

H10014

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey .. Hydrographic
Field No. WH-20-02-82
Registry No. H-10014

LOCALITY

State Texas
General Locality .. Gulf of Mexico
Sublocality Approach to Freeport

.....
19 82
.....
CHIEF OF PARTY
CDR R.K. Matsushige

LIBRARY & ARCHIVES

DATE December 2, 1983

HYDROGRAPHIC TITLE SHEET

H-10014

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.

WH-20-2-82

State Texas

General locality Gulf of Mexico

Locality Freeport Approach to Freeport

Scale 1:20,000 Date of survey 25 April to 27 May, 1982

Instructions dated 22 December, 1981 Project No. OPR K104-WH-82

Vessel NOAA Ship WHITING (EDP #2930)

Chief of party CDR Roy K. Matsushige, Commanding Officer

Surveyed by A. Armstrong, A. Fior, V. Shaffer, M. Henderson, E. Steigerwald, P. Ruiz
T. Wolf, P. Kenul

Soundings taken by echo sounder, ~~and lead, etc.~~ Ross Model 5000

Graphic record scaled by WHITING personnel

Graphic record checked by VNS, MEH, EAS, PJR, TAW, PMK, FRC, RWB, RCB, RSE, MS, MF, JO'N

Protracted by _____ Automated plot by Hydroplot
Synetics 1241 Plotter (Amc)

Soundings penciled by _____

Soundings in ~~fathoms~~ feet at ~~MHW~~ MLLW

REMARKS: All times are Coordinated Universal Time

Notes in the Descriptive Report were made in red during verification

683 STANDARD US C&G

END

AWOIS - RWD 12/20/83

SC 4-30-97

PROGRESS SKETCH

OPR K104-WH-82

GULF OF MEXICO

April-June 1982

NOAA Ship WHITING

CDR. Roy k. Matsushige
Commanding

From Chart 11300

Scale 1:460,732

TEXAS

GALVESTON

FREEPORT

LEGEND

- Naut. Miles Sounding Lines
- Sq. Naut. Miles Hydrography
- Tide Station Established
- Electronic Stations
- Bench Marks Established
- Bottom Samples Taken
- TDC Cast
- Hydrography

| April | May | June |
|-------|------|------|
| 1920 | 1776 | 868 |
| 156.7 | 176 | 82 |
| 1 | 0 | 0 |
| 2 | 0 | 7 |
| 5 | 0 | 0 |
| 61 | 95 | 57 |
| 3 | 3 | 3 |

29° 00'

29° 00'

95° 00'

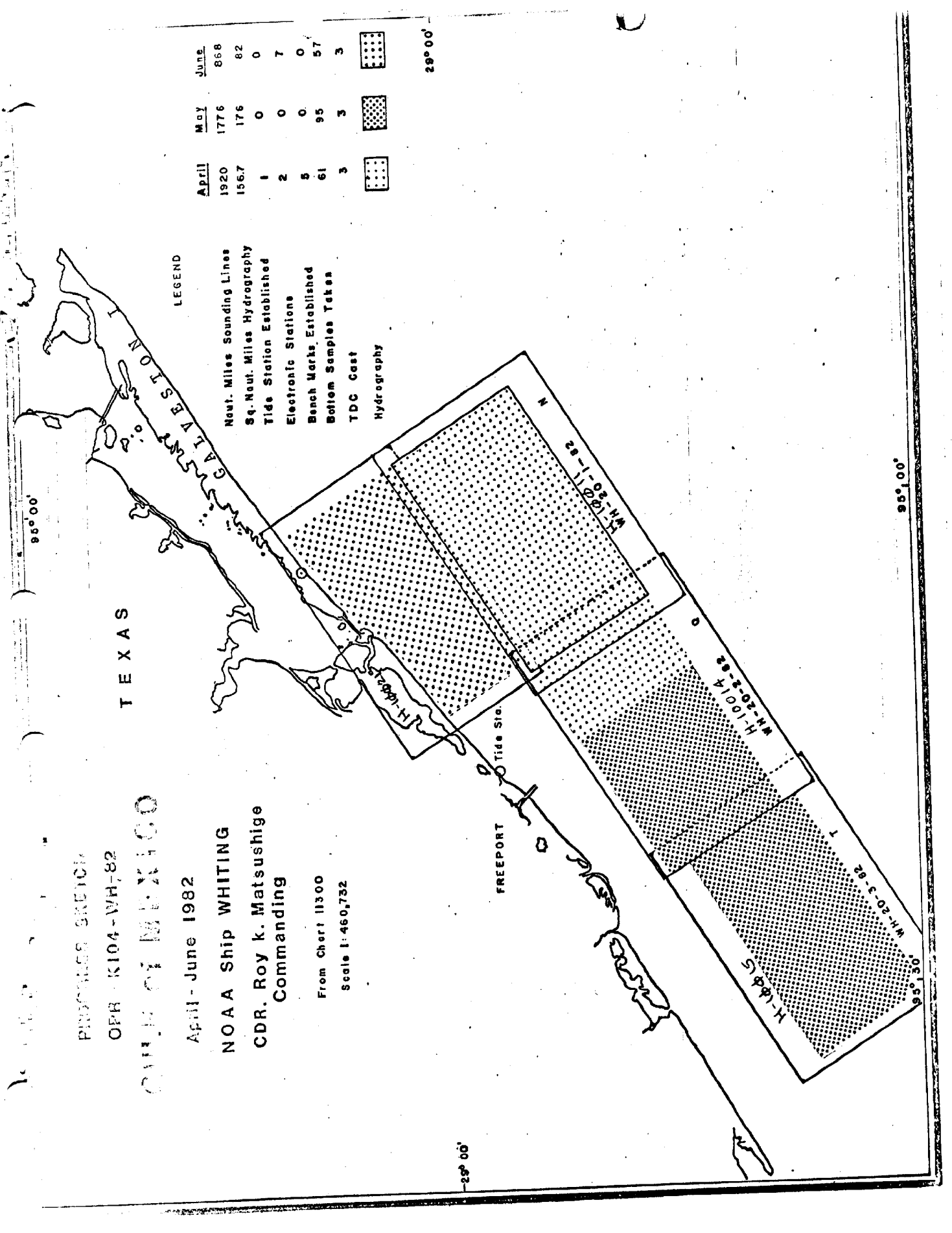


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A. PROJECT

Hydrographic Survey H-10014 was performed in accordance with Project Instructions OPR K104-WH-82, except as noted on the Appendix Sheet, Gulf of Mexico, dated 22 December 1981, as amended by Change No. 1 dated 17 February 1982.

B. AREA SURVEYED

The area surveyed was in the Gulf of Mexico, general locality south-east of Freeport, Texas. The sheet was laid out parallel to the shoreline and was bounded by the following points:

~~28° 41' 25" N, 95° 17' 44" W~~ 28°-49'-24"N, 95°-05'-46"W
~~28° 48' 54" N, 95° 23' 01" W~~ 28°-55'-42"N, 95°-10'-13"W
~~28° 56' 16" N, 95° 09' 47" W~~ 28°-48'-59"N, 95°-22'-41"W
~~28° 48' 48" N, 95° 04' 30" W~~ 28°-42'-33"N, 95°-18'-07"W

The area surveyed was characterized by generally gently sloping sandy or muddy bottom with four irregular features, two shoals and two fish havens. This survey was conducted from 25 April to 27 May 1982, Julian Days 115-147.

C. SOUNDING VESSEL

The sounding vessel used throughout this survey was the NOAA Ship WHITING S-329, EDP number 2930. The WHITING was equipped with standard hydrographic equipment, including the Ross 5000 ~~fathometer~~^{echosounder} and the Hydrotrac positioning system. No unusual sounding vessel configurations were used or problems encountered.

D. SOUNDING EQUIPMENT & CORRECTIONS TO ECHO SOUNDINGS

The sounding equipment used throughout this survey was a Ross 5000 Fineline ~~fathometer~~^{echosounder}. ~~Fathometer~~^{Echosounder} serial number 1053 was used on Julian Days 115-131 and ~~fathometer~~^{echosounder} serial number 1049 was used on Julian Days 141-147. The initial trace on these recorders varied

from dark and straight to light and jagged. This should not affect the quality of the data. During operation, the blanking was left on at either twenty or thirty feet to ensure that the phase and initial were constantly adjusted correctly. *

Following are the procedures used to determine the corrections to echo soundings:

Velocity Corrections

TDC casts were taken on JD's 114, 118, 127, 131, and 144 using a Martek TDC model 167 (s/n 127) calibrated February 1982. Velocity correctors determined from TDC casts on JD's 114 and 118 were used for all data on JD's 115-120, velocity correctors determined from TDC casts 127 and 131 were used for all data on JD's 125-131, and velocity correctors determined from TDC cast on JD 144 was used for all data on JD's 141-147.

TRA Corrections

Fore and aft draft readings were recorded at the beginning and end of each trip. These readings were averaged to obtain the mean draft for each working period. Two sets of leadline measurements were taken on JD's 071 and 074, during OPR J217, to determine the instrument error. As a result of these two tests, the instrument error is considered to be insignificant. Differences between the digital and leadline values were attributed to error in the leadline observations.

Settlement and Squat trials were run on 26 April, JD 116, in approximately 65 feet of water near the southern limit of this survey. Ross model 5000 ^{echo sounder} fathometer (s/n 1053) was used.

Predicted Tides

The smooth field sheets for this project were plotted using predicted tides from the reference gage at Galveston Pleasure Pier (877-1510) Lat. $29^{\circ} 17.2'N$, Long. $94^{\circ} 47.4'W$. Logger tapes were provided by Processing Division, AMC, and were converted to predicted tide tapes by WHITING personnel using AM500, Predicted Tide Generator.

All TRA corrections will be applied during final processing by OA/CAM 3, Processing Division via TC/TI tapes.

* Stylus and/or belt drive appears to be defective, JDs 115 to 117. The initial wanders on these days. Also the phase checks that were performed appear to be good. The hydrography on both sides and crossing these days is in good agreement.

E. HYDROGRAPHIC SHEETS

All field sheets were prepared on board the WHITING by her personnel using Houston Instrument DP-3 Roll Plotter. This survey was divided into three sheets, east, central, and west, each with a skew of 122° and the following origins:

| EAST | CENTRAL | WEST |
|---------------|---------------|---------------|
| 28° 48' 48" N | 28° 46' 30" N | 28° 44' 12" N |
| 95° 04' 30" W | 95° 08' 36" W | 95° 12' 42" W |

A total of six plotted sheets were submitted with this survey: three boatsheets with mainscheme, crosslines, bottom samples, and seven developments, and three smooth sheets with mainscheme, crosslines, bottom samples, and five developments. PSR item number 276 was not plotted on the smooth sheet as no trace of the wreck was found. The development lines for this item also agreed with the mainscheme and crosslines.

All plotted sheets and field records have been submitted to OA/CAM 3, Processing Division, for verification.

F. CONTROL STATIONS

The following signals were used for electronic positioning control or as visual calibration signals:

| <u>Signal #</u> | <u>Name</u> | <u>Year Est'd</u> |
|-----------------|--|---|
| 001 | Hx82xTX | 1979 field position |
| 002 | Terramar | 1982 adjusted position |
| 007 | Well USE | 1912 calibration station |
| 008 | Dow Chemical Co Plant A Organic Tank Dow Chem Co Plt A Organic Tank | 1954 calibration station |
| 010 | Captain | 1978 calibration station |
| 011 | CCO & Gas Co GA 278L NW 2 CCO & Gas Co GA 278L NW2 | 1982 calibration station |
| 012 | Hx78xTX | 1979 calibration station - field position |

Station numbers 002 and 011 were established to Third Order, Class I standards by Mr. Gary Fredrick, AMC Operations Division, between 28 March and 10 April 1982. Positions for the other stations were obtained

from NGS published data. Stations 001 and 002 were used as electronic control sites. Stations 007, 008, 010, 011, and 012 were used as signals for visual sextant calibrations. The CCO and Gas Co. oil rig (sta. # 011) was also used for circle calibrations.

