10011

Diagram No. 1283

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WH-20-1-82

Office No. H-10011

LOCALITY

State Texas

General Locality Gulf of Mexico

Locality South of San Luis Pass

1982

CHIEF OF PARTY
CDR R.K.Matsushige

LIBRARY & ARCHIVES

DATE December 5, 1983

☆U.S. GOV. PRINTING OFFICE: 1980—768-230

AREA 4
SHTS:
-11323-80—
-11321-40—
-11330-210—
-11300-460
411-2,160

FORM C&GS-537 (5-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

H-10011

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-20-1-82

State Texas

General locality Gulf of Mexico

Locality ~~Freeport~~ South of San Luis Pass

Scale 1:20,000 Date of survey 11 April to 27 April, 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, V. Shaffer, E. Steigerwald, P. Ruiz, T. Wolf, P. Kenul

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

Graphic record scaled by WHITING personnel

Graphic record checked by VNS, EAS, PJR, TAW, PMK, FRC, RWB, DVM, MS

Protracted by _____ Automated plot by Hydroplot

Soundings penciled by _____

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

REMARKS: All times are Coordinated Universal Time.

Notes in the Descriptive Report in red were made during verification.

12-08-83
STANDARDS CK'D
C.LOY

AWOIS ✓ RWD 12/83

USCOMM-DC 37009-P66

DESCRIPTIVE REPORT

TO ACCOMPANY

BASIC HYDROGRAPHIC SURVEY

WH-20-1-82

H-10011

SCALE: 1:20,000

SURVEYED APRIL 11 - APRIL 27, 1982

BY NOAA SHIP WHITING S-329

CDR ROY K. MATSUSHIGE

COMMANDING OFFICER

A. PROJECT

Hydrographic Survey H-10011 was performed in accordance with Project Instructions OPR K104-WH-82, 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, southeast of Freeport,Texas. The sheet was laid out approximately parallel to the shoreline, and was bounded by the following points:

~~28° 55.9' N, 95° 11.2' W~~ 29°-Ø2'-49"N , ~~9~~4°-57'-33"W
~~29° 03.8' N, 94° 56.7' W~~ 28°-56'-2Ø"N, ~~9~~4°-52'-59"W
~~28° 47.4' N, 95° 05.3' W~~ 28°-49'-15"N, 95°-Ø5'-55"W
~~28° 55.4' N, 94° 51.0' W~~ 28°-55'-38"N, 95°-1Ø'-26"W

The area surveyed was characterized by gently sloping sandy bottom, with no irregular features. This survey was conducted from 11 April to 27 April 1982, Julian Days 101-117.

C. SOUNDING VESSELS

The sounding vessel used in this survey was the NOAA Ship WHITING S-329, EDP number 2930. The WHITING was equipped with standard hydrographic equipment, including Ross 5000 ~~fathometers~~ echo sounders and the Hydrotrac electronic positioning system. No unusual problems were encountered with any of the equipment used.

D. SOUNDING EQUIPMENT & CORRECTIONS TO ECHO SOUNDINGS

The sounding equipment used throughout this survey was a Ross Model 5000 Fine-line ~~fathometer~~ echo sounder, serial number 1053. The initial trace on this recorder was consistently very light and jagged, and at times disappeared altogether. This problem should in no way affect the quality of the data.

During operation the blanking was left on at either 20 or 30 feet in order to ensure that the phase and initial were adjusted correctly.

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

Velocity Corrections:

TDC casts were taken on JD's 102, 105, 114, and 118 using a Martek TDC Model 167 (s/n 127), calibrated February 1982. A severe storm on JD's 111-113 with accompanying high winds and 10-12 foot seas caused the only significant change in the graphs of the velocity curves. Because of this change, velocity correctors determined from TDC casts on JD's 102 and 105 were used for all data on JD's 101-111, while correctors applied to data on JD's 113-117 were determined from TDC casts on JD's 114 and 118.

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.** The instrument error, defined by the difference between the digital and fathometer readout, is considered insignificant as a result of these two tests.*** Differences between the digital and lead-line values were attributed to error in the lead-line observations.

Settlement and squat trials were run on 26 April in approximately 65 feet of water near the southern limit of the survey area. Ross Model 5000 ~~fathometer~~ echo sounder, 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° 17.2' N, Long. 94° 47.4' W. Logger tapes were provided by Processing Division, AMC, and were converted to predicted tide tapes by WHITING personnel using AM 500, Predicted Tide Generator.

Descriptions of all methods used to determine the corrections to echo soundings and supporting data are included in Appendix IV. All TRA corrections will be applied during final processing by OA/CAM 3,

* See Corrections to Echo Soundings (Folder included with survey)

** In Appendix IV

*** Considered ϕ.2 significant but next statement seem right (no corrections applied).

Processing Division, via the TC/TI tapes.

E. HYDROGRAPHIC SHEETS

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

East	Central	West
28° 55' 42" N	28° 53' 24" N	28° 51' 06" N
94° 52' 06" W	94° 56' 12" W	95° 00' 18" W

A total of six plotter sheets were submitted with this survey; three boat sheets containing mainscheme, crosslines, bottom samples and one development, and three smooth field sheets containing mainscheme, crosslines and bottom samples. The development of PSR item #81 was not plotted on the smooth sheet* because no trace of the wreck was found on the fathogram, and the development lines agreed with the mainscheme ~~hydrography~~ hydrography in this area. No other developments were needed to further define any topography on this survey. See splits run full width of sheet.

