEMENT AND SQUAT CORRECTORS
 MT MITCHELL 1978 FIELD SEASON

RPM	JENSEN #1002 VESNO 2225	JENSEN #1004 VESNO 2226
0	----	----
500	+ .05	+ .05
600	+ .07	+ .07
700	+ .09	+ .08
800	+ .12	+ .10
900	+ .13	+ .12
1000	+ .17	+ .14
1100	+ .19	+ .15
1200	+ .22	+ .17
1300	+ .24	+ .18
1400	+ .25	+ .19
1500	+ .27	+ .19
1600	+ .27	+ .20
1700	+ .27	+ .19
1800	+ .26	+ .18
1900	+ .24	+ .16
2000	+ .18	+ .13
2100	+ .08	+ .09
2200	- .02	+ .03
2300	- .18	- .03
2400	- .24	- .11
2500	- .32	- .21

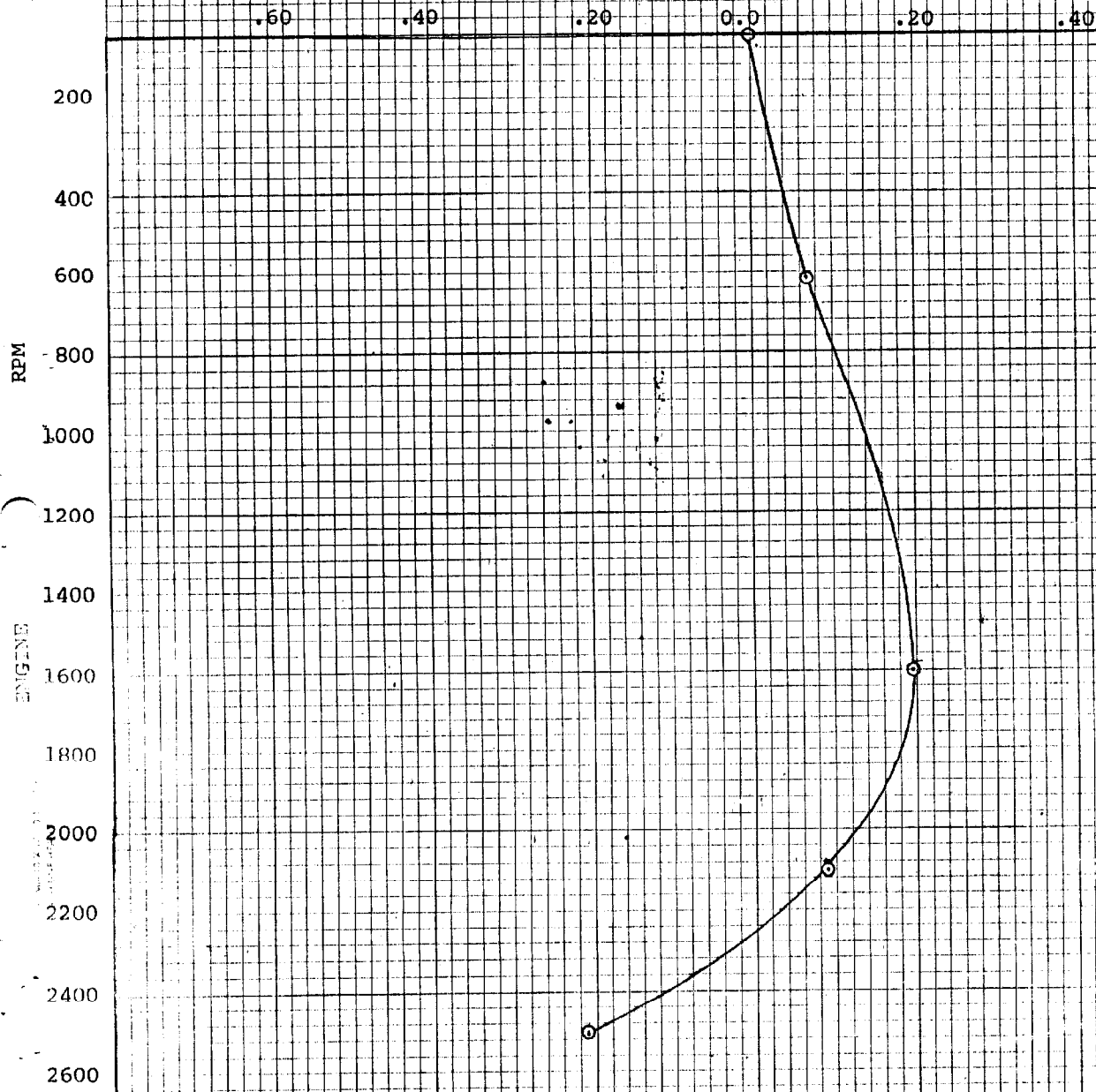
Mt. Mitchell Launch #2225

SETTLEMENT AND SQUAT, 1978 Jensen 1002
Corrections (ft.)



Mt. M 11 Launch #2226

SETTLEMENT AND SQUAT, 1978 Jensen 1004
Corrections (ft.)



SETTLEMENT AND SQUAT

MT MITCHELL 1978 FIELD SEASON

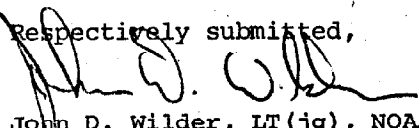
The settlement and squat test for the MT MITCHELL (S-222) was conducted June 12, 1977 in the Galveston Inner Bar Channel, approximately one-half mile east of the Coast Guard Base at Galveston, Texas, using a Zeiss Ni-2 Level (s/n 142936) positioned on the southern breakwater. To determine possible water level changes during the test, the height of water was measured before, during and after the level sightings; no change was observed.

A tower on the northern side of the channel was used as a range, and the readings were taken as the ship aligned with the tower. Passes with the ship were made at idle, half, and standard speeds with a heading of 100° on each pass. An initial reading was taken with the ship dead in the water. A portable tide staff (graduated in tenths of feet), was positioned on the center of the fan-tail cargo hatch located amidships to allow a clear line of sight to the onshore observer. The displacement of the staff from the skeg transducer was approximately 3 feet aft. Since all hydrography for OPR-K104-MI-78 was to be recorded using this transducer, the settlement and squat correctors were only determined at one location.

A draft reading of 14.7 feet was taken before the test. The ship was carrying four launches--two Pacific Plastics launches in davits #3 and #4, and two Jensen launches in davits #5 and #6. Settlement and squat was run using both engines and various pitch combinations as determined from a speed curve established May 1977, offshore Cape Henry, Virginia. The ship carried a full load of fuel during the test.

Included is an abstract of the data obtained, suggested correctors versus ship speed, the graph of ship speed versus settlement and squat correctors, the "C" shot determination of instrument error, and the ship's speed curve.

