FE245

Diagram No. 1279

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic Field Examination

Field No. R/H-20-4-83

Office No. FE-245

LOCALITY

State Louisiana-Texas

General Locality Gulf of Mexico

Locality Thirteen Miles South of Sabine Bank

1983

CHIEF OF PARTY
LCDR R.C.Arnold

LIBRARY & ARCHIVES

DATE April 24, 1984

☆U.S. GOV. PRINTING OFFICE: 1980—766-230

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ARTS:
11332-80
11330
11340
11341
4 inc
} to sign off see Record of Application

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO. FE-245

FIELD NO. R/H -20-04-83

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

State LOUISIANA – TEXAS

General locality GULF OF MEXICO

Locality Thirteen Miles SOUTH OF SABINE BANK

Scale 1:20,000 Date of survey APRIL 27 to MAY 6, 1983

Instructions dated JANUARY 6, 1983 Project No. OPR-K667-RU/HE-83

Vessel NOAA SHIPS RUDE (9040) & HECK (9140)

Chief of party LCDR RUSSELL C. ARNOLD

Surveyed by LCDR R.C. ARNOLD, LCDR D.D. WINTER, LTJG J.W. BAILEY, ENS T.G. CALLAHAN

Soundings taken by echo sounder, ~~hand lead, pole~~ DE-719B (RAYTHEON)

Graphic record scaled by J.W. BAILEY, T.G. CALLAHAN, G.L. ANDERSEN

Graphic record checked by J.W. BAILEY, T.G. CALLAHAN, G.L. ANDERSEN

Protracted by _____ Automated plot by ~~Xynetics 1201 Plotter (AMC)~~

Verification by Hydrographic Surveys Branch, Atlantic Marine Center

Soundings in fathoms (feet) at MLW (MLLW) ~~GULF COAST LOW WATER DATUM REDUCED FOR PREDICTED TIDES~~

REMARKS: ALL TIME RECORDED FOR THIS SURVEY ARE G.M.T.

The Smooth Position Number Overlays are filed with the survey records.

The following has been removed from the Descriptive Report and is filed with the survey records:

Projection Parameters
Letter of Request for Smooth Tides
Range Calibration values
Martek Calibration Report
Memorandum from Stephen Dana
TDC Station Observations
Oceanographic Log Sheet - M
Velocity Corrections Graph & Table
Vessel 9040 Sounding Correction Abstract
Vessel 9140 Sounding Correction Abstract

[redacted]

2 W.W. 2/8/94

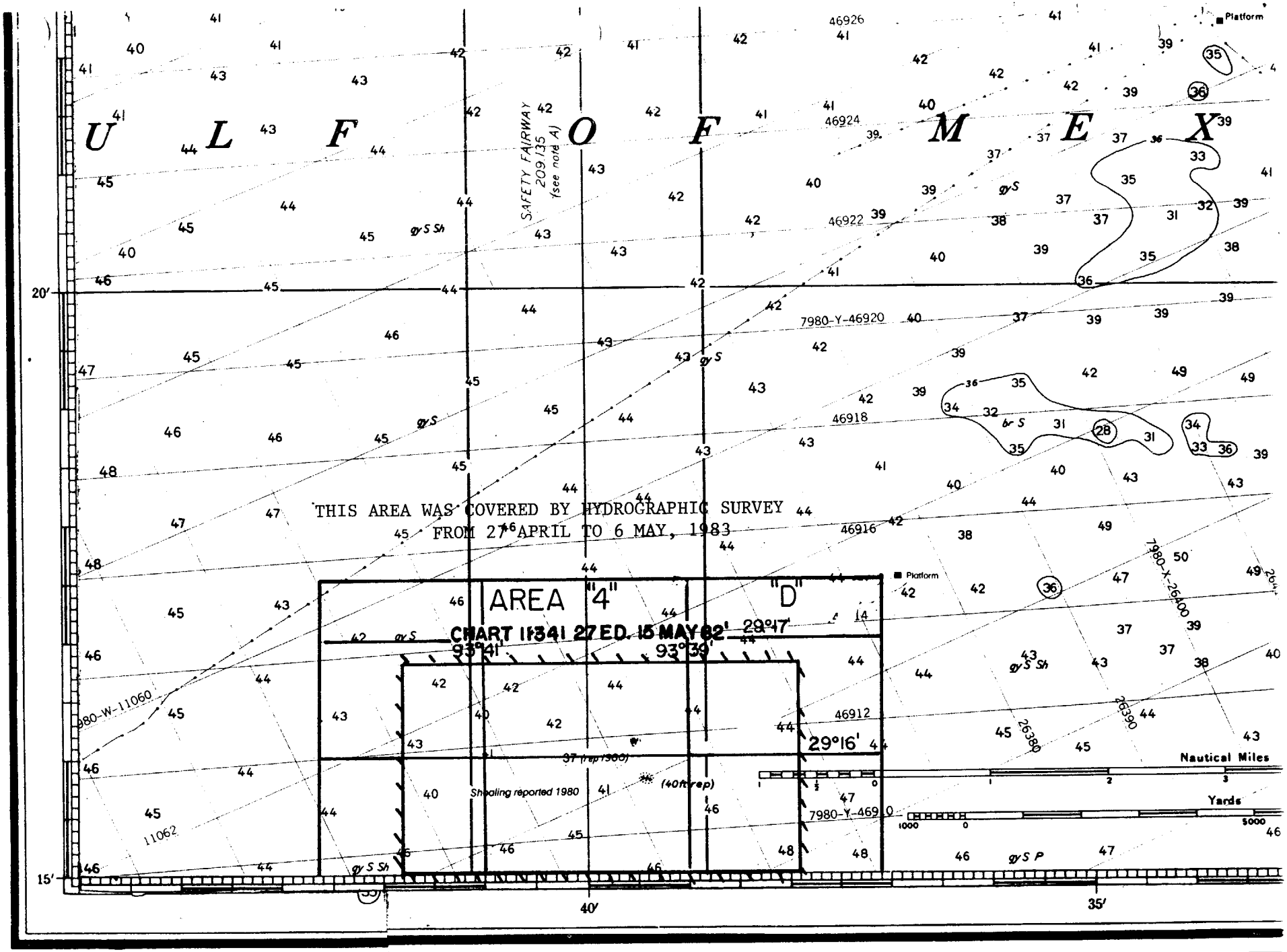
NOAA FORM 77-28 SUPERSEDES FORM C&GS-537