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

F. CONTROL STATIONS

The following signals were used for electronic positioning sites or calibration signals:

Signal #	Name	Year Est'd
001	H~~X~~82~~*~~TX	1979 unadj. (field position)
002	Terramar	1982 adj (field position)
007	Well USE	1912 calibration
008	~~Dow Chem Co Plt A Organic Tank~~ Dow Chemical Co Plant A Organic Tank	1954 calibration
010	Captain	1978 calibration
011	CCO & Gas Co ~~GA 278L NW2~~ GA278L NW 2	1982 calibration
012	H~~*~~78~~*~~TX	1979 calibration

Station numbers 002 and 011 were established to Third Order, Class I

* Plotted on rough boat sheet and smooth sheet.

standards by Mr. Gary Fredrick, AMC Operations Division, Between 28 March and 10 April 1982. Positions for all 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 calibration signals for visual sextant calibrations. The CCO & Gas Co. oil rig (sta #011) was also used for circle calibrations.

G. HYDROGRAPHIC POSITION CONTROL

Range-range control was used for this survey. The ~~Hydrotrac~~ HYDROTRAC positioning system was utilized for all mainscheme, crosslines, bottom samples, and developments. No problems were experienced with the ~~Hydrotrac~~ HYDROTRAC equipment, and the signal strength was not affected by adverse 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), and the following equipment used:

Power Amplifier s/n 536

Slave Drive Unit s/n 214

Coupler s/n JH 10120

At the right station (sta #002) a 36-foot whip antenna was used, along with the following units:

Power Amplifier s/n 537

Slave Drive Unit s/n 226

Coupler s/n JH 101206

The left and right stations were chosen to insure an intersection ~~of rates~~ angles greater than 30° and less than 150° throughout the survey area.

Calibration of the ~~Hydrotrac~~ HYDROTRAC 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 working trip, and whenever a loss or gain of lanes was suspected. The partial lane correctors were determined from these calibrations, and were applied for plotting on-line with RK112 and smooth plotting off-line with RK211.

Two oil rigs were also used for circle calibrations: the CCO & Gas Co. oil rig (sta #011) and a small wellhead (0.2 nm NE of the Texoma GALV 245-L oil rig) located NE of the survey limits. The position value for the Hydrotrac lanes was calculated for station #011 using its geodetic postion, and for the wellhead by averaging the values from several different circle calibrations. The circle calibrations served as a check of whole lane count, and a rough check of the partial correctors.

Lane losses were experienced on both stations on JD 116 during the development of PSR item #81. It was determined that this was due to a momentary loss of shipboard power to the ~~Hydrotrac~~ HYDROTRAC and Hydroplot sytems. The partial lane correctors determined by a visual calibration immediately after the lane loss differed by about a tenth of a lane with those from the previous calibration. They agreed well with the closing visual calibration on JD 117, and it was felt that this change in partial correctors occured during the loss of power. Therefore the correctors determined from the visual calibration on JD 113 were used for all data prior to the loss of lanes, and the correctors after the lane losses were used for the work done on JD 117.

An ANDIST of 5 meters was used with RK561 during visual calibrations to correct for the difference in position between the angle benders and the Hydrotrac antenna. An ANDIST of 5.5 meters and the digital gyrocompass input were used for on- and off-line plotting to correct for the distance between the transducer and the ~~Hydrotrac~~ HYDROTRAC antenna.

All calibration data for this survey was adequate, and no problems were encountered which degraded the positional accuracy.

See calibration listing, page 42 of this report.

An abstract of correctors has been included in Appendix V, and all calibration data has been submitted on a separate folder.

H. SHORELINE

There was no shoreline within the area of this survey.

I. CROSSLINES See also Evaluation Report, section 3.a.

One hundred and twelve nautical miles of crosslines were run, which is 9.8% of the mainscheme. Agreement with the mainscheme was excellent. Ninety-nine percent agreed within one foot of the mainscheme soundings, and 1% agreed within two feet.

J. JUNCTIONS See also Evaluation Report, section 5

This survey junctioned with H-9843 to the northeast and H-9885 to the southeast. H-9843 was a 1:20,000 scale survey done in 1979, and H-9885 was a 1:40,000 scale survey done in 1980. The junctions with both surveys were very good, all depths agreeing within one foot. This meets the criterion stated in Section 1.1.2 of the Hydrographic Manual.

K. COMPARISON WITH PRIOR SURVEYS See also Evaluation Report, section 6

Prior survey H-6253, a 1:40,000 scale survey completed in 1937, was compared to survey H-10011. Agreement with H-6253 was good, with approximately 75% of the depths agreeing within 1-2 feet. The remainder agreed within 2-3 feet, the depths on the present survey being consistently deeper than those of H-6253. This difference is within the acceptable limits suggested in Section 1.1.2 of the Hydrographic Manual.

The following two PSR items were investigated during this survey:

Item No.	Description	Charted Position	Source
79	Pipes, PA Full investigation item	Lat. 28° 54.6' N Lon. 95° 08.9' W	LNM 39, 1974
81	Wreck, PA Limited investigation	Lat. 28° 58' N Lon. 95° 04' W	NM 22, 1968

Item #79 was reported to be a 28-inch pipe extending 4 feet above the surface of the water. The ship ran over this area during hydrography, and anchored in this area during a storm on JD 112. At no time were the pipes visible above the surface, and no trace was found of any submerged pipes on the fathogram. Both the local Coast Guard Group in Galveston and the District Office in New Orleans were contacted about the pipes, and they had no record of anything being found, or of any further mention in the Notice to Mariners. Shrimp trawlers were often seen working in this area. The hydrographer recommends that the symbol be revised from PA, position approximate, to submerged pipe ED, existence doubtful.

Item #81 was a fishing vessel sunk in approximately 53 feet of water. This area was developed with 45-meter line spacing to a radius of 1000 meters around the charted position of the wreck. No trace of any debris was seen on the fathogram. The hydrographer recommends that this be charted as a wreck, existence doubtful. Do not concur; see section 7.a.2 of the Evaluation Report.

L. COMPARISON WITH THE CHART See also Evaluation Report 7.a and 6.b.

Survey H-10011 was compared with NOS Chart 11321, 20th ed., 19 April 1980, and NOS Chart 11323, 44th ed., 25 April 1981, both at scales of 1:80,000. Agreement with the charted depths was very good. Seventy percent of the charted depths agreed within one foot of the present survey, 25% agreed within 2 feet, and 5% within 3 feet. A 52-foot sounding charted at Lat. 28° 56' 18" N, Long. 95° 04' 50" W was 5 feet shoaler than the present depth. See section 6.b of Evaluation Report.