G. HYDROGRAPHIC POSITION CONTROL

Range-range control was used throughout this survey. The ~~Hydrotrac~~^{HYDROTRAC} positioning system was used for all mainscheme, crosslines, bottom samples, and developments. No problems were encountered with this system and signal strength was unaffected by weather conditions. The following components were used aboard the WHITING as the master unit:

Receiver s/n 327
Power Amplifier s/n 539
Master Drive Unit s/n 122
ALU s/n JH 101206
Strip Chart Recorder s/n 1914

A one-hundred foot tower was erected for the left station (sta. # 001) with the following equipment:

Power Amplifier s/n 536
Slave Drive Unit s/n 214
Coupler s/n JH 101206

A thirty-foot whip antenna was erected for the right station (sta. #002) with the following equipment:

Power Amplifier s/n 537
Slave Drive Unit s/n 226
Coupler s/n JH 101206

The left and right stations were chosen to ensure ~~an~~ intersection of ~~rates~~^{angles} greater than 30° and less than 150° throughout most of the survey area. Some hydrography was run in the area of poor intersection on the northwestern edge of the survey (sheets central and west). However, this should not affect the quality of the data. Calibration of the ~~hydrotrac~~^{HYDROTRAC} positioning system was done in accordance with the Hydrographic Manual. Visual calibrations, using three-point sextant

fixes with a check angle, were performed at the beginning and end of each trip and whenever a gain or loss of lanes was suspected. The partial lane correctors were determined from these calibrations and were applied for on-line plotting using RK112 and off-line smooth plotting using RK211.

Oil rig CCO & Gas Co. (sta. # 011) was used for circle calibrations. This rig was located at the north end of survey H- 10011. The geodetic position for station # 011 was used to calculate the position values for the ~~Hydrotrac~~ lanes. The circle calibrations served as a check of whole lane counts and as a rough check of the partial correctors.

Lane losses were experienced on both stations on JD 116. It was determined that this was due to a momentary loss of shipboard power to the ~~Hydrotrac~~ and Hydroplot systems. A visual calibration was immediately performed and the partial correctors determined differed by about a tenth of a lane from those of a previous calibration. These correctors agreed well with those of the closing calibration of JD 117 and it was felt that the change in partial correctors occurred during the power loss.

An ANDIST of five meters was used with RK561 during visual calibrations to correct for the difference in position between the angle ~~sensors~~ and the ~~Hydrotrac~~ antenna. An ANDIST of 5.5 meters and a digital gyrocompass input were used for on-line and off-line plotting to correct for the difference between the transducer and ~~Hydrotrac~~ antenna positions.

All calibration data for this survey is adequate and no problems were encountered which might degrade position accuracy.

H. SHORELINE

There was no shoreline within the area of this survey.

I. CROSSLINES See Evaluation Report, section 3.

Eighty-nine nautical miles of crosslines were run, which is 7.2% of the mainscheme. Agreement with the mainscheme is as follows: 98%

agreed within one foot of the mainscheme soundings, and 2% agreed within two feet.

J. JUNCTIONS See also section 5 of the Evaluation Report.

This survey was junctioned with H-9885 to the southeast. H-9885 was a 1:40,000 scale survey done in 1980. Agreement with H-9885 is such that all depths agreed within one foot. This meets the criteria stated in Section 1.1.2 of the Hydrographic Manual.

K. COMPARISON WITH PRIOR SURVEYS See also sections 4 and 6 of the Evaluation Report

Prior survey H-6253, a 1:40,000 scale survey completed in 1937, was compared to this survey. Only ten soundings could be compared and they all agreed within one-two feet. This difference is within the acceptable limits suggested in Section 1.1.2 of the Hydrographic Manual.

The following five PSR items were investigated during this survey:

| <u>Item No.</u> | <u>Description</u> | <u>Charted Position</u> | <u>Source</u> |
|-----------------|---|--|---------------|
| ✓ 66 | Wreck, PA Information Item | 28° 44' N 95° 18.5' W | N.M. 35, 1966 |
| ✓ 67 | Radioactive Material lost, PA Information Item | 28° 48' ³ 30" N 95° 21'46" W | LNM 29, 1975 |
| ✓ 75 | Wreck, PA Information Item | 28° 50' N 95° 15.5' W | LNM 68, 1971 |
| ✓ 76 | Wreck, PA Information Item | 28° 47.5' N 95° 14.0' W | N.M. 30, 1966 |
| ✓ 276 | Wreck, PA Limited Investigation | 28° 50.7' N 95° 13.7' W | LNM 42, 1980 |

*Item charted
PD in 2/82
Chg 1. 1. 1. 1.
PSB Update
gm*

Item # 66 was the dangerous wreck of a 24-foot cabin cruiser sunk in approximately 50 feet of water. No trace was found on the fathogram

during normal sounding lines. The hydrographer recommends that this item be charted as a wreck, ED, existence doubtful. *Retain as charted.*

Item # 67 was described as a container of radioactive material lost overboard in heavy seas in approximately 40 feet of water. Due to the dangerous nature of this item the hydrographer recommends that the charted position be kept even though no trace was found on the fathogram during normal sounding lines. Because of the size of the container (fourteen inches in diameter) and its nearly neutral buoyancy, the hydrographer recommends that the chart symbol be changed from PA to PD, position doubtful. *Charted as PD in Feb. 1982*

Item # 75 was a 36-foot pleasure craft burned and sunk in 56 feet of water. A limited investigation of reduced sounding line spacing (90 meters) covering an area of 200 meters radius from the charted position was done. No trace was found on the fathogram. The hydrographer recommends that the chart symbol ^{not} be revised from PA to ED.

Item # 76 was the dangerous wreck of a 54-foot party boat sunk in 50 feet of water. A limited investigation was done of reduced sounding line spacing (90 meters) covering an area of 200 meters radius from the charted position. No trace was found on the fathogram. The hydrographer recommends that the chart symbol be revised from PA to ED. *See section 7.2.(2) of the Evaluation Report for Item 76.*

Item # 276 was a 30-foot sailing vessel sunk in 60 feet of water. A limited investigation was done of reduced sounding line spacing (45 meters) covering an area of 1000 meters radius from the charted position. The fathogram showed no trace of the wreck. The hydrographer recommends that the chart symbol be changed from PA to ED. *See section 7.2.(1) of the Evaluation Report for Item 276.*

L. COMPARISON WITH THE CHART *See also section 7.2. of the Evaluation Report.*

Survey H-10014 was compared with NOS Chart 11321 20th ed., April 1980, at a scale of 1:80,000. Agreement with the chart is as follows: 57% of the charted depths agreed within one foot, an additional 18% agreed within two feet, an additional 10% agreed within three feet, and 15% agreed with depths of four feet or greater. The areas of greatest discrepancy consistently occurred where the surveyed depths were 50 feet or less or around the two shoals. The difference in the area of the shoals can be attributed to the shifting of the shoals due to natural processes. The area of greatest difference

between the chart and this survey occurred in an area of the chart where the survey was done in 1937.

Two fish havens and two shoals were investigated during this survey. The fish havens were dived on and the results are included in the dive reports within this survey. The two shoals were discovered during normal hydrography and investigations were carried out by reduced spacing (90 meters) and by running hydrography perpendicular to normal mainscheme. The first shoal, approximate position Lat. $28^{\circ} 47' 35''$ N, Long. $95^{\circ} 17' 50''$ W, was investigated in positions 3594-3616 and 3548-3653 by 180 meter lines running perpendicular to mainscheme. The second shoal was investigated in positions 3711-3738 by 90 meter line spacing parallel to mainscheme with one line along the major axis of the shoal.

See sections 4.1, 3. c. (3) and 6.3 of the Evaluation Report.

M. ADEQUACY OF THE SURVEY

This survey is sufficiently complete and adequate to super^scede prior surveys for charting purposes. *See Evaluation Report*

The following areas are the only ones where hydrography is below standards set forth in the Hydrographic Manual:

The line spacing between positions 442 and the sixth out of 809 (Lat. $28^{\circ} 53' 18''$ N, Long. $95^{\circ} 12' 22''$ W) is 220 meters; between 3199 and 3334 (Lat. $28^{\circ} 48' 30''$ N, Long. $95^{\circ} 17' 24''$ W) is 230 meters; and between the third out of 3686 and the fourth out of 3684 (Lat. $28^{\circ} 44' 48''$ Long. $95^{\circ} 14' 24''$ W) is 220 meters.

There is a ^{holiday} hole at Lat. $28^{\circ} 48' 06''$ N, Long. $95^{\circ} 16' 12''$ W. This ~~holiday~~ hole is located approximately 300 meters from an oil rig and due to the rigors of safe navigation the soundings in that area were missed. Similar holes due to the same reasons can be found at the following positions:

holidays

| | |
|-------------------------------|-------------------------------|
| Lat. $28^{\circ} 51' 56''$ N, | Long. $95^{\circ} 16' 57''$ W |
| $28^{\circ} 48' 08''$ N, | $95^{\circ} 14' 56''$ W |
| $28^{\circ} 47' 08''$ N, | $95^{\circ} 19' 11''$ W |

There is a ~~hole~~^{holiday} at Lat. 28° 47' 30" N. Long. 95° 15' 14" W caused by improperly overlapping lines. However, the fathometer traces before positions 1561 and 2857 do show a depth of 54-55 feet which is consistent with the soundings in that area.

N. AIDS TO NAVIGATION See also sections 4.i and 7.b of the Evaluation Report.

There were ten oil rigs within the area of this survey. Their geodetic positions were taken from a list of oil rig positions that the WHITING received from CAMI, Operations Division. This list was complete up to LNM 3, 1979. The positions from this list were put on the boat sheet and a procedure similar to circle calibrations was used to verify the listed positions. The following is a table of listed positions and surveyed positions:

| Listed Name | Position from List | Name Seen on Oil Rig | Surveyed Position |
|------------------------------|--------------------------------|--------------------------|--|
| RU 102 1 ROC BR 355L1 | 28° 47' 10" N 95° 17' 07" W | ROC 335L1 | 28° 47' 10.132" N 95° 17' 07.361" W |
| RUTHERFORD 103-1 | 28° 47' 48" N 95° 16' 09" W | ROC GA 334 L | 28° 47' 48.904" N 95° 16' 09.982" W |
| RUTHERFORD 102-4 | 28° 46' 14" N 95° 18' 19" N | ROC BA 335 L 6 | 28° 46' 14.206" N 95° 18' 20.151" W |
| RUTHERFORD 102-3 | 28° 46' 44" N 95° 18' 40" W | ROC BR 335 L 5 | 28° 46' 44.011" N 95° 18' 40.475" W |
| RU 102 2 ROC 335 L 3 | 28° 47' 05" N 95° 18' 42" N | ROC 335 LC | 28° 47' 04.666" N 95° 18' 41.055" W |
| * KING 102 1 BR309 L | 28° 48' 31" N 95° 18' 27" W | no name seen | 28° 48' 30.995" N 95° 18' 27.688" W |
| * KING 102 2 BR335L 1A | 28° 48' 17" N 95° 19' 02" W | RESOURCES 87-335 L-1A | 28° 48' 12.081" N 95° 19' 00.837" W |

* Oil rigs "KING 102 1 BR 309 L" and "KING 102 2 BR 335L 1A" removed per LNM 6/84.

| | | | |
|-------------|---------------|--------------|-------------------|
| ROC310L1 | 28° 48' 27" N | ROC GA 310L | 28° 48' 27.564" N |
| ROC310L | 95° 15' 01" W | | 95° 15' 02.316" W |
| MOBIL 174 1 | 28° 52' 03" N | MO-BR-3865-A | 28° 52' 02.693" N |
| | 95° 17' 01" W | | 95° 17' 00.300" W |

One rig in this survey was not listed. Its approximate position was scaled from the chart as being Lat. 28° 50' 26" N, Long. 95° 14' 24" W. The surveyed position was Lat. 28° 50' 28.133" N, Long. 95° 14' 23.491" W.