Respectively submitted,

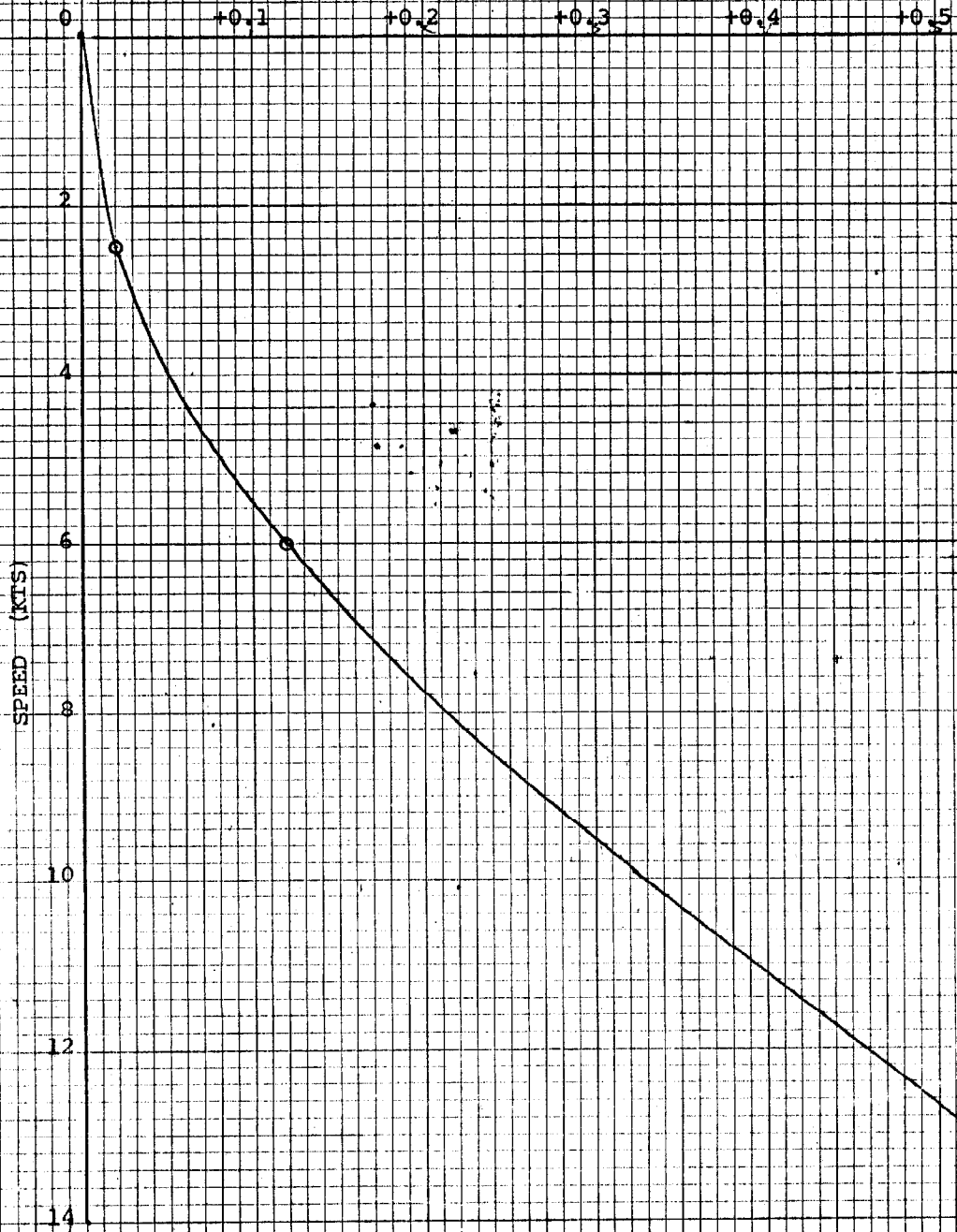

John D. Wilder, LT(jg), NOAA

SETTLEMENT AND SQUAT CORRECTORS

June 12, 1978

SPEED (KTS)	CORRECTION (FT)
1	0
2	0
3	0
4	0
5	0.1
6	0.1
7	0.2
8	0.2
9	0.3
10	0.3
11	0.4
12	0.5
13	0.5

SETTLEMENT AND SQUAT, 1977
Corrections (ft)



QUALITY CONTROL
BY THE NAVY

SIGNAL TAPE PRINTOUT H-9765 MI-20-2-78 OPR-K104-MI-78

100	4	28	56	05032	095	17	58364	250	0000	171859
261	4	29	27	16439	094	37	33952	250	0000	000000 ✓
266	4	29	28	52370	094	33	51860	250	0000	000000 ✓
267	4	29	28	37181	094	33	09652	139	0000	000000 ✓
268	4	29	28	13316	094	31	43548	139	0000	000000 ✓
269	4	29	29	14185	094	32	56506	250	0000	000000 ✓
270	4	29	29	34919	094	32	03726	250	0000	000000 ✓
271	4	29	29	56884	094	31	09670	250	0000	000000 ✓
272	4	29	30	19260	094	30	16260	250	0000	000000 ✓
273	4	29	30	40904	094	29	14797	250	0000	000000 ✓
274	4	29	31	03129	094	28	19456	250	0000	000000 ✓
275	4	29	31	20416	094	27	32126	250	0000	000000 ✓
276	4	29	31	47968	094	26	30847	250	0000	000000 ✓
277	4	29	32	10846	094	25	20110	250	0000	000000 ✓
278	4	29	32	37438	094	24	13355	250	0000	000000 ✓
279	4	29	32	53232	094	23	25225	250	0000	000000 ✓
280	4	29	33	32665	094	23	37269	139	0000	000000
282	4	29	33	23677	094	23	08196	139	0000	000000
286	4	29	32	25248	094	24	50658	250	0000	000000
288	4	29	33	52042	094	20	44013	250	0000	000000
291	4	29	31	44699	094	25	00026	250	0000	000000
292	4	29	29	52946	094	23	36843	250	0000	000000
295	4	29	35	00651	094	17	50856	250	0000	000000
300	4	29	35	12670	094	17	18380	250	0000	171859