Charted depths were consistently shoaler than the depth obtained in this survey. Differences may be attributed to the difference in scale between the chart and that of the survey, and to changes in the sandy bottom due to natural causes.

M. ADEQUACY OF SURVEY

This survey is sufficiently complete and adequate to supercede

prior surveys for charting purposes.

The following areas are the only ones in which the hydrography is below standards set in the Hydrographic Manual:
Two soundings at Lat. 28° 55' 22" N, Long. 95° 07' 38" W were missed, causing a small hole in the middle of the line.
The sounding interval on the East sheet crosslines from position 0001 to 0012 was 0.9 cm.
The 60-foot contour line differed somewhat between sheets and in some cases between lines. This was due to the differences in scanning of hydrography done during rough seas versus relatively calm seas over very flat topography. Adequately resolved during survey verification at AMC.

N. AIDS TO NAVIGATION

There were no fixed of floating aids to navigation within the limits of this survey.

O. STATISTICS

VESNO: 2930
Total No. of Positions: ~~3776~~ 3659
Total Nautical Miles of Hydro: 1288
Total Square Miles of Hydro: 101
Bottom Samples: 33
Tide Stations: 4
Current Stations: 0
TDC Casts: 4
Magnetic Stations: 0

P. MISCELLANEOUS

See following letters.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

NOAA SHIP WHITING
GALVESTON, TEXAS 77553

2 April 1982

Commanding Officer
Coast Guard Vessel Traffic Service Unit
Houston / Galveston
P.O. Box 501
Galena Park, Texas 77547

Dear Sir:

The NOAA Ship WHITING will conduct a routine hydrographic survey operation at Galveston and vicinity from 8 April to 23 June 1982 particularly within the area covered by the following coordinates:

29° 09' 00" N	95° 00' 36" W
28° 55' 36" N	94° 51' 00" W
28° 34' 00" N	95° 30' 00" W
28° 45' 00" N	95° 38' 00" W

Please include this information in all pertinent publications and announcements within the stated time frame for dissemination to mariners regularly plying the area.

Sincerely,

Virginia N. Shaffer

Virginia N. Shaffer, LT., NOAA
Field Operation Officer

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIP WHITING
GALVESTON, TEXAS 77553

2 April 1982

Commander
Eighth Coast Guard District
Hale Boggs Federal Building
500 Camp Street
New Orleans, LA. 70130

Dear Sir:

The NOAA Ship WHITING will conduct a routine hydrographic survey operation at Galveston and vicinity from 8 April to 23 June 1982 particularly within the area covered by the following coordinates:

29° 09' 00" N	95° 00' 36" W
28° 55' 36" N	94° 51' 00" W
28° 34' 00" N	95° 30' 00" W
28° 45' 00" N	95° 38' 00" W

Please include this notice in all pertinent publications and announcements within the stated time frame for the information of the mariners regularly plying the area.

Sincerely,

Virginia N. Shaffer

Virginia N. Shaffer, LT., NOAA
Field Operation Officer

Q. RECOMMENDATIONS See also Evaluation Report, section 9

Survey H-10011 is adequate and no further field work is recommended.

See recommendations in Section K (Comparison to Prior Surveys).

R. AUTOMATED DATA PROCESSING

Program No.	Description	Version Date
RK 112	R/R Real Time Hydroplot	8/04/81
RK 201	Grid, Signal & Lattice Plot	4/18/75
RK 211	R/R Non-Real Time Plot	2/02/81
RK 300	Utility Computations	10/21/80
RK 330	Data Reformat and Check	5/04/76
AM 500	Predicted Tide Generator	11/10/72
AM 530	Layer Corr. for Velocities	5/10/76
RK 561	R/R Geodetic Calibration	5/26/81
RK 602	Extended Line Oriented Editor	5/21/75
RK 612	Line Printer Listing	3/22/78

S. REFERRAL TO REPORTS

Tide Station Report submitted to OA/C321 Tidal Requirements and Acquisitions Branch, 4 May 1982.

Recovery Notes, horizontal control, submitted to OA/CAM1 Operations Division AMC, 19 April 1982.

DR Abstracts for LORAN-C comparison, submitted to OA/CAM1 13 May, 1982.

Respectfully submitted,

Elizabeth A. Steigerwald

Elizabeth Steigerwald, ENS NOAA

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:

Station Number	Station Name	Location
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.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

NOAA Ship WHITING
439 W. York St.
Norfolk, Virginia 23510

13 May 1982

TO: Chief,
Tides and Water Levels Branch, OA/C231

FROM: CDR Roy K. Matsushige
Commanding Officer, NOAA Ship WHITING

SUBJECT: Smooth Tide Data for Survey H-10011

Please forward smooth tide data for the southeastern coast of Texas from tide station numbers 877-1510, 877-5270, 877-1450, and 877-2481 to Chief, Processing Division, CAM3, Atlantic Marine Center, Norfolk, Virginia. Smooth tide data is needed for Julian Days 101-108 and 110-120, 1982.