In each case a prominent feature or the approximate center of the rig was used to shoot the bearings.

A description of each rig was noted in the sounding volumes and is noted on the field sheets. The sizes of the rigs varied and each is represented on the field sheet accordingly.

Three buoys and one fixed aid to navigation charted within the area of this survey were not located during hydrography. Their charted positions are as follows: *See section 4e of the Evaluation Report*

| <u>Latitude</u> | <u>Longitude</u> | <u>Description</u> |
|-----------------|------------------|-------------------------------|
| 28° 47' 03" N | 95° 18' 48" W | W Or "A" Fl 4 sec Priv maintd |
| 28° 44' 27" N | 95° 14' 27" W | W Or "E" Fl 4 sec Priv maintd |
| 28° 44' 07" N | 95° 14' 18" W | W Or "A" Fl 4 sec Priv maintd |
| 28° 47' 40" N | 95° 20' 52" W | Fl 4sec 30ft HORN Priv maintd |

The first buoy was located near a rig. The second and third were part of a group of six buoys delineating the area of a brine diffusion outflow. The fourth listed was a fixed aid to navigation marking an obstruction, a fish haven, with an authorized minimum depth of 22 feet. Enclosed in this report is a copy of the notice sent to the Coast Guard for immediate chart correction. The remaining four buoys of the brine diffusion plant were not fully located as they were beyond the survey limit.

See also section 7.6 of the Evaluation Report.

O. STATISTICS

VESNO=2930
 Total # of Positions=~~4005~~ 3883
 Hydro Miles= 1284
 Square Miles= 101

Bottom Samples=70
Tide Stations=4
Current Stations=0
TDC Casts=5
Magnetic Stations=0

P. MISCELLANEOUS

See following letters.

Q. RECOMMENDATIONS *See also section 9 of the Evaluation Report*

Survey H-10014 is adequate and no further field work is recommended. See recommendations in Section K (Comparison to Prior Surveys) and the Approval Sheet.

R. AUTOMATED DATA PROCESSING

| <u>Program No.</u> | <u>Description</u> | <u>Version Date</u> |
|--------------------|-------------------------------|---------------------|
| RK112 | R/R Real Time Hydroplot | 8/04/81 |
| RK201 | Grid, Signal and Lattice Plot | 4/18/75 |
| RK211 | R/R Non-Real Time Plot | 2/02/81 |
| RK300 | Utility Computations | 10/21/80 |
| RK330 | Data Reformat and Check | 5/04/76 |
| AM500 | Predicted Tide Generator | 11/10/72 |
| AM530 | Layer Corr. for Velocities | 5/10/76 |
| RK561 | R/R Geodetic Calibration | 5/26/81 |
| RK602 | Extended Line Oriented Editor | 5/21/75 |
| RK612 | Line printer Listing | 3/22/78 |

S. REFERRAL TO REPORTS

Tide Station Report submitted to OA/C321 Tidal Requirements and Acquisitions Branch.

Recovery Notes, horizontal control, submitted to OA/CAM1, Operations Division, AMC.

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DIVE REPORT ON ~~GEORGETOWN~~ FISH HAVEN

GEORGE VANCOUVER Fishing Reef
See also section 7.2 of the Evaluation Report
22 May 1982

I. AREA OF INVESTIGATION

- A. Location: Gulf of Mexico, 9 nautical miles southwest of Freeport, Texas.
- B. Position: The position of the fish haven was determined using the Hydrotrac positioning system (using Pattern 1 as H-82-TX 1979 and Pattern 2 as TERRAMAR 1982) as follows:
- Latitude: 28° 47.6' N
Longitude: 95° 20.9' W
- C. Survey Sheet:

Project: OPR-K104-WH-82
Field No. WH-20-2-82, Sheet "Q"
Registry No. H-10014

II. PURPOSE

The dive was conducted to verify a ^{authorized minimum} charted ~~least~~ depth of 22 feet on Chart No. 11321, revised 19 April 1980.

III. SURVEY PROCEDURE

A marker float was dropped near the site by the ship's personnel as the ship slowly maneuvered along a sounding line which had previously indicated the shoal area. Divers were maneuvered alongside the marker float in the ship's Monark. Using the float line for reference, the divers conducted a circle search at the end of a 60-foot leadline, and found the remains of a sunken ship.

Adjacent known features are two oil rigs with position

-14-

bearings given are
from the fish haven to
the platforms per

ranges, and bearings to the fish haven as follows:

- | | | | |
|----|------------|-----------------|------|
| 1. | 28° 47.1'N | 1.9 Naut. Miles | 108° |
| | 95° 18.7'W | | |
| 2. | 28° 48.3'N | 1.7 Naut. Miles | 070° |
| | 95° 19.0'W | | |

The divers first located the bow of the ship and proceeded aft. After determining that the higher portion was near the bow, they returned to the bow and measured a leadline depth of 35 feet.

IV. DIVE DATA

A. Divers: - First Time

Ens. P. J. Ruiz
SS R.C. Brewington
YS E. J. Lowery

While descending to the bottom, YS Lowery developed ear trouble so the dive was aborted.

Second Time

QM E.J. Tylutki
Ens. P.J. Ruiz
SS R.C. Brewington

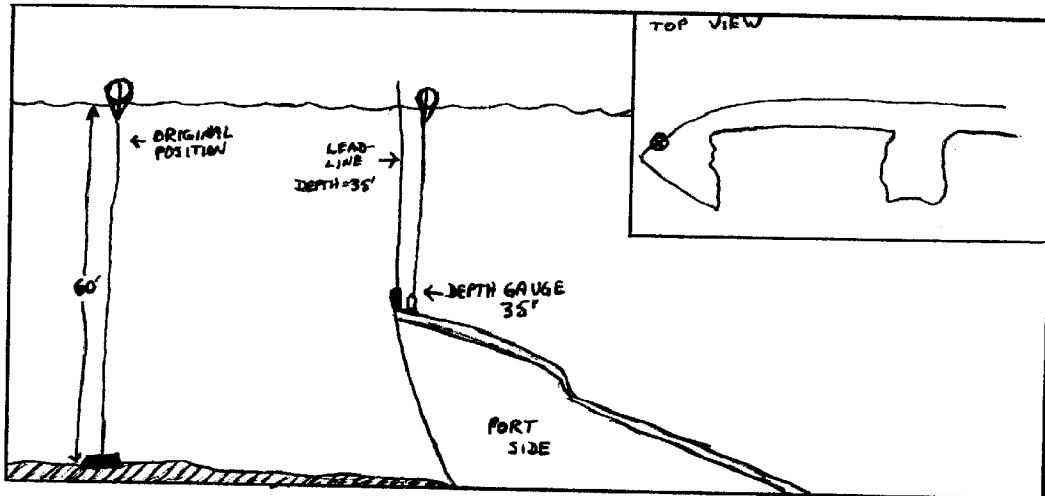
- B. Date and Time of Dive: The diving operation was held on 22 May 1982. It began at 0915 and ended at 0940 when the divers surfaced. Times are local.
- C. Depth at the base of the bow of the ship was 60 feet. Depth on top of the bow was 35 feet.
- D. A ½ knot northeast current was prevailing in the area and a distinct surface layer of murky water (runoff from the nearby Brazoria River) with a visibility

BRAZOS

-15-

of zero overlaid a clear, cooler layer of water with visibility of 15 feet horizontally and approximately 15 feet vertically.

V. RESULTS



The depth as illustrated on the fathogram shows a least depth of 38 feet. The ship appeared to have been approximately 200 feet long, and had been submerged for a long period of time as evidenced by the condition of the metal surface. Location of the wreck is: Latitude $28^{\circ}47'33.23''N$, Longitude $95^{\circ}20'51.13''W$.

VI. RECOMMENDATION See also section 7.2.(3) of the Evaluation Report.

~~It is recommended that this feature remains as charted. The aid, as charted on Chart No. 11321 is no longer marking the site. The least depth of 22 feet should remain. This potentially is a danger to navigation.~~

It is recommended that the wreck with a least depth of 34 feet be charted in Latitude $28^{\circ}47'33.21''N$, Longitude $95^{\circ}20'51.13''W$. This wreck is 116 meters south-east of a charted fish haven.

DIVE REPORT ON DISCONTINUED FISH HAVEN

28 April 1982

I. AREA OF INVESTIGATION

A. Location: Gulf of Mexico, 12 nautical miles southeast of Freeport, Texas.

B. Position: The position of the Fish Haven was determined using the Hydrotrac positioning system (with Pattern I from H-82-TX 1979 and Pattern 2 from TERRAMAR 1982) as follows:

Latitude: 28° 50.6' N
Longitude: 95° 08.1' W

51-foot least depth obtained by ship's leadline at lat. 28° 50' 37.03" N, long. 95° 08' 09.01" W see Evaluation Report Section 6.a.

C. Survey Sheet:

Project: OPR-K104-WH-82
Field No. WH-20-2-82, Sheet "Q"
Registry No. H - 10014

II. PURPOSE

The dive was conducted to determine the least depth on the charted discontinued Fish Haven and to compare it to the 48-foot authorized minimum depth. (Reference - Chart No. 11321, Revised 19 April 1980)

III. SURVEY PROCEDURE

A. The Fish Haven location was first observed while the WHITING was running main scheme hydrography. The charted position was in agreement with the position determined using the Hydrotrac positioning system.

B. A marker float was dropped over the site by personnel aboard the ship as it was steered on the previously observed sounding *present* survey.

Present 58-ft sdq corresponds to Coral Head on H-6389 (1938) 6398

The 58-ft sdq was exceeded during evaluation and prior depths brought forward to supplement

line. Divers were brought alongside the float in the ship's Whaler. Using the float line for reference, a leadline was stretched 60 feet and a circle search was conducted to determine the least depth of the Fish Haven. The structure appeared to be 60 feet long by 10 feet high and circular in shape, and was composed of blocks of concrete and rubble. The least depth determined using a depth gage was 51 feet. No leadline depth was determined because the divers ran low ^{on} air.

Leadline depth determined by ship.