SIGNAL NAMES TAPE PRINTOUT MI-20-2-78 H-9765 OPR-K104-MI-78

100	CAPTAIN	FIELD PARTY G18
261	H-5-TX-78	AMC OPS
266	H-9-TX-78	AMC OPS
267	SW PIPELINE PLATFORM LIGHT	AMC OPS
268	PIPESTAND LIGHT	AMC OPS
269	H-10-TX-78	AMC OPS
270	H-11-TX-78	AMC OPS
271	H-12-TX-78	AMC OPS
272	H-13-TX-78	AMC OPS
273	H-14-TX-78	AMC OPS
274	H-15-TX-78	AMC OPS
275	H-16-TX-78	AMC OPS
276	HOLT	290941 #1024
277	H-17-TX-78	AMC OPS
278	H-18-TX-78	AMC OPS
279	H-19-TX-78 (AUTOTAPE)	AMC OPS
280	HIGH ISLAND MUNICIPAL WATER TANK	AMC OPS
282	HIGH ISLAND MICROWAVE TOWER	AMC OPS
286	H-7 (COE)	AMC OPS
288	H-21-TX-78	AMC OPS
291	"B-1"	MT MITCHELL
292	"B-2"	MT MITCHELL
295	H-23-TX-78	AMC OPS
300	H-27-TX-78	AMC OPS

Replaces C&GS Form 567. LANDMARKS FOR CHARTS

REPORTING UNIT (Field Party, Ship or Office) Coastal Mapping Div., AMC, Norfolk, VA STATE TEXAS LOCALITY Sabine Pass to Pass Cavallo DATE July 1978

The following objects HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS. OPR PROJECT NO. K-104 JOB NUMBER CM-7702 SURVEY NUMBER TP-00230 DATUM N.A. 1927

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)

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)	CHARTS AFFECTED
		D.M. Meters	° /	D.P. Meters	° /		
TANK	Water tank hcm 170 ft. (off limits of 4-9765)	29-27	27	94-38	11	77C(I)2552 March 7, 1977	11323 11331
TANK	North of two	29-29	44	94-33	49	77C(I)2550 March 7, 1977	" "
TANK	South of two	29-29	43	94-33	49	" "	" "
*	These two tanks were left on the manuscript, because field editor said visible from intra coastal waterway not visible from Gulf of Mexico						

RESPONSIBLE PERSONNEL

TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	J. D. Di Mare	<input checked="" type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	J. D. Di Mare	FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	F. Margiotta	OFFICE ACTIVITY REPRESENTATIVE <input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'
(Consult Photogrammetric Instructions No. 64.)

<p>OFFICE</p> <p>I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p> <p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection</p> <p>A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p>FIELD (Cont'd)</p> <p>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982</p> <p>II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vls.' and date. EXAMPLE: V-Vls. 8-12-75</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>
---	--

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:

<u>SITE</u>	<u>LOCATION</u>	<u>PERIOD</u>
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
General Delivery
Galveston, Texas 77550

DATE: 1 August 1978

TO: Director, National Ocean Survey (C331)

FROM: Commanding Officer, NOAA Ship MT MITCHELL S-222

SUBJECT: Tidal Data for Survey H-9765

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 (CAM 3), Atlantic Marine Center, Norfolk, VA 23510.

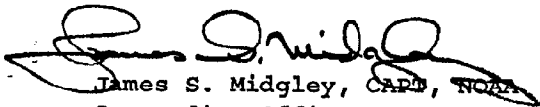
Galveston (Pier 21), Texas	(877-1450)	29°18.6'N	94°47.2'W
Galveston (Pleasure Pier), Texas	(877-1510)	29°17.2'N	94°47.4'W
Sabine Pass, Texas	(877-0590)	29°42.3'N	93°51.2'W

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

29°27.5'N	29°32.3'N
94°34.0'W	94°24.1'W
29°16.5'N	29°20.8'N
94°24.1'W	94°16.4'W

This information is requested for the following periods:

0000 May 23, 1978 (JD 143) through 2359 July 10, 1978 (JD 191).


James S. Midgley, CAPT, NOAA
Commanding Officer



April 11, 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.
877-1450 Galveston Pier 21, Tx

Period: May 23 - July 10, 1978

HYDROGRAPHIC SHEET: H-9765

OPR: K104

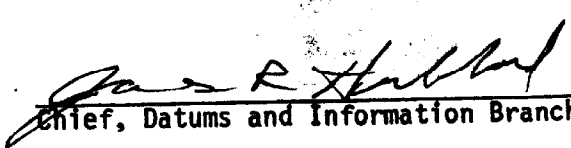
Locality: Texas coast, vicinity of Galveston

(Gulf Coast Low Water Datum): 2.46 ft. - Pleasure Pier
Plane of reference (~~mean lower low water~~): 3.82 ft. - Pier 21

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

Remarks: Zone direct on Pleasure Pier.

NOTE: ~~Data for Pleasure Pier is not available from June 1-28.~~
~~For this period zone on Pier 21 applying time correction~~
~~-1 hour and 6 minutes and range ratio x1.50.~~
Data found by Tide Branch and has been
applied to H-9765 with revised datum of 2.86 ft.
BJS


Chief, Datums and Information Branch

APPROVAL SHEET

MI-20-2-78

H-9765

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

for *Gerald B. Mills*
Raymond L. Speer

CDR, NOAA

Commanding Officer

GEOGRAPHIC NAMES

Name on Survey	Source of Name									
	A	B	C	D	E	F	G	H	I	J
	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		
Gilchrist ✓	11332									1
Rolloven ✓	11332									2
Rollover Pass ✓	11332									3
Caplen ✓	11332									4
Bolivar Peninsula ✓	11323									5
Gulf of Mexico ✓	11323									6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25

Approved:

Chas E. Hamilton
Chief Geographer - C345

28 Feb. 1980

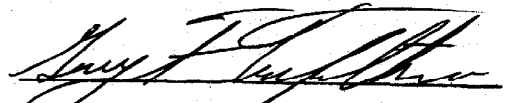
APPROVAL SHEET
FOR
SURVEY H- 9765

- 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:

8/31/79

Signed:



Title:

Chief, Verification Branch

HYDROGRAPHIC SURVEY STATISTICS

H-9765

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	11
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	2

DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						1- misc. data
CAHIERS	2- with printouts					
VOLUMES	5					
BOXES			1- Smooth			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

1- Cht. blow-up

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			4251
POSITIONS CHECKED		420	
POSITIONS REVISED		10	
SOUNDINGS REVISED		40	
SOUNDINGS ERRONEOUSLY SPACED		4	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)			
VERIFICATION OF CONTROL		4	
VERIFICATION OF POSITIONS		25	
VERIFICATION OF SOUNDINGS		40	
COMPILATION OF SMOOTH SHEET		25	
APPLICATION OF TOPOGRAPHY		16	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		8	
COMPARISON WITH PRIOR SURVEYS & CHARTS		12	
VERIFIER'S REPORT		8	
OTHER		101	
TOTALS	0	239	239

Pre-Verification by M Hickson, R. Roberson	Beginning Date 08/30/78	Ending Date 05/31/79
Verification by R. R. Hill	Beginning Date 08/15/79	Ending Date 08/27/79
Verification Check by B.J. Stephenson	Time (Hours) 5	Date 08/27/79
Marine Center Inspection by HIT	Time (Hours) 8	Date 08/28/79
Quality Control Inspection by F.P. SAULSBURY	Time (Hours) 74	Date 02-27-80
Requirements Evaluation by D.J. Hill	Time (Hours) 84	Date 6/23/80

12 hours. 4/2/80
D. Myers

REGISTRY NO. H-9765

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. 9765

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 REQUIRED _____ INITIALS JHE

REMARKS:

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9765

FIELD NO. MI-20-2-78

Texas, Gulf of Mexico, Offshore Gilchrist

SURVEYED: May 23, 1978 through July 10, 1978

SCALE: 1:20,000

PROJECT NO.: OPR-K104

SOUNDINGS: Ross Digital Echo Sounder
Raytheon 723B Echo Sounder

CONTROL: Odum Hydrotrac
(Range/Range)
Del-Norte
(Range/Range)