ABSTRACT OF DRAFT CORRECTIONS

VESSEL WHITING PROJECT QPR K104-WH-82

DATE / J.D.	DRAFT FWD	DRAFT AFT	AVE. DRAFT FOR TRIP
11 April/101	10' 3"	11' 0"	mm 11/17/82
18 April/108	9' 5"	10' 6"	10.3'
20 April/110	10' 5"	11' 0"	mm 11/17/82
30 April/120	9' 6"	10' 6"	10.4'

mm 11/17/82

DIGITAL - LEADLINE COMPARISON

VESSEL Ship WHITING

DATE 12 March JD 071

FATHOMETER TYPE Ross 5000 SERIAL NO. 1053

Lat. 30° 16' 30"

DIGITAL DRAFT 0

Long. 87° 17' 10"

FATHOGRAM INITIAL 0

Locality Pensacola, FL

LEADLINES	No.	Markings	Length
1. Port	1	fm	20 fm
2. Stbd	2	ft	60 ft

Wind 7 kts

Sea 0-1 ft

Ship Draft Fore 9' 7"

Aft 10' 9"

Velocity Correction +1.1 ft

Mean Draft 10.2 ft

	1	2	3	4	5	6
LEADLINE PORT	44.4	44.9	44.7	44.5	44.5	44.2
STBD	45.0	44.5	44.5	44.0	44.0	44.0
MEAN	44.7	44.7	44.6	44.2	44.2	44.1
Velocity Corr. + DIGITAL RDG + Draft	43.8	44.2	44.2	44.0	43.9	43.8
DIFFERENCE	0.9	0.5	0.4	0.2	0.3	0.3
					MEAN	0.4
DIGITAL READING	32.5	32.9	32.9	32.7	32.6	32.5
FATHOGRAM RDG	32.5	32.7	32.7	32.8	32.5	32.2
DIGITAL - FATHO RDG	0.0	0.2	0.2	-0.1	0.1	0.3
					MEAN	0.1

DIGITAL - LEADLINE COMPARISON

VESSEL Ship WHITING

FATHOMETER TYPE Ross 5000 SERIAL NO. 1053

DIGITAL DRAFT 0

FATHOGRAM INITIAL 0

LEADLINES	No.	Markings	Length
1. Port	1	fm	20 fm
2. Stbd	2	ft	60 ft

DATE 15 March JD 074

Lat. 30° 20' 48"

Long. 87° 15' 54"

Locality Pensacola, FL

Wind 5 kts

Sea 0 ft

Ship Draft Fore 10' 6"

Aft 10' 8"

Velocity Correction +0.5 ft

Mean Draft 10.6'

	1	2	3	4	5	6
LEADLINE PORT	27.2	27.3	27.4	27.5	27.2	27.0
STBD	27.2	27.2	27.2	27.2	27.2	27.2
MEAN	27.2	27.2	27.3	27.3	27.2	27.1
Velocity Corr. + DIGITAL RDG+ Draft	27.0	27.0	27.0	27.0	27.0	27.0
DIFFERENCE	0.2	0.2	0.3	0.3	0.2	0.1
					MEAN	0.2
DIGITAL READING	15.9	15.9	15.9	15.9	15.9	15.9
FATHOGRAM RDG	15.9	15.9	16.0	15.9	15.9	15.9
DIGITAL - FATHO RDG	0.0	0.0	-0.1	0.0	0.0	0.0
					MEAN	0.0

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.

SETTLEMENT AND SQUAT

NOAA SHIP WHITING

1982 Field Season

SPEED	POS. #	ANALOG DEPTH	AVE. DEPTH	CORRECTION (ft)
At Rest		55.6		0.0
240/2	662	55.3		
	663	55.7		
	665	55.4		
	666	55.2		
	668	55.3	55.4	+0.2
240/4	669	54.9		
	670	55.1		
	671	54.8		
	672	54.7		
	673	54.9	54.9	+0.7
260/4	674	54.7		
	675	54.7		
	676	55.0		
	677	54.6		
	678	54.3	54.7	+0.9
280/6	679	54.4		
	680	53.9		
	681	54.3		
	682	54.3		
	683	54.4	54.3	+1.3