IV. DIVE DATA

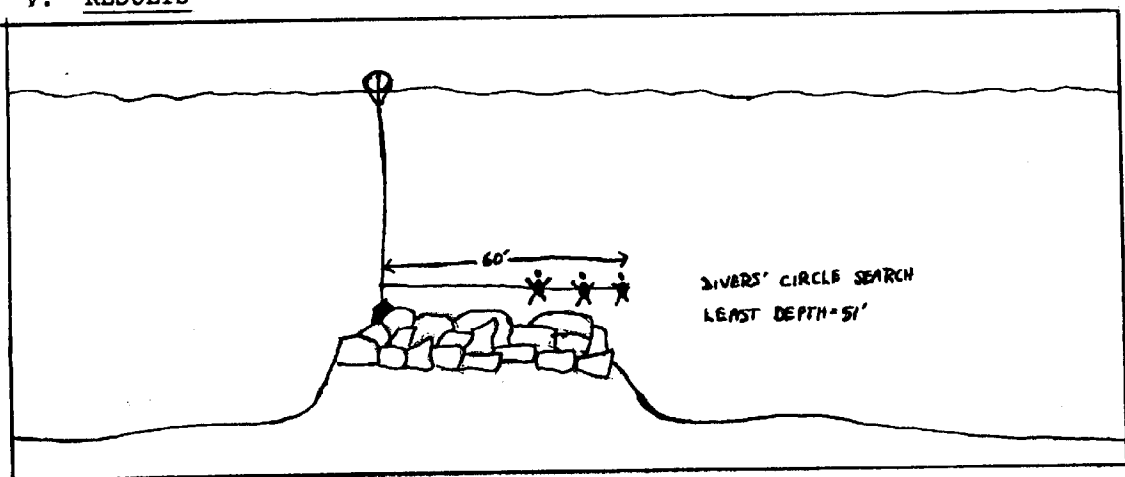
A. Divers - QM E.J. Tylutki, Divemaster
Ens. P. J. Ruiz
YS E. J. Lowery

B. Date and Time of Dive - The diving operation was held on 28 April 1982. It commenced at 0851 and was completed at 0929.

C. The depth of the area was 51 feet.

D. The underwater visibility was approximately 4 - 5 feet horizontally and 8 feet vertically. A strong (1-2 knots) northeast current made the operation difficult. The water temperature was 72° F.

V. RESULTS



Because the depth determined by depth gage was not adequate confirmation of the true depth, the ship was subsequently made to lay-to over the site and a series of leadline depths were recorded. The least depth determined by leadline was 53 feet.
Corrected depth, 51 feet.

VI. RECOMMENDATION *See sections 6.2 and 6.6 of the Evaluation Report.*

The charted depth is adequate and it is recommended that this feature remains charted. It is not a danger to navigation. ✓

PTTUZYUW RULYTEW0125 1461808--UUUU--RULYSUU.
ZNR UUUUU
P 261808Z MAY 82
FM NOAA S WHITING
TO CCGDEIGHT NEW ORLEANS LA
INFO COMCOGARDGRU GALVESTON TX
COMCOGARDGRU CORPUS CHRISTI TX
COMCOGARDGRU NEW ORLEANS LA
CM GRNC

BT

UNCLAS

SUBJ: AIDS TO NAVIGATION

THE NOAA SHIP WHITING/WTEW DURING HYDROGRAPHY OFF THE COAST OF
FREEPORT, TX REPORTS THE FOLLOWING AIDS TO NAVIGATION MISSING:

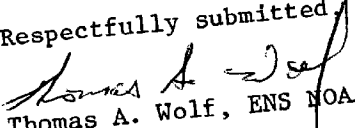
- | | |
|---------------------------|--------------------------------------|
| 1) 28-47-03N4 095-18-48W5 | W OR 'A' FL 4 SEC. PRIV. MAINTAINED |
| 2) 28-44-27N7 095-14-27W8 | W OR 'E' FL 4 SEC PRIV. MAINTAINED |
| 3) 28-44-07N5 095-14-18W8 | W OR 'A' FL 4 SEC PRIV. MAINTAINED |
| 4) 28-47-40N5 095-20-52W3 | FL 4 SEC 30FT. HORN PRIV. MAINTAINED |

BT

#0125

NNNN+

DR Abstracts for LORAN-C comparison, submitted to OA/CAMI

Respectfully submitted

Thomas A. Wolf, ENS NOAA

The ten oil rigs within this project area were located by hydrographic methods instead of Third Order, Class I standards because it was felt that a hydrographic position was adequate for the final scale of the chart and because it would not be economical to locate it by Third Order, Class I standards. It was estimated that six to ten months would be required to obtain permission to go onto the rigs (the rigs could not be located from shore and in some cases were not visible to each other). Helicopter services for two to three weeks and a stand alone positioning system that would meet Third Order, Class I standards must be available. It is recommended that the positions obtained for these rigs be considered adequate.

The "holidays" of various sizes around the oil rigs were due to my decision that 0.3 nautical miles were the limits of safe navigation about the various rig structures. Variations from this limit are due to the OOD's conning ability, size of the rigs, and what we judge^d were safe distances after carefully observing the structure.

Soundings were taken during turns to cover as much of the holidays as possible. The depth sounder was monitored carefully and comparisons of overlaps showed excellent agreement. It was noted that this ordinarily is not a good practice.

Although this survey was not completed per the Project Instructions and the Hydrographic Manual, due to the above discrepancies, it is recommended that no further field work be done in this area and the work completed considered adequate for charting.

Concur except as noted in the Evaluation Report.

Approved/forwarded

Roy K. Matsushige

Roy K. Matsushige, Cdr., NOAA
Commanding Officer, NOAA Ship WHITING S-329

MASTER SIGNAL TAPE LISTING

OPR K104-WH-82

| STATION NUMBER | OCTANT PLOTTING POS. | LATITUDE | LONGITUDE | CARTO CODE | ANTENNA ELEVATION | FREQUENCY | STATION NAME AND YEAR ESTABLISHED |
|----------------|----------------------|-------------|--------------|------------|-------------------|----------------------------------|--|
| 001 | 6 | 28 35 53645 | 095 58 42593 | 250 0003 | 171870 | H*82KTX 1979 | Field position - control station |
| 002 | 6 | 29 07 34427 | 095 03 43158 | 250 0000 | 171870 | Terramar 1982 | - control station |
| 003 | 6 | 29 01 35911 | 095 11 17926 | 139 0002 | 000000 | Pugh 1978 | - Not used |
| 004 | 6 | 28 58 44064 | 095 15 09268 | 139 0002 | 000000 | Skeet 1933 | - Not used |
| 005 | 6 | 28 58 22387 | 095 15 58712 | 139 0000 | 000000 | Surfside Radio Mast 1979 | - Not used |
| 006 | 6 | 28 57 26703 | 095 16 53537 | 139 0001 | 000002 | SL 18 USE 1979 | - Not used |
| 007 | 6 | 28 57 08294 | 095 17 10027 | 139 0002 | 000000 | Well USE 1912 | |
| 008 | 6 | 28 56 47542 | 095 18 51873 | 139 0000 | 000000 | Dow Chem CO | Chemical Plant Pkt A Organic Tent, 1954 |
| 009 | 6 | 28 56 27392 | 095 18 02969 | 139 0000 | 000000 | Freeport Coast Guard Beacon 1978 | - Not used |
| 010 | 6 | 28 56 34991 | 095 17 58399 | 139 0003 | 000000 | Captain 1978 | |
| 011 | 6 | 28 55 39424 | 095 12 16228 | 139 0002 | 000000 | CCO & Gas Co | GA 240L and GA 270L NW 2 1982 field position |
| 012 | 6 | 28 58 22633 | 095 15 42046 | 139 0000 | 000000 | H*78KTX 1979 | Field position |

VELOCITY TAPE #1
VESNO 2930 JD 115-120

000173 0 0002 0001 000 293000 010014
000218 0 0004
000262 0 0006
000307 0 0008
000352 0 0010
000396 0 0012
000441 0 0014
000486 0 0016
000530 0 0018
000575 0 0020
000619 0 0022
000664 0 0024
000709 0 0026
000753 0 0028
000798 0 0030

CORRECTIONS IN FEET

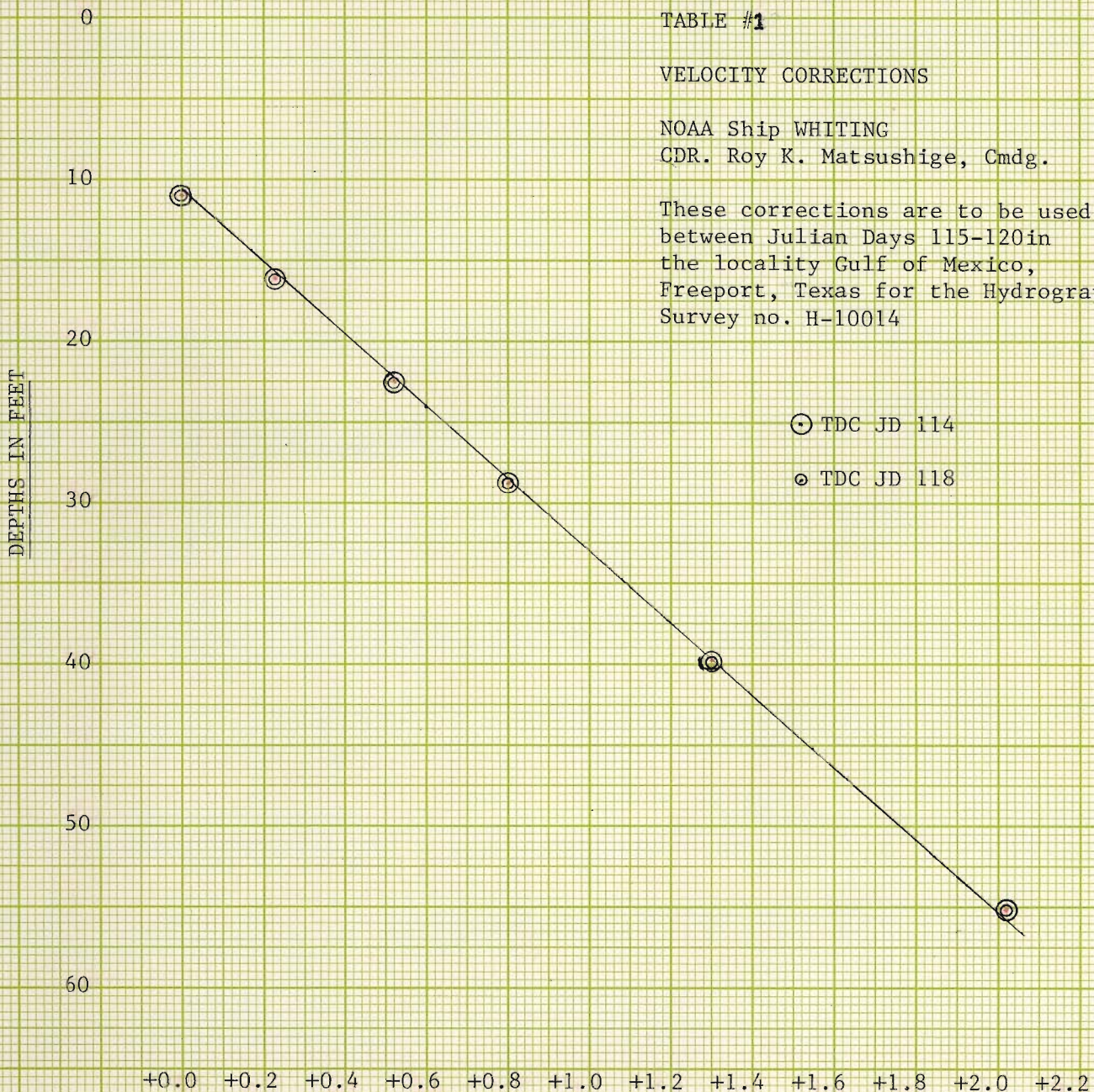


TABLE #1

VELOCITY CORRECTIONS

NOAA Ship WHITING
CDR. Roy K. Matsushige, Cmdg.