Chief of Party R.L. Speer
Surveyed by G. Mills
..... L. Goodman
..... D. Waltz
..... M. Henderson
..... J. Wilder
..... P. Daughterty
..... T. Rulon
..... W. Pringle
..... T. Bainbridge
Automated Plot by XYNETICS 1201 Plotter (AMC)
Verified and Inked by R.R. Hill
August 27, 1979

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-00230 and TP-00231 of 1977-78. (BP-104916-17)

Differences were encountered in shoreline between the T-sheets and Hydrographic data in the vicinity of Rollover Pass. A sketch of this area drawn in the sounding volume (No. 5 page 11) and the field's location of a new jetty to the east, disagrees with the shoreline manuscripts.

Examine area when new photograph is available

See Chart Letter 1506/80

3. Hydrography

- a. Depths at crossings are in good agreement. *1 ft differences are common*
- b. The standard depth contours were adequately delineated.
- c. The development of the bottom configuration and the investigation of least depths were considered adequate.

4. Condition of Survey

The smooth sheet and accompanying overlays, hydrographic records, and reports are adequate and conforms to the requirements of the Hydrographic Manual with the following exception:

The hydrographer failed to adequately investigate Rollover Pass.

5. Junctions

An adequate junction was effected with the following:

H-9769	(1978)	to the east - not registered yet
H-9774	(1978)	to the west - not registered yet
H-9775	(1978)	to the south O.K.

6. Comparison With Prior Surveys

H-5511	(1933)	1:20,000 ✓
H-6304	(1937)	1:20,000 ✓
H-6251	(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 occur within the 12-foot curve where apparent shoreline and inshore area erosion has taken place. Shoreline erosion of up to 140 meters has taken place in the survey area. Differences in the offshore area are attributed to different survey methods and equipment and possible natural causes.

A single 12-foot sounding from H-6304 (1937) in latitude 29°31'01.0", longitude 94°26'37.5" falls in present survey depths of 15 to 17 feet. It is doubtful that this depth still exists in the present survey area. Reference is made to Section L. Item 6 of the hydrographer's report for additional information. *The 12 ft sdp. is considered discredited by present survey depths*
The present survey is adequate to supersede the prior surveys within the common area.

7. Comparison With Chart #11332 (15th Edition, December 31, 1977)

a. Hydrography

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

Attention is directed to the following:

1. The platform ruins, PA, charted in latitude $29^{\circ}31.6'$, longitude $94^{\circ}25.1'$, originates with Chart Letter 1858 of 1968, a U.S. Power Squadron report, as a visible platform, PA. The investigation of this Presurvey Review Item (No. 132) by the field produced a position on a wellhead, by T-2 theodolite intersection, in latitude $29^{\circ}31'44.699''$, longitude $94^{\circ}25'00.026''$ and two chain drag hangs on platform wreckage in latitude $29^{\circ}31'44.95''$, longitude $94^{\circ}24'59.22''$ and latitude $29^{\circ}31'43.36''$, longitude $94^{\circ}24'57.93''$. It is recommended that platform ruins be charted.

A radius of 50 to 60 meters around the wellhead was chain dragged & described as foul by the hydrographer

2. A submerged pipeline crossings the southern portion of present survey area at latitude $29^{\circ}19'$, longitude $94^{\circ}18'$, to latitude $29^{\circ}21'$, longitude $94^{\circ}28'$, originates from an unknown source. The disposition of this feature was not verified by the present survey and it is recommended that this submerged pipeline be retained as charted.

Additional information concerning charting information may be found in Sections K, L, and P of the Hydrographer's Descriptive Report.

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

b. Aids to Navigation

There are no aids to navigation maintained by the U.S. Coast Guard with in the limits of the present survey area. However, six lighted wellheads and platforms were located by the present survey. *See also item 19, page 14 of the D.R.*

There is a conflict between the nautical chart fog signals noted on platform and wellheads by the hydrographer. The hydrographer indicates whistles on these features and the chart indicates horns. It is recommended that the Marine Chart Division make appropriate inquiries as to the proper annotation.

8. Compliance With Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work


This is considered an excellent basic survey, however additional work is recommended in the vicinity of Rollover Pass to resolve shoreline differences. *CONCUR*


7PS
Differences can be rectified with air photos rather than additional field work.