Fuel Load = 25,465 gallons

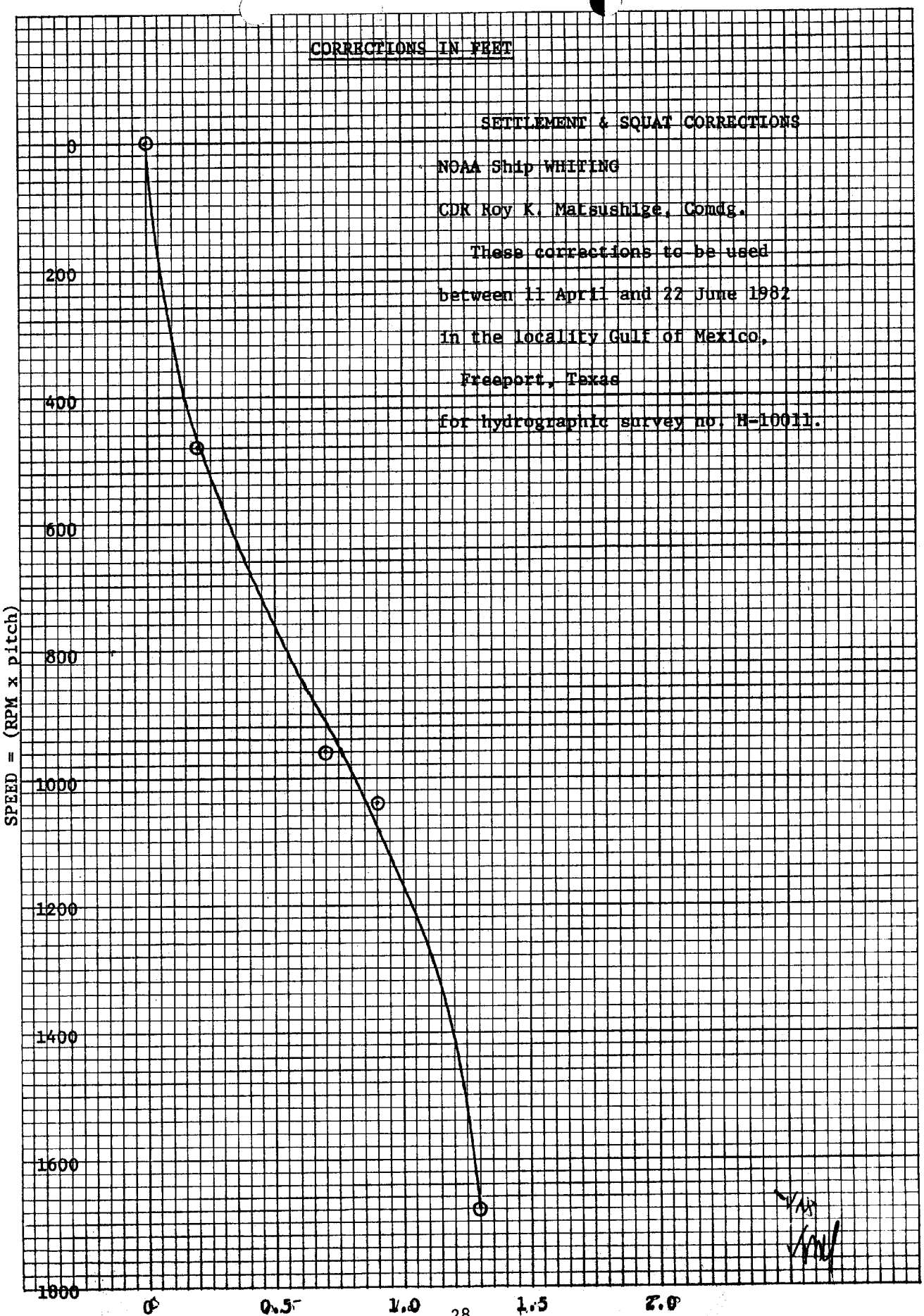
CORRECTIONS IN FEET

SETTLEMENT & SQUAT CORRECTIONS

NOAA Ship WHITING

CDR Roy K. Matsushige, Comdg.

These corrections to be used between 11 April and 22 June 1982 in the locality Gulf of Mexico, Freeport, Texas for hydrographic survey no. H-10011.



FRI-MI-10 X 10 TO 1 INCH
10TH LINE HEAVY

CORRECTIONS IN FEET

TABLE #1

VELOCITY CORRECTIONS

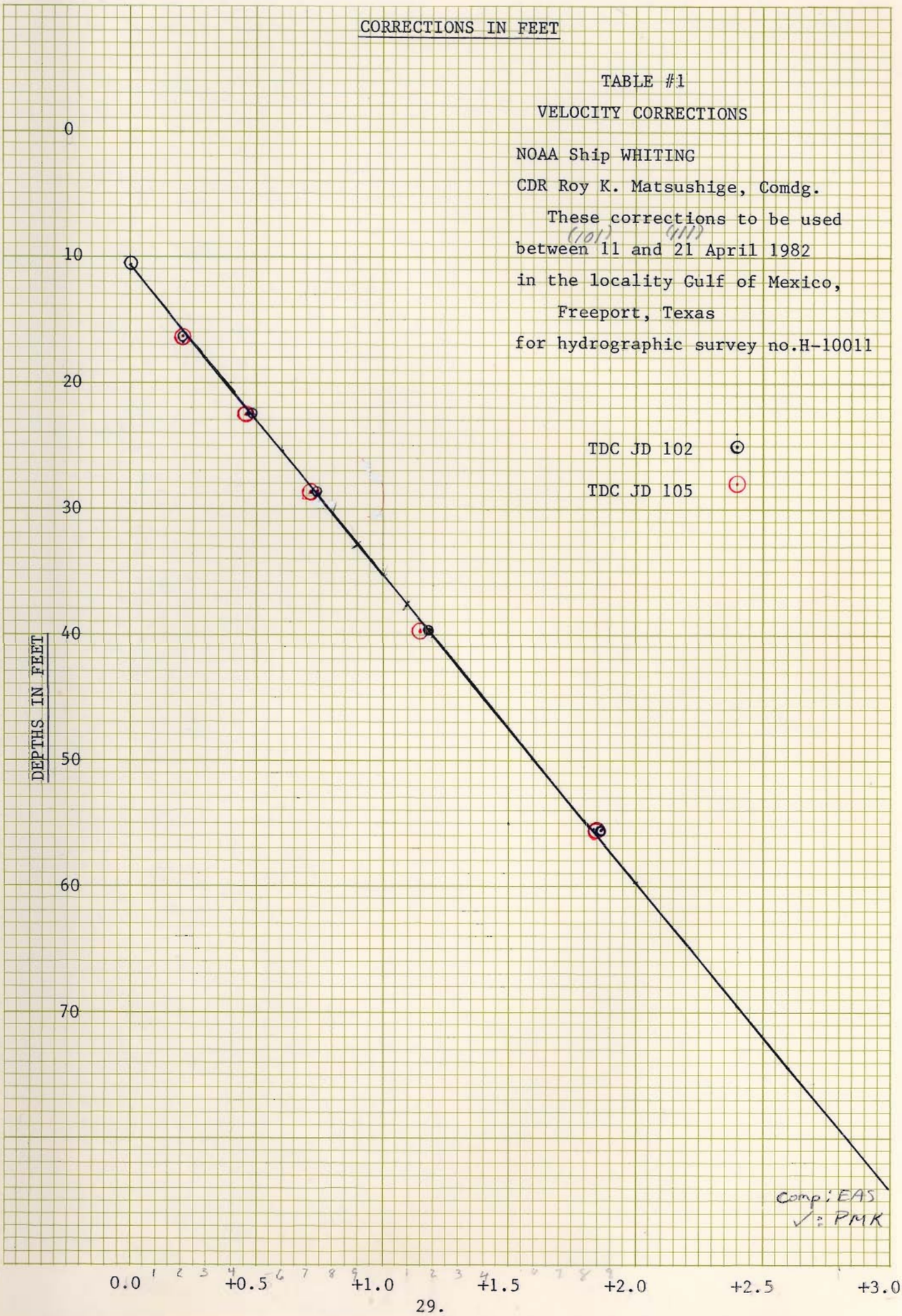
NOAA Ship WHITING

CDR Roy K. Matsushige, Comdg.