These corrections are to be used
between Julian Days 115-120 in
the locality Gulf of Mexico,
Freeport, Texas for the Hydrographic
Survey no. H-10014

⊙ TDC JD 114

⊙ TDC JD 118

K+W
10 X 10 TO 1 1/2 INCH
7 1/2 X 10 INCHES
U.S.A.
KEUFFEL & ESSER CO

1113

VELOCITY TAPE #2
VESNO 2930 JD 125-131

| | | | | | | |
|--------|---|------|------|-----|--------|--------|
| 000171 | 0 | 0002 | 0002 | 000 | 270000 | 01001* |
| 000211 | 0 | 0004 | | | | |
| 000252 | 0 | 0008 | | | | |
| 000302 | 0 | 0008 | | | | |
| 000348 | 0 | 0010 | | | | |
| 000387 | 0 | 0012 | | | | |
| 000431 | 0 | 0014 | | | | |
| 000477 | 0 | 0018 | | | | |
| 000521 | 0 | 0018 | | | | |
| 000564 | 0 | 0020 | | | | |
| 000602 | 0 | 0022 | | | | |
| 000651 | 0 | 0024 | | | | |
| 000672 | 0 | 0026 | | | | |
| 000717 | 0 | 0028 | | | | |
| 000759 | 0 | 0030 | | | | |

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

CORRECTIONS IN FEET, FATHOMS

NOAA FORM 75-21
(10-72)

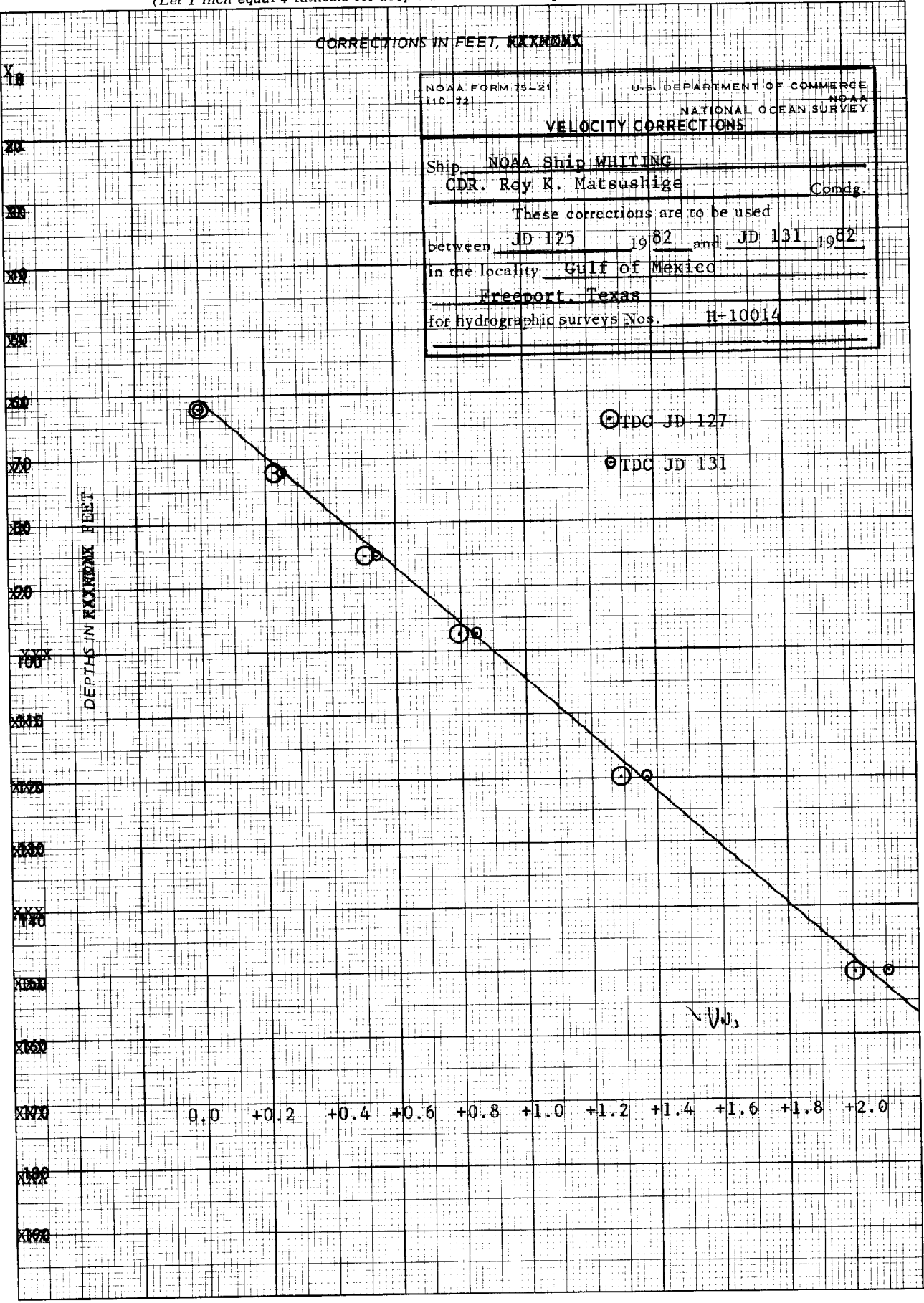
U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

| | | |
|--|------------------------|------------------|
| Ship | NOAA Ship WHITING | |
| Comd. | CDR. Roy K. Matsushige | |
| These corrections are to be used | | |
| between | JD 125 | 19 82 and JD 131 |
| | | 19 82 |
| in the locality <u>Gulf of Mexico</u> | | |
| <u>Freeport, Texas</u> | | |
| for hydrographic surveys Nos. <u>H-10014</u> | | |

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS FEET



20 X 20 TO THE INCH, 7 1/8 INCHES
KEUFFEL & ESSER CO. MA

240

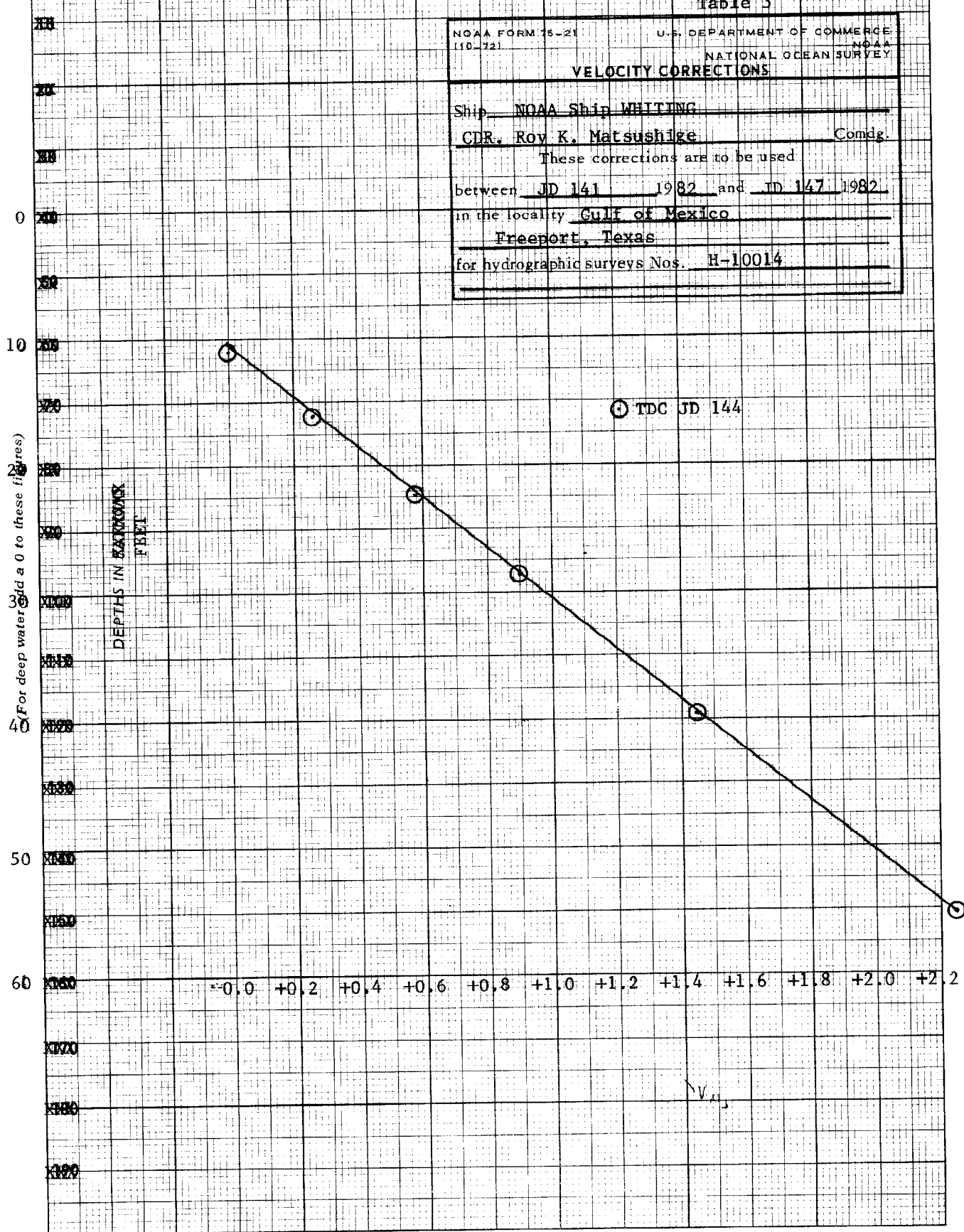
VELOCITY TAPE #3
VESNO 2930 JD 141-147

| | | | | | | |
|--------|---|------|------|-----|--------|--------|
| 000165 | 0 | 0002 | 0003 | 000 | 000000 | 0111.4 |
| 000170 | 0 | 0004 | | | | |
| 000180 | 0 | 0005 | | | | |
| 000280 | 0 | 0008 | | | | |
| 000380 | 0 | 0010 | | | | |
| 000500 | 0 | 0012 | | | | |
| 000700 | 0 | 0014 | | | | |
| 000900 | 0 | 0016 | | | | |
| 001100 | 0 | 0018 | | | | |
| 001300 | 0 | 0020 | | | | |
| 001500 | 0 | 0022 | | | | |
| 001700 | 0 | 0024 | | | | |
| 001900 | 0 | 0026 | | | | |
| 002100 | 0 | 0028 | | | | |
| 002300 | 0 | 0030 | | | | |
| 002500 | 0 | 0032 | | | | |

CORRECTIONS IN FEET, FATHOMS

Table 3

| | |
|---|--|
| NOAA FORM 75-21 110-721 | U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY |
| VELOCITY CORRECTIONS | |
| Ship <u>NOAA Ship WHITING</u> | Comdg. _____ |
| CDR. <u>Roy K. Matsushige</u> | |
| These corrections are to be used | |
| between <u>JD 141 1982</u> and <u>JD 147 1982</u> | |
| in the locality <u>Gulf of Mexico</u> | |
| <u>Freeport, Texas</u> | |
| for hydrographic surveys Nos. <u>H-10014</u> | |



20 X 20 TO THE INCH • 7 10 INCHES
KEUFFEL & ESSER CO. MA.

SETTLEMENT AND SQUAT
NOAA SHIP WHITING
1982 Field Season

A settlement and squat test was run for the NOAA Ship WHITING on 26 April 1982 in the working area for OPR K104-WH-82, near Freeport, Texas.

A buoy was set in approximately 67 feet of water and the depth recorded with the ship at rest when the buoy was deployed. The ship was then steered on a line past the buoy at different speeds, and a D.P. taken each time the buoy was abeam. Five passes were made at each speed, and the depths averaged to determine the correction.