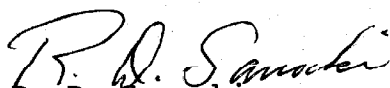
Inspection Report
H-9765


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: August 29, 1979


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

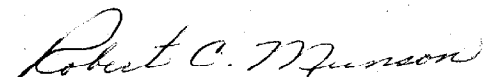

David W. Yeager, Lt. Cdr., NOAA
Field Procedures Officer
Operations Division


R. D. Sanocki
Technical Assistant
Processing Division


Absent
Maureen Kenny, LT, NOAA
Chief, Electronic Data
Processing Branch


Harry R. Smith
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

February 27, 1980

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

THRU: Chief, Quality Control Branch *gm*

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

SUBJECT: Quality Control Report for H-9765 (1978), Texas, Gulf of Mexico, Off Gilchrist

A quality control inspection of H-9765 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, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report and as follows:

1. Additions and revisions to survey items accomplished during quality control are addressed on the one-half scale copy of the survey furnished verification.
2. Geographic positions of detached positions were not listed in the sounding volumes by the hydrographer.
3. Some foreshore item descriptions transferred to the smooth sheet from the contemporary topographic surveys are incorrectly shown in slanted lettering instead of vertical lettering on the smooth sheet.
4. The pier ruins charted from an unascertainable source in the vicinity of latitude 29°29'06"N, longitude 94°33'06"W were neither mentioned by the hydrographer nor shown on the contemporary topographic survey. The pier ruins are referred to the compiler for resolution.
5. A machine plotted 20-foot sounding at latitude 29°28.98'N, longitude 94°29.79'W was found to be misplotted during quality control. This depth was apparently displaced due to control anomalies that existed during



field investigations. The sounding was replotted by time and course at latitude 29°29.2'N, longitude 94°30.1'W by the evaluator.

A 20-foot hand plotted sounding inked in black on the smooth sheet at latitude 29°29.5'N, longitude 94°28.23'W was erroneously applied during verification. This isolated depth is not supported by hydrographic data and, therefore, was removed during quality control.

cc:
OA/C35
OA/C351



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

JUL 23 1980

OA/C351:DJH

TO: OA/CAM - Richard H. Houlder

FROM: *[Signature]*
OA/C3 - Roger F. Lanier

SUBJECT: H-9765 (1978), OPR-K104, Texas, Gulf of Mexico, Off Gilchrist, Report of Compliance with Project Instructions

The smooth sheet and Descriptive Report for the subject survey have been examined. In addition to the Quality Control Report, dated February 27, 1980 (copy attached), and the Hydrographic Survey Inspection Team Report, dated August 29, 1979, the following is submitted:

Hydrographic revisions to the HWL in the vicinity of Rollover Pass are the subject of some concern generated during verification and quality control processing. It has been recommended that additional field work or aerial photography be accomplished to substantiate the hydrographer's delineations.

Conformance to requirements contained in the Hydrographic Manual would have obviated the need for additional work. Specifically, sections 1.6.2, 3.2.4, and 4.5.8 all indicate the need for coordination of effort between the field editor and the hydrographer. The need for this requirement is to eliminate unresolved discrepancies between the field edit and hydrographic data and to thereby ensure there are no unnecessary delays during processing.

However, it is recognized that the timely coordination of field edit and hydrography may be practically impossible during east coast combined operations. It is often the case that field edit precedes or is subsequent to hydrography. In such cases when conformance to requirements becomes difficult, the hydrographer should offer suitable explanation within the survey records. Known discrepancies between the two survey results should similarly be explained to ensure that subsequent processing is expedient and accurate. The hydrographer's interpretation of topographic features must be clearly supported with acceptable survey data.

It will be recommended that future changes to the Hydrographic Manual address the unique character of east coast combined operations to ensure that the hydrographer has available the necessary guidance to resolve similar potential problems.



10TH ANNIVERSARY 1970-1980

National Oceanic and Atmospheric Administration

A young agency with a historic
tradition of service to the Nation

Except as noted, the survey is complete and adequate for the purposes intended and is in compliance with Project Instructions OPR-K104-MI-78, dated December 9, 1977.

Attachment

cc:
OA/C352 w/o att.

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

Hydrographic Index No. 89 G