These corrections to be used between 11 (101) and 21 (111) April 1982 in the locality Gulf of Mexico, Freeport, Texas for hydrographic survey no.H-10011

TDC JD 102 ⊙

TDC JD 105 ⊕



Comp: EAS
✓: PMK

FPI-MI—10 X 10 TO 1 INCH
10TH LINE HEAVY

VELOCITY TAPE #1

VESNO 2930

JD 101-111

```
000157 0 0002 0001 000 293000 020182
000206 0 0004
000254 0 0006
000303 0 0008
000352 0 0010
000401 0 0012
000450 0 0014
000499 0 0016
000548 0 0018
000597 0 0020
000646 0 0022
000695 0 0024
000743 0 0026
999999 0 0028
```

Wnd 1/6/83

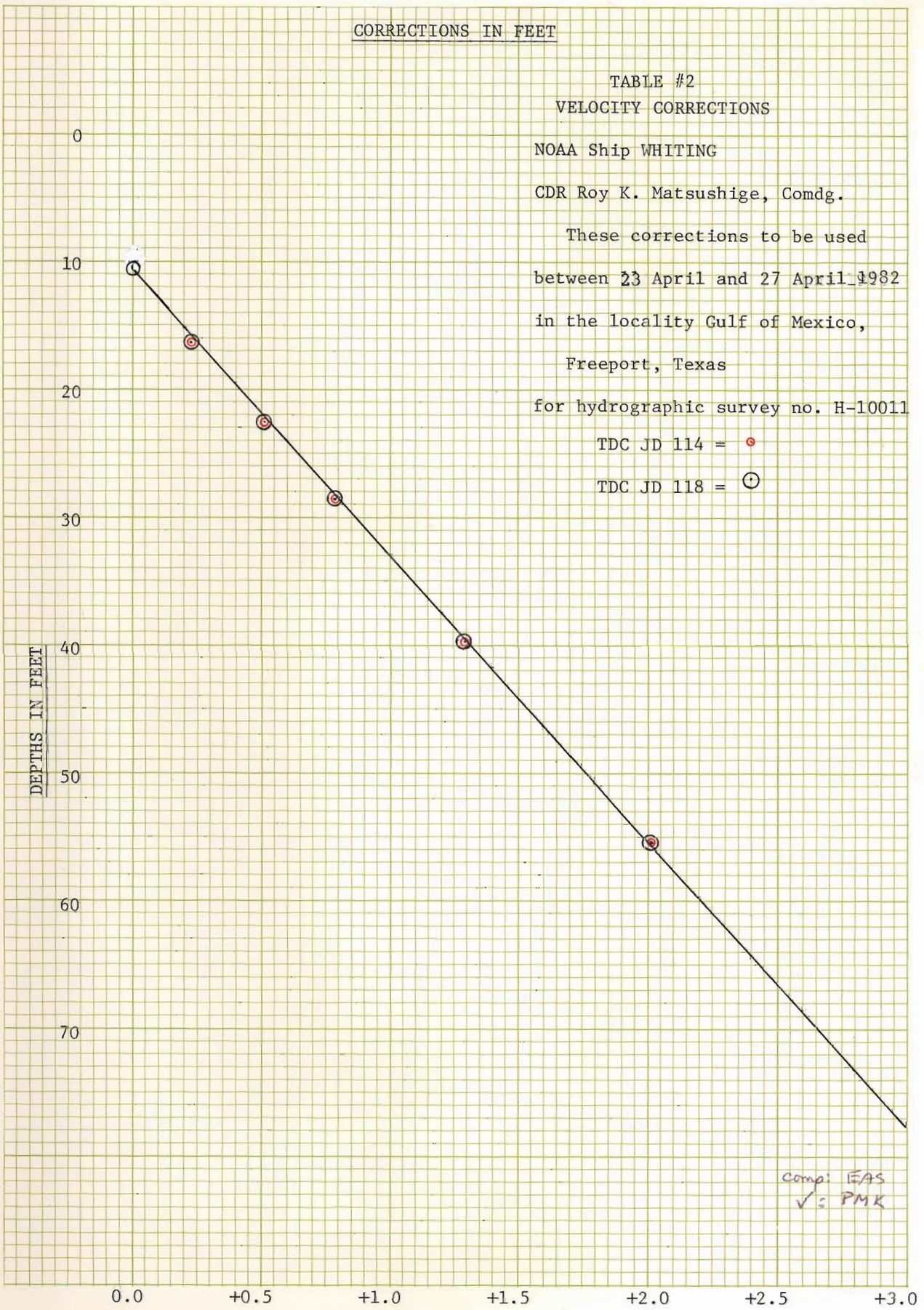
Revised Velocity Table #1

by LGC & JSB

18.3	ϕ.2
23.1	ϕ.4
27.9	ϕ.6
32.8	ϕ.8
37.6	1.ϕ
42.4	1.2
47.4	1.4
52.3	1.6
57.2	1.8
62.ϕ	2.ϕ
67.ϕ	2.2
72.ϕ	2.4
76.9	2.6
81.7	2.8

Comp: EAS

√: PMK



VELOCITY TAPE #2

VESNO 2930

JD 113-117

```
000151 0 0002 0002 000 293000 020182
000195 0 0004
000240 0 0006
000284 0 0008
000329 0 0010
000374 0 0012
000418 0 0014
000463 0 0016
000508 0 0018
000552 0 0020
000597 0 0022
000642 0 0024
000686 0 0026
000731 0 0028
999999 0 0030
```