This test was conducted at the mid-point of an 11-day work period. The ship carried all normal equipment and both Jensen launches.

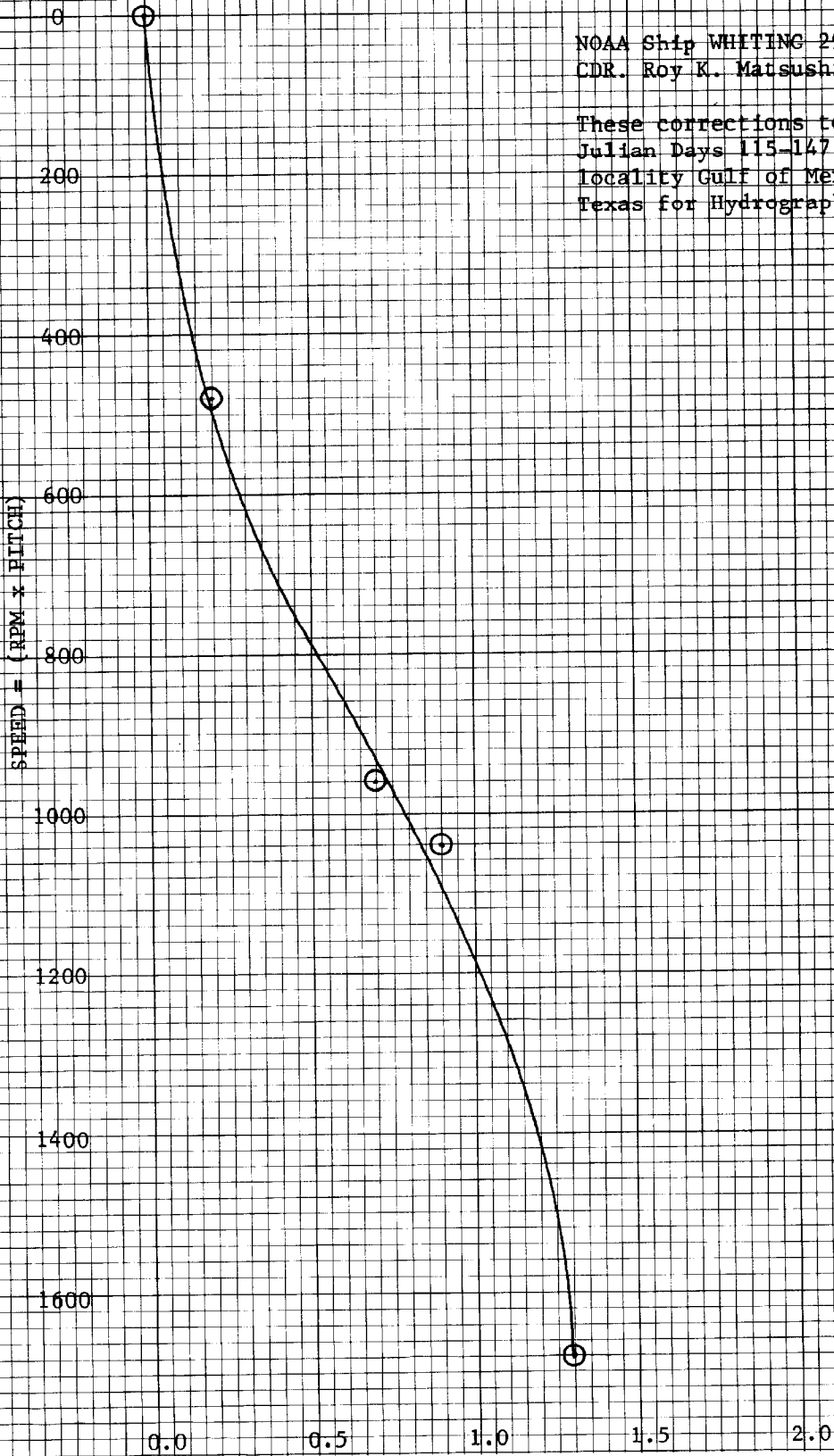
Following is a table of depths and corrections, and the resulting graph of speed (RPM x pitch) vs. draft corrections.

CORRECTIONS IN FEET

SETTLEMENT AND SQUAT CORRECTIONS

NOAA Ship WHITING 2930
CDR. Roy K. Matsushige, Cmdg.

These corrections to be used for
Julian Days 115-147, 1982 in the
locality Gulf of Mexico, Freeport
Texas for Hydrographic Survey H-10014.



FRAM-30 X 10 TO 1 INCH
100% LINE HEAVY

During the entire period of hydrography the primary tide station at Galveston, Pleasure Pier (877-1510) served as control for datum determination. The following subordinate stations were also in operation during the period of hydrography:

| <u>Station Number</u> | <u>Station Name</u> | <u>Location</u> |
|-----------------------|------------------------------------|--------------------------|
| 877-5270 | Port Aransas, Horace Caldwell Pier | 27° 49.6' N, 97° 03.1' W |
| 877-1450 | Galveston, Pier 21 | 29° 18.8' N, 94° 47.2' W |
| 877-2481 | Surfside Fishing Pier | 28° 57.4' N, 95° 16.4' W |

Stations 877-5270 and 877-1450 are under operation and maintenance contract by Chapin Associates Inc. of Tallahassee, Florida. Station 877-2481, Surfside Fishing Pier, was installed on 8 April 1982 and maintained by WHITING personnel.

Weekly tide reports are being submitted monthly to OA/C231, Tides and Water Levels Branch. Tide installation package was also submitted to OA/C231 on 4 May 1982.

DATE: September 1, 1982

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): 877-2481 Surfside Fishing Pier, TX

Period: May 5-27, 1982

HYDROGRAPHIC SHEET: H-10014

OPR: K104

Locality: Offshore Freeport, Texas, Gulf of Mexico

Plane of reference (mean lower low water): 5.05 ft.

Height of Mean High Water above Plane of Reference is 1.83 ft.

REMARKS: Recommended Zoning:

Zone Direct.


Chief, Tidal Datums and Information Branch

GEOGRAPHIC NAMES

H-10014

| | | | | | | | | | |
|----------------|-----------------------|---------------------------|----------------------------|---------------------------|---------------|----------------------------|------------------------|-----------------|---|
| Name on Survey | A | B | C | D | E | F | G | H | K |
| | ON CHART NO. 11300 | ON PREVIOUS SURVEY NO. | ON U.S. QUADRANGLE MAPS | FROM LOCAL INFORMATION | ON LOCAL MAPS | P.O. GUIDE OR MAP ATLAS | GRAND MCNALLY ATLAS | U.S. LIGHT LIST | |

| | | | | | | | | | | |
|----------------|---|--|--|--|--|--|--|--|--|----|
| FREEPORT | X | | | | | | | | | 1 |
| GULF OF MEXICO | X | | | | | | | | | 2 |
| TEXAS | X | | | | | | | | | 3 |
| | | | | | | | | | | 4 |
| | | | | | | | | | | 5 |
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| | | | | | | | | | | 9 |
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| | | | | | | | | | | 21 |
| | | | | | | | | | | 22 |
| | | | | | | | | | | 23 |
| | | | | | | | | | | 24 |
| | | | | | | | | | | 25 |

Approved:

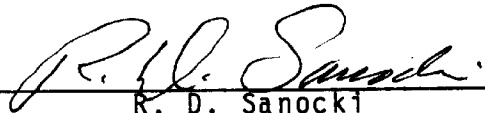
Chas. G. Harrington
Chief Geographer - N/22,2x5

31 Aug 1983

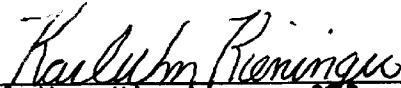
INSPECTION REPORT
H-10014

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected




R. D. Sanocki
Chief, Verification Section
Hydrographic Surveys Branch



Karl Wm. Kieninger, ^{COR}, NOAA
Chief, Hydrographic Surveys Branch

Approved 14 September 1983



Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

HYDROGRAPHIC SURVEY STATISTICS

H-10014

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

| RECORD DESCRIPTION | | AMOUNT | RECORD DESCRIPTION | | AMOUNT |
|--------------------|-------------------|----------------------|-----------------------------------|--------------------------|----------------------------|
| SMOOTH SHEET | | 1 | SMOOTH OVERLAYS: POS. ARC, EXCESS | | 3 |
| DESCRIPTIVE REPORT | | 1 | FIELD SHEETS AND OTHER OVERLAYS | | 6 |
| DESCRIPTION | DEPTH/POS RECORDS | HORIZ. CONT. RECORDS | SONAR-GRAMS | PRINTOUTS | ABSTRACTS/SOURCE DOCUMENTS |
| ACCORDIAN FILES | | | | 3 raw P/O 3 misc data | |
| ENVELOPES | | | | | |
| VOLUMES | | | | | |
| CAHIERS | | | | | |
| BOXES | | | | 2 smooth P/O misc | |

SHORELINE DATA

- SHORELINE MAPS(List):
- PHOTOBATHYMETRIC MAPS(List):
- NOTES TO THE HYDROGRAPHER(List):
- SPECIAL REPORTS(List):
- NAUTICAL CHARTS(List): 11300, 11323

OFFICE PROCESSING ACTIVITIES

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

| PROCESSING ACTIVITY | AMOUNTS | | |
|--|--------------|------------|--------|
| | VERIFICATION | EVALUATION | TOTALS |
| POSITIONS ON SHEET | | | 3883 |
| POSITIONS REVISED | 3883 | | 3883 |
| SOUNDINGS REVISED | 560 | 10 | 570 |
| CONTROL STATIONS REVISED | 2 | | 2 |
| | TIME - HOURS | | |
| | VERIFICATION | EVALUATION | TOTALS |
| PRE-PROCESSING EXAMINATION | 25 | | 25 |
| VERIFICATION OF CONTROL | 16 | | 16 |
| VERIFICATION OF POSITIONS | 97 | | 97 |
| VERIFICATION OF SOUNDINGS | 550 | 5 | 555 |
| VERIFICATION OF JUNCTIONS | | 2 | 2 |
| APPLICATION OF PHOTOBATHYMETRY | | | |
| SHORELINE APPLICATION/VERIFICATION | | | |
| COMPILATION OF SMOOTH SHEET | 37 | | 37 |
| COMPARISON WITH PRIOR SURVEYS AND CHARTS | | 22 | 22 |
| EVALUATION OF SIDESCAN SONAR RECORDS | | | |
| EVALUATION OF WIRE DRAGS AND SWEEPS | | | |
| EVALUATION REPORT | | 39 | 39 |
| OTHER | | | |
| DIGITIZING | 10 | | 10 |
| TOTALS | 735 | 68 | 803 |

| | | |
|---|-------------------------------|----------------------------|
| Pre-processing Examination by D.V. Mason, R.G. Roberson | Beginning Date 29 JUN 1982 | Ending Date 6 AUG 1982 |
| Verification of Field Data by M.J. Stewart, M.W. Holloway, C.D. Meador | Time(Hours) 735 | Ending Date 8 AUG 1983 |
| Verification Check by G.F. Trefethen, L.G. Cram, C.D. Meador | Time(Hours) 41 | Ending Date 19 AUG 1983 |
| Evaluation and Analysis by R.G. Roberson | Time(Hours) 68 | Ending Date 14 SEP 1983 |
| Inspection by CDR K. Wm. Kieninger, R.D. Sanocki | Time(Hours) 20 | Ending Date 12 SEP 1983 |

Completed by L.G. 6/28/84 55 App. Exam 11/6/84 Dringwood hours

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO.: H-10014

FIELD NO.: WH 20-2-82

Texas, Gulf of Mexico, Approach to Freeport

SURVEYED: April 25 through May 27, 1982

SCALE: 1:20,000

PROJECT NO.: OPR-K104-WH-82

SOUNDINGS: Ross Digital
Echo Sounder and Leadline

CONTROL: Odom Offshore
HYDROTRAC (range/range)

Chief of Party R.K. Matsushige
Surveyed by A.A. Armstrong
..... A.N. Flior
..... V.N. Shaffer
..... M.E. Henderson
..... E.A. Steigerwald
..... P.J. Ruiz
..... T.A. Wolf
..... P.M. Kenul
Automated Plot by Xynetics 1201 Plotter (AMC)

1. INTRODUCTION

- a. No unusual problems were encountered during verification of the survey.
- b. Notes in the Descriptive Report were made in red during verification.