Revised Velocity Table #2

by LGC & JSB

12.8	ϕ.ϕ
17.3	ϕ.2
21.8	ϕ.4
26.1	ϕ.6
3ϕ.7	ϕ.8
35.1	1.ϕ
39.6	1.2
44.ϕ	1.4
48.7	1.6
53.1	1.8
57.5	2.ϕ
61.9	2.2
66.5	2.4
71.ϕ	2.6
75.3	2.8

comp: BAS
✓: PMK

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-82-TX 1979 UNADJ ELEV. = 2.33m
002	6	29	07	34423	095	03	43158	250	0000	171870	Terramar 1982 ~~UNADJ~~ ADJ (FIELD POSITION) ELEV. = 2.52m
003	6	29	01	35911	095	11	17926	139	0002	000000	Pugh 1978 ADJ ELEV. = 1.96m
004	6	28	58	44664	095	15	09268	139	0002	000000	Skeet 1933 ADJ ELEV. = 1.53m
005	6	28	58	22387	095	15	58712	139	0000	000000	Surfside Radio Mast 1979 UNADJ
006	6	28	57	26703	095	16	53537	139	0001	000000	SL 18 USE 1979 UNADJ
007	6	28	57	08294	095	17	10027	139	0002	000000	Well USE 1912 ADJ ELEV. = 1.78m
008	6	28	56	47542	095	18	51873	139	0000	000000	Dow Chem CO Plt A Organic Tank 1954 ADJ
009	6	28	56	27392	095	18	02969	139	0000	000000	Freeport Coast ~~Caurd~~ Guard Beacon 1978 ADJ
010	6	28	56	24991	095	17	58399	139	0003	000000	Captain 1978 ADJ ELEV. = 2.87m
011	6	28	55	39~~424~~ 397	095	12	16~~223~~ 188	139	0002	000000	CCO & Gas Co ~~GA~~ 278L NW 2 1982 UNADJ
012	6	28	58	22633	095	15	42246	139	0000	000000	H-78-TX 1979 UNADJ ELEV. = 1.52 m

Supervision of all field and office work on this hydrographic survey was continuous and on a day to day basis to ensure completeness. All work was done in accordance with the Project Instructions and the Hydrographic Manual. This survey is complete and adequate for charting purposes.

Approved/forwarded

Roy K. Matsushige

Roy K. Matsushige, CDR NOAA
Commanding Officer, NOAA Ship WHITING

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: April 11-30, 1982

HYDROGRAPHIC SHEET: H-10011

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.

James C. Hubbard
Chief, Tidal Datums and Information Branch

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10011

Name on Survey	A ON CHART NO. 1390	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
GULF OF MEXICO	X									1
SAN LUIS PASS	X									2
TEXAS	X									3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
				Approved:						18
										19
				Charles E. Harrington						20
				Chief Geographer - N/CG2x5						21
				31 Aug. 1983						22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27 | U.S. DEPARTMENT OF COMMERCE | REGISTRY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-10011

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	4
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		
ENVELOPES						
VOLUMES						
CAHIERS						
BOXES				3		

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

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			3659
POSITIONS REVISED			
SOUNDINGS REVISED	501	3	504
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION		23	23
VERIFICATION OF CONTROL	8		8
VERIFICATION OF POSITIONS	64		64
VERIFICATION OF SOUNDINGS	149		149
VERIFICATION OF JUNCTIONS		2	2
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	149	6	155
COMPARISON WITH PRIOR SURVEYS AND CHARTS		12	12
EVALUATION OF SIDESCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		31	31
OTHER		1	1
DIGITIZING	8		8
TOTALS	378	75	453

Pre-processing Examination by C.D. Meador, R.G. Roberson	*Beginning Date* 20 JUL 1982	*Ending Date* 23 JUL 1982
Verification of Field Data by M.W. Holloway, J.S. Bradford, R.L. Keene	*Time (Hours)* 378 ✓	*Ending Date* 5 AUG 1983
Verification Check by L.G. Cram, G.F. Trefethen	*Time (Hours)* 36 ✓	*Ending Date* 8 AUG 1983
Evaluation and Analysis by R.G. Roberson	*Time (Hours)* 52 ✓	*Ending Date* 12 SEP 1983
Inspection by CDR K.Wm. Kieninger, R.D. Sanocki	*Time (Hours)* 11 ✓	*Ending Date* 9 SEP 1983

ATLANTIC MARINE CENTER
EVALUATION REPORT

Registry No.: H-10011 Field No.: WH 20-1-82

Texas, Gulf of Mexico, South of San Luis Pass

SURVEYED: 11 April through 27 April, 1982

SCALE: 1:20,000 PROJECT NO.: OPR-K104-WH-82

SOUNDINGS: Ross Digital Echo Sounder CONTROL: ODOM Offshore HYDROTRAC (range/range)

Chief of Party
Surveyed by R.K. Matsushige
A.A. Armstrong
V.N. Shaffer
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.

b. Notes in the Descriptive Report were made in red during verification.

2. CONTROL AND SHORELINE

a. Control is adequately discussed in Sections F and G of the Descriptive Report. A supplemental report was submitted by AMC Operations Division in 1982.

b. There is no shoreline in the area surveyed.

3. HYDROGRAPHY

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

b. The standard depth curves are adequately delineated. Dashed curves and brown curves were added to show additional bottom relief.

c. Development of the bottom configuration and determination of least depths is considered adequate.

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the Hydrographic Manual with the following exceptions:

a. Data for comparison between the lead-line(s) used for vertical casts and a standard required by Section 4.9.5.1.2 (1) of the Hydrographic Manual was not submitted.

b. "Original vertical cast observational data..." required by Section 4.9.5.1.2 (6) of the Hydrographic Manual was not submitted. Xerographic copies were included in the separates following the Descriptive Report text.

c. The index of sheets required by Section5.3.3 of the Hydrographic Manual was not in the Descriptive Report.

d. Geographic names found in the survey area were not submitted as required by Section 5.3.5 (c) of the Hydrographic Manual.

e. Some master tapes did not have the proper day words when submitted. This problem was corrected during processing.

f. TC/TI tape format was not correct. Vesssel draft is applied via corrector tapes not the TC/TI tape. AMC OPORDER 77, Section V.A. illustrates the correct format. This was corrrected during verification.

g. Velocity tapes' last record was not properly formatted AMC OPORDER 77, Section V.B. illustrates the correct format.

h. The velocity correctors were not scaled from the velocity curves correctly. This was corrected during verification.

i. The hydrographer adequately investigated spurious traces approximately seven (7) feet shoaler than the general depths found on Julian day 117. These traces between positions 3668 and 3669, in approximate Latitude 28°57'59"N, Longitude 95°04'30"W were interpreted as fish and fall randomly in the area of investigation.

j. The hydrographer did not contact the Coast Guard or Corps of Engineers to ascertain if Presurvey Review Item 81 had been salvaged.

k. The hydrographer did not compare the present survey with FE-198WD (1964) and H-6398a (1938) as required in section 6.10.1 of the Project Instructions.

5. JUNCTIONS

H-9843 (1979) to the east
H-9885 (1980) to the south
H-10014 (1982) to the west
H-10021 (1982) to the north

An adequate junction was effected with H-10014 (1982). H-9843 (1979) and H-9885 (1980) are in Headquarters, Rockville, Maryland. H-10021 (1982) was not sufficiently processed to effect a junction at this time. The junction with H-10021(1982) will be considered in the Evaluation Report of that survey.

There are no junctional surveys southeast. Survey depths in this area are in one (1) to two (2) feet deeper than charted hydrography.

6. COMPARISON WITH PRIOR SURVEYS

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

The surveys listed above cover the present survey entirely. The bottom configuration is gently sloping and virtually featurless. Depths are generally one (1) to three (3) feet deeper on the present survey. This may be attributable to the withdrawal of gas and oil in the region. The sixty (60) foot curve has migrated approximately one-half (½) mile north.

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

b. Wire Drag Surveys

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

A charted 52-ft sounding originates with FE-198WD (1964) which identified it as a temporary grounding in Latitude 28°56.26'N, Longitude 95°04.84'W with surrounding depths of fifty-nine (59) to sixty (60) feet on the present survey is not disproved by the present survey. Item 52 of FE-198WD (1964) (F.E. No. 1, 1964WD) was an investigation of the sunken F/V BOY SCOUT. This was previously charted as an obstruction reported, PA in Latitude 28°55.8'N, Longitude 95°05.19'W originating with Chart Letter 629 (1957). Although the wire drag survey recommended disproval as a result of the investigation the 52-ft grounding depth is inconsistent with the present survey depths. This raises doubts about the disproval recommendation. It is recommended that the 52-ft charted sounding be revised to 52wk.

There are no significant conflicts with the effective depths of the wire drag survey and the present survey.

7. COMPARISON WITH CHARTS 11300 (24th Edition, Feb. 27/82)
11321 (20th Edition, Apr. 19/80)
11323 (44th Edition, Apr 25/81)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys and miscellaneous sources. Attention is directed to the following items:

1) Presurvey Review Item 79, pipes, PA, in Latitude 28°54'38"N, Longitude 95°08'54"W were searched for with negative results. It is recommended that the pipes be retained on the chart, but charted as submerged pipes, ED until their verification or disproval by wire drag and/or side scan sonar.

2) Presurvey Review Item 81, sunken dangerous wreck, PA in Latitude 28°58'N, Longitude 95°04'W was searched for with negative results according to the hydrographer. It is recommended that the sunken dangerous wreck, PA remain as charted and that both of them be investigated using wire drag and/or side scan sonar to verify or disprove their existence.

3) The 8½fm cleared depth in Latitude 29°00.00"N, Longitude 95°00.00"W on chart 11300 originates with a wire drag investigation from FE-198WD (1964). The item being investigated was the cargo vessel MARGATE from the U.S. Navy Wreck List, No. 817. No indication of this wreck was found by the present survey. It is recommended the 8½-fm cleared depth be retained as charted.

The present survey is adequate to supersede the charted hydrography in the common area except as noted above.

b. AIDS TO NAVIGATION

There were no fixed or floating aids to navigation in the survey area.

8. COMPLIANCE WITH INSTRUCTIONS

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

9. ADDITIONAL WORK

This is a good basic survey. Recommendations for additional work are in section 7.a.1 and 7.a.2 of this report.

J. Scott Bradford
Cartographic Technician
Verification of Field Data

Robert G. Roberson
Cartographer
Evaluation and Analysis

Leroy G. Cram
Supervisory Cartographic Technician
Verification Check

INSPECTION REPORT
H-10011

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, CDR, NOAA
Chief, Hydrographic Surveys Branch

Approved 13 September 1983

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

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

Hydrographic Index No. 89[illegible]G

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

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10011

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	2/24/84	BARTHEL	~~Full~~ Part ~~Before~~ After ~~Verification Review~~ Inspection Signed Via
			Drawing No. 29 FULLY APPLIED DESCRIPTIVE REPORT ONLY.
DRF 11330	6/26/84	BARTHEL	~~Full~~ Part ~~Before~~ After ~~Verification~~ ~~Review~~ Inspection Signed Via
			Drawing No. 1 FULLY APPLIED DESCRIPTIVE REPORT ONLY.
11300	9-6-84	OWYANG, J	~~Full~~ Part ~~Before~~ After ~~Verification~~ ~~Review~~ Inspection Signed Via
			Drawing No. 40 APPLIED DESCRIPTIVE REPORT ONLY
11323	7/9/85	SHARP, B	Full ~~Part~~ ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No. 66
~~11321~~	~~3/15/88~~	~~CORDTS~~	~~Full Part Before After Verification Review Inspection Signed Via~~
			~~Drawing No. No CORR., Off chart limits~~
11321	4/4/88	CORDTS WW	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 31 23rd Ed.
11330	4/7/88	CORDTS WW	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 4 4th Ed.
11300	4/8/88	CORDTS WW	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 42 27th Ed.
411	4/8/88	CORDTS WW	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 61 39th Ed
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

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

USCOMM-DC 8558-P63