2. CONTROL AND SHORELINE

- a. Control is adequately discussed in sections F., G. and S. of the Descriptive Report.
- b. There is no shoreline in the area surveyed.

3. HYDROGRAPHY

a. Sounding at crossings are in excellent agreement. Depths are generally within one (1) foot.

b. The standard depth curves could be adequately delineated. Brown and dashed curves were added to show additional bottom relief.

c. The development of the bottom configuration and determination of least depths is considered adequate except:

(1) The sixty (60) foot curve is not adequately delineated from approximately Latitude $28^{\circ}46'36''N$, Longitude $95^{\circ}16'36''W$ to Latitude $28^{\circ}45'42''N$, Longitude $95^{\circ}18'12''W$ and Latitude $28^{\circ}47'54''N$, Longitude $95^{\circ}18'00''W$ to Latitude $28^{\circ}47'06''N$, Longitude $95^{\circ}19'00''W$. Lines of hydrography were run parallel to the depth curve.

* (2) A bottom feature with a forty-nine (49) foot sounding which is eleven (11) feet shallower than surrounding depths found in Latitude $28^{\circ}47'17.55''N$, Longitude $95^{\circ}18'49.88''W$ was not adequately developed.

(3) A large bottom feature centered at approximate Latitude $28^{\circ}47'30''N$, Longitude $95^{\circ}18'00''$ was not adequately developed. Additional reduced spacing sounding lines of both mainscheme and perpendicular lines of hydrography would have better defined this feature and assured that least depths were obtained. See also Section 6 of this report.

* ~~LA 204~~ 125 — 11321
N/M 7/85 NM/31/85-11330
1/23/85 ALA 11300 } 7/9/85

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 lead line comparisons (vertical casts) taken on Julian days 071 and 074 were taken using Ross echo sounder (S/N 1053). On Julian days 141 through 147 Ross echo sounder (S/N 1049) replaced echo sounder (S/N 1053). Another leadline comparison should have been performed to determine instrument error for the second echo sounder.

b. The TC/TI tapes and listings submitted were incomplete. Several speed changes were not applied. This was corrected during verification.

c. The corrector tapes submitted used a draft of 11.0 feet. A tabulation of draft correctors for each trip is found on page 54 of the Descriptive Report. These values were applied during verification.

d. The hydrographer did not compare the present survey with FE-198WD (1964), FE-20 No. 3WD (1965); H-6398a (1938) and H-6398b (1938). These surveys together cover all but the twelve (12) soundings found by the hydrographer on H-6253 (1937). All of these surveys were listed in the Project Instructions.

e. Descriptions of the oil rigs in the survey area were not found in the NOAA Forms 77-44 "SOUNDINGS" as stated in section N of the Descriptive Report.

f. The dive reports submitted in the Descriptive Report contained no geographic positions of the items located or the time meridian used for the dives. This makes verification and application of smooth tides for least depth determination difficult. A position for the wreck located by the divers was determined by using indications found on the fathograms for hydrography run on different lines (main scheme and crossline) and an indication seen after the end of a line.

g. The electronic correctors listed on page 62 of the Descriptive Report were a compilation of morning correctors only. The mean for the morning and afternoon correctors was computed and entered during verification.

h. The NOAA Forms 77-44 "SOUNDINGS" submitted were not chronologically correct as required in section 4.8.3 of the Hydrographic Manual.

i. Four (4) aids to navigation were located on Julian day 130 (volume 2 of 2, page 31). A detached position based upon a radar range with no bearing or geographic position is not an acceptable method for location of aids to navigation. These positions were not accepted. This does not meet the criteria for positioning floating aids to navigation specified in Section 4.5.13.2 of the Hydrographic Manual.

j. The proper stamps were not used in the volumes at watch changes.

k. Velocity graphs are not drawn to the maximum depth of the velocity tape listing, i.e. Table I goes to 75.3 feet while the graph only goes to approximately fifty-six (56) feet.

l. Bottom samples were not taken on the two (2) shoals located in Latitude $28^{\circ}47'30''N$, Longitude $95^{\circ}18'00''W$ and Latitude $28^{\circ}46'33''N$, Longitude $95^{\circ}20'36''W$. Section 4.5.9.2 of the Hydrographic Manual outlines this requirement.

m. Soundings were taken while the vessel was making circular patterns or making turns for course changes on crosslines. This is not a standard practice and did on some lines cause an apparent one (1) foot variance in depths.

n. Total coverage of the area surveyed was not achieved; most notable were the large areas around the oil rigs; however, the hydrographer cites safe navigation for these holidays. There are additional smaller holidays mentioned by the hydrographer in section M of the Descriptive Report.

5. JUNCTIONS

H-9881 (1980) to the south

H-9885 (1980) to the south

H-10011 (1982) to the east

H-10015 (1982) to the west

An adequate junction was effected with H-10011 (1982) to the east and H-10015 to the west. H-9881 (1980) and H-9885 (1980) have been forwarded to Rockville, Maryland. There are no contemporary surveys to the north and present survey depths are not in harmony in this area. Present survey depths are generally five (5) to eleven (11) feet deeper.

6. COMPARISON WITH PRIOR SURVEYS

- a. ⁶²⁵³ H-6352 (1:40,000) 1937
H-6398a (1:40,000) 1938
H-6398b (1:40,000) 1938

The above prior surveys cover the entire area of present survey.

H-6253 (1937) is one (1) to three (3) feet shoaler in the common area.

H-6398a (1938) shows a general trend of being one (1) to three (3) feet shoaler than the present survey. Along the northern quarter of the present survey west of Longitude 95° 13'00"W, present survey depths are five (5) to ten (10) feet deeper ^{or} than the prior survey depths. A coral head in Latitude 28° 50.2'N, Longitude 95° 08.4'W with a least depth of fifty (50) feet corresponds to the charted location of an obstruction, fish haven (discontinued) located by the present survey. [✓] The field unit dived on this feature and later obtained a lead line least depth of fifty-one (51) feet. Another indication was found by the field unit approximately 130 meters northeast of the fifty-one (51) foot sounding. This indication corresponds to coral head shown on the prior survey H-6398a (1938). Surrounding depths on the present survey are sixty-seven (67) to seventy (70) feet. Prior survey depths were brought forward to supplement the present survey data in this area.

*Diver's determination of least depth by gage.
See Diver's Report for annotated position
of leadline least depth by ship.*

³ H-6298b (1938) is generally one (1) to three (3) feet shoaler than the present survey. This prior survey developed three (3) features. The present survey found the east and middle features. The west feature falls on junctional survey H-10015 (1982) to the west.

The overall present survey deeper depths may be attributable to the withdrawal of gas and oil in the area. However, the differences of up to 10 feet in the northwestern area of the present survey may be attributable to natural causes.

Selected prior survey soundings that were brought forward to the present survey in several areas are one (1) to three (3) feet shoaler than present survey depths. These were brought forward as the most conservative approach to charting information in an area where the present survey does not provide adequate coverage. Because of the generally flat bottom in the survey area and the one (1) to three (3) foot disparity, between the present and prior surveys, no prior survey soundings were brought forward in the holidays around the oil rigs.

★ The present survey is adequate to supersede the prior surveys except as noted above.

b. Wire Drag Survey

FE-198WD (1964) 1:80,000

FE-203WD (1968) 1:80,000

Survey FE-198WD (1964) previously numbered as F.E. No. 1, 1965 WD consists of three wire-drag investigations assigned by OPR-450 (1963-64) which fall in the common area of the present survey.

FE-198WD (1964)

Presurvey Review Item 53 was a search for an obstruction, fish haven in Latitude $28^{\circ}50.98'N$, Longitude $95^{\circ}08.49'W$ originating with NM 46 (1959). The fish haven was moved by a chart compiler to its presently charted location in Latitude $28^{\circ}50.65'N$, Longitude $95^{\circ}08.07'W$ to correspond with the location of a coral head with a fifty (50) foot least depth originating with survey H-6398a (1938). The present survey found the fish haven which consists of concrete rubble (verified by divers) with a least depth of fifty-one (51) feet. The discontinued fish haven is adjacent to the feature from survey H-6398a (1938) on which the present survey obtained a depth of fifty-eight (58) feet. It is recommended that the presently charted information on Chart 11321 and 11300 be revised to reflect what is presented on the present survey.

There were no conflicts with present survey depths and the wire drag effective depths.

Presurvey Review Item #58

A wire drag investigation of a dangerous sunken wreck, PA in Latitude $28^{\circ}46.97'N$, Longitude $95^{\circ}15.98'W$. The wreck was cleared to fifty-seven (57) feet by the investigation. Present survey depths are fifty-seven (57) to sixty-six (66) feet which were not in conflict with wire-drag effective depths. No indication of the wreck was found by the present survey. A charted 9½-fathom cleared depth in the location is shown on Chart 11300. No change to presently charted information is recommended. Presurvey Review Item No. 59 was on wire-drag investigation of a dangerous sunken wreck charted in Latitude $28^{\circ}54.02'N$, Longitude $95^{\circ}11.32'W$. The charted wreck was cleared to forty-eight (48) feet by the wire drag survey. Present survey depths are fifty-five (55) to fifty-eight (58) feet in the area. While not in conflict with wire-drag effective depths, it is questionable whether the wreck can be considered disproved at the reported position. Chart Letter 629 (1957) reported the wreck burned and sank in 1949. The effective depths were not within three (3) feet of the bottom as required to disprove by the Wire Drag Manual. It is recommended that the wreck be restored to Chart 11321 with the notation: "(cleared 40 feet)". Chart 11300 shows a wreck rep, PD with a cleared depth of eight (8) fathoms.

48 feet
off
1-12-84

FE-203WD 1964

Survey FE-203WD (1965) previously F.E. No. 1, 1966WD consists of two investigation items assigned by OPR-450 of 1965 that fall in the area common to the present survey.

Investigation Item 5a was a wire drag investigation of the sunken wreck, PA (F/V KOKOMO) charted in Latitude $28^{\circ}49.5'N$, Longitude $95^{\circ}11.5'W$. The wire-drag investigation cleared the charted location with at least a 1-mile radius to sixty-one (61) feet. Present survey depths are sixty-four (64) to sixty-eight (68) feet and there are no conflicts with effective wire-drag depths. It is recommended that the cleared depth of 10 fathoms on Chart 11300 be retained as charted. There was no indication of this wreck on the present survey.

Investigation Item 5i was a wire-drag investigation of the sunken wreck, PA (F/V LAURA E) presently charted with a wire drag clearance of twenty-four (24) feet in Latitude $28^{\circ}50'N$, Longitude $95^{\circ}21'W$. There are no conflicts between effective wire-drag depths and present survey depths. There was no indication of this wreck on the present survey. No change in the presently charted data is recommended.

7. COMPARISON WITH CHART 11321 (20th Edition, Apr 19/80)
11300 (24th Edition, Feb. 27/82)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys. In addition to the hydrographer's Descriptive Report attention is directed to the following:

(1) Presurvey Review item 276, a charted dangerous sunken wreck, PA, in Latitude $28^{\circ}50.7'N$, Longitude $95^{\circ}13.7'W$, was searched for by the hydrographer with negative results. A shoal indication was found in Latitude $28^{\circ}50'37.36''N$, Longitude $95^{\circ}12'44.94''W$ with an echo sounder least depth of forty-eight (48) feet. This was evaluated and shown on the smooth sheet as a wreck. It is recommended that this wreck be charted and a wire drag/side scan sonar investigation be considered at an opportune time for verification or disproval of this wreck. However, the depth on the wreck shown on the smooth sheet may not be the least depth. A least depth will have to be ascertained by a subsequent field investigation. The dangerous sunken wreck, PA charted in Latitude $28^{\circ}50.7'N$, Longitude $95^{\circ}13.7'W$, from LNM 42 (1980) should be deleted from the chart.

Do not concur
See
Examination
Report

(2) Presurvey Review item 76, a charted sunken dangerous wreck, PA, in Latitude $28^{\circ}47.5'N$, Longitude $95^{\circ}14.0'W$, was searched for with negative results. The wreck originates with NM 30 of 1966. It is recommended that the wreck remain as charted. It is also recommended that a wire drag/side scan sonar investigation be conducted at an opportune time to verify or disprove the existence of the wreck.

A 59-ft sdg that falls in surrounding depths of 61-63 feet on the present survey is near the charted wreck location.

(3) The charted light with horn in Latitude $28^{\circ}47.6'N$, Longitude $95^{\circ}20.9'W$ was not found by the hydrographer. A telephone conversation on 24 August 1983 with Mr. Charles Branton of the Texas Coastal Marine Council, (512) 475-5849, confirmed the light is down and has been replaced with a lighted buoy. The hydrographer found a wreck in Latitude $28^{\circ}47'33.21''N$, Longitude $95^{\circ}20'51.13''W$ with a leadline least depth of thirty-four (34) feet. Mr. Branton furnished this office with actual Loran rates and a geographic position of the "GEORGE VANCOUVER FISHING REEF". The "GEORGE VANCOUVER" is a 420 foot hulk that sunk in heavy weather while being towed to a fish haven site. Its present location is Latitude $28^{\circ}47'39.426''$, Longitude $95^{\circ}20'52.113''W$. This location was provided to the Texas Coastal Marine Council by Decca Surveys of Houston, Texas.

The hydrographer's description of the wreck found does not correspond with the location or dimensions of the "GEORGE VANCOUVER". It is recommended that the wreck found be charted on subsequent editions of all affected charts and that a wire drag/side scan sonar investigation be performed at an opportune time.

The present survey is adequate to supersede the charted hydrography except as noted in section 6 of this report.

b. AIDS TO NAVIGATION

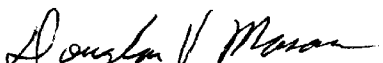
There is one (1) fixed and one (1) floating aid to navigation charted in the area survey. Neither of these aids were on station during the time of the survey. The hydrographer promptly notified the Eighth Coast Guard District of this problem.

8. COMPLIANCE WITH PROJECT INSTRUCTIONS


This survey adequately complies with the Project Instructions except as noted in section 4 of this report.

9. ADDITIONAL WORK

This is an adequate basic survey; additional work is recommended in sections 3 and 6.a of this report.


Douglas V. Mason
Cartographic Technician
Verification of Field Data


Leroy G. Cram
Supervisory Cartographic Technician
Verification Check


Robert G. Roberson
Cartographer
Evaluation and Analysis

REC'D APR 15 1985
HYDROGRAPHIC SURVEY BRANCH
NAUTICAL CHARTING DIVISION



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

N/CG242:LQ

January 24, 1985

TO: N/CG24 - Roy K. Matsushige *RM*
FROM: N/CG242 - *George K. Myers, Jr.*
SUBJECT: Examination of Hydrographic Survey H-10014 (1982), Texas, Gulf of Mexico, Approaches to Freeport

Chief of Party R. K. Matsushige
Field Unit NOAA Ship WHITING
Processed by Atlantic Marine Center
Examined by L. Quinlan

An examination of hydrographic survey H-10014 (1982) was accomplished to monitor the survey for adequacy with respect to data acquisition, conformance with applicable project instructions, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, smooth plotting, digital data standards, decisions made and actions taken by the evaluator, and the cartographic presentation of data.

Cartographic deficiencies and constructive comments are noted on a 1/2-scale copy of the survey smooth sheet which will be forwarded to the marine center. No significant digital data deficiencies were detected. In general, the survey was found to conform to National Ocean Service standards and requirements except as stated in the Evaluation Report and as follows:

1. Presurvey Review item 276, a charted dangerous sunken wreck, PA in latitude 28°50.7'N, longitude 95°13.7'W was searched for by the hydrographer and was not found. The search was conducted at a 45-meter spacing with an echo sounder only, and is not considered conclusive evidence for removal of the wreck, PA. The 48-foot depth found by echo sounder in latitude 28°50'37.37"N, Longitude 95°12'44.94"W was not investigated, nor was it conclusively determined to be a wreck.

It is recommended that the dangerous sunken wreck, PA remain as charted. Also, the 48-foot depth should be charted with the annotation "Obstr." The label "Wk" currently denoting this feature on the smooth sheet should be disregarded.

It is also recommended that full investigations be made of these two items, to include side scan sonar, diver investigations, and/or wire drag.



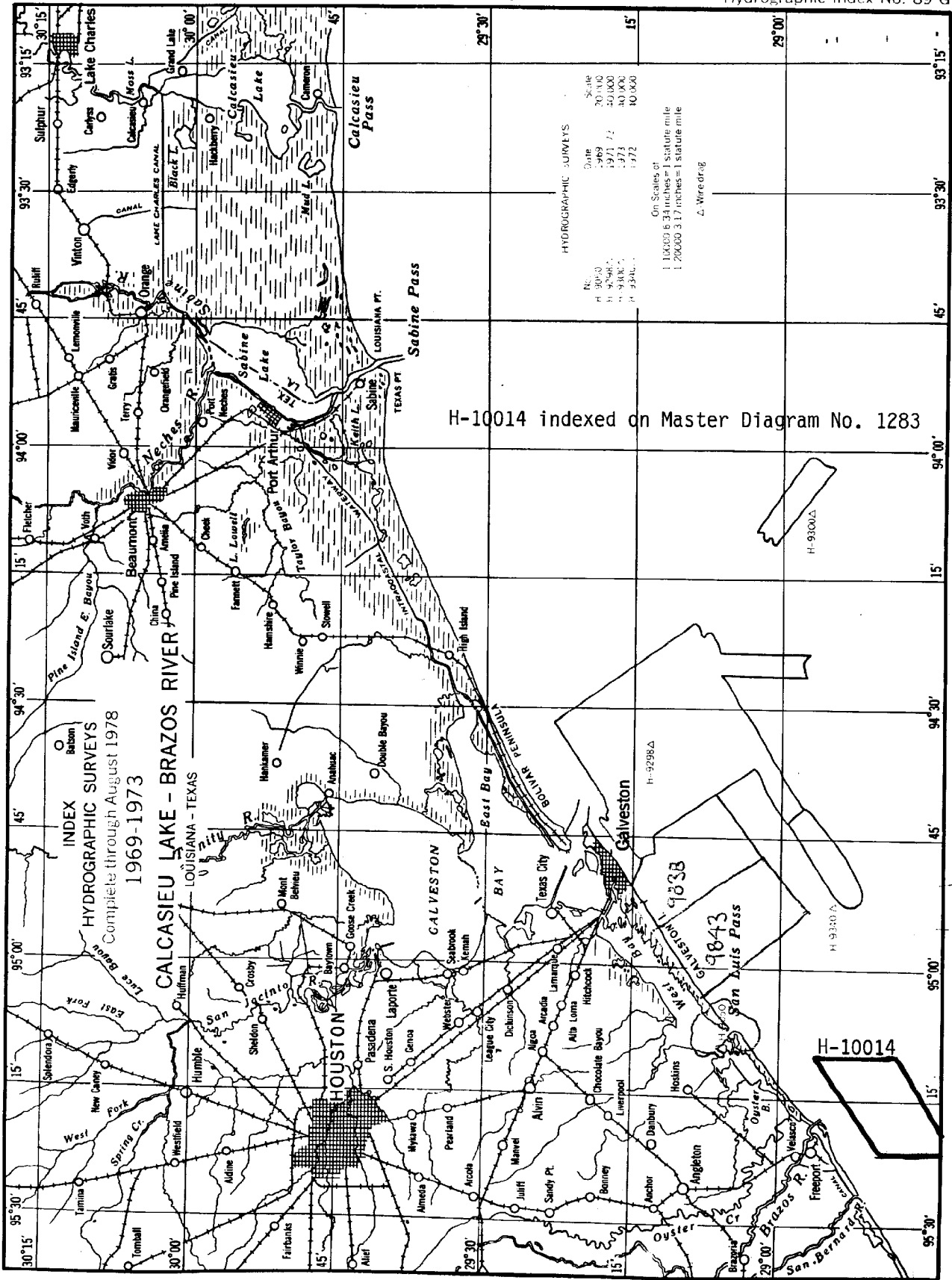
2. The annotation "Obstr" has been added to the smooth sheet to describe the 49-foot sounding found in latitude $28^{\circ}47'17.55''\text{N}$, longitude $95^{\circ}18'49.88''\text{W}$, which is 11 feet shoaler than surrounding depths. This annotation now agrees with the cartographic code used for this feature in the survey records.

This item should be further investigated at the earliest opportunity.

3. Miscellaneous pages should have been removed from the Descriptive Report during evaluation and filed with the records for this survey, in accordance with the C35x2 memorandum of August 30, 1976.

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

Hydrographic Index No. 89 G



INDEX
 HYDROGRAPHIC SURVEYS
 Complete through August 1978
 1969-1973

HYDROGRAPHIC SURVEYS

| No. | Date | Scale |
|--------|------|--------|
| H 3003 | 1969 | 30,000 |
| H 4758 | 1971 | 30,000 |
| H 3887 | 1973 | 30,000 |
| H 4346 | 1972 | 10,000 |

On Scales of
 1:10000 6.34 inches = 1 statute mile
 1:20000 3.17 inches = 1 statute mile

△ Wire drag

H-10014 indexed on Master Diagram No. 1283

H-10014

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10014

INSTRUCTIONS

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

| CHART | DATE | CARTOGRAPHER | REMARKS |
|-------|---------|----------------------|--|
| 11321 | 1-16-84 | BARTHEL | Full Part Before After Verification Review Inspection Signed Via Drawing No. 29 FULLY APPLIED DESCRIPTIVE REPORT ONLY. <i>Before exam. report</i> |
| 11321 | 6-28-85 | M. Herrick <i>mw</i> | Full Part Before After Verification Review Inspection Signed Via Drawing No. 30 |
| 11330 | 6-29-85 | M. Herrick <i>mw</i> | Full Part Before After Verification Review Inspection Signed Via Drawing No. 2 |
| 11300 | 6-29-85 | M. Herrick <i>mw</i> | Full Part Before After Verification Review Inspection Signed Via Drawing No. 40 |
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