☆ U.S. GPO: 1974-0-768-081/1207

appld to Std's 4-26-84 JSH

AWOIS chgd 8/15/84 JSH

CONTENTS



27th Ed., May 15/82 ■

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Published at Washington, D. C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

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DESCRIPTIVE REPORT
To Accompany
HYDROGRAPHIC SURVEY ~~H~~ FE-245
Field Number RH-20-04-83

A. PROJECT

This survey is part of OPR-K667-RU/HE-83, Calcasieu Pass and Sabine Bank, Louisiana and Heald Bank, Texas. This project was conducted in accordance with project instructions dated 6 January 1983, issued by the Chief, Nautical Charting Division and forwarded via the Director, Atlantic Marine Center. There were no changes issued during this survey.

B. AREA SURVEYED

This survey was conducted in the Gulf of Mexico, vicinity of the safety fairway, south of Sabine Bank, Louisiana. The actual survey limits are as follows:

29°15'00"N 093°41'48"W	000° True to	29°16'48"N 093°41'48"W
29°16'48"N 093°41'48"W	090° True to	29°16'48"N 093°37'54"W
29°16'48"N 093°37'54"W	180° True to	29°15'00"N 093°37'54"W
29°15'00"N 093°37'54"W	270° True to	29°15'00"N 093°41'48"W

The four vertices of the surveyed area are:
29°15'00" N
93°42'00" W

29°17'00" N
93°42'00" W

29°17'00" N
93°37'30" W

29°14'40" N
93°37'30" W

There was no coastline contained within the above mentioned survey limits. Hydrography was conducted from 27 April to 6 May 6, 1983.

C. SOUNDING VESSELS

Hydrography was performed by the NOAA Ship RUDE, S590, Vesno 9040 and the HECK, S591, Vesno 9140.

These vessels proved to be fair sounding platforms at best. Vessel size and hull design, during even minimal sea conditions (4-6 ft. seas), contributed greatly to jagged fathometer traces. See section 4. of the Evaluation Report.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The fathometer used for this survey was the Raytheon portable fathometer, model DE-719B. The following is a list by vessel of the days and times that the different fathometers were used:

Vesno	JD	Time (GMT)	Fathometer S/N
9040	117	210400-235900	5799
	118	002300-011600	5799
	119	121627-150900	5799
9140	117	211500-235000	6212
	118	000900-231200	6212
	126	120700-132200	5799

The fathometers were maintained at a zero initial setting with a static draft of 7.0 feet being added to all corrector tapes.

The velocity of sound corrections will be based upon a T.D.C. cast taken by the NOAA Ship HECK (9140). The T.D.C. cast was performed on 26 April 1983, JD116, at 29°02'36"N, 094°14'24"W, to a depth of 18 meters. The instrument used was a Martek Mark VII, model #167, S/N 126. This unit was calibrated by Atlantic Marine Center, Acoustic Branch, during the 1982-83 winter inport period. A copy of those calibrations will be forwarded with this report. The velocity table, graph and correctors were computed and applied to all field work by Atlantic Marine Center, Electronic Data Processing Section. - See section 4. of the Evaluation Report.

A vertical cast was taken on 2 May 1983, JD122, for both vessels (Vesno 9040, 9140). Both vessels installed and checked all three fathometers (S/N's 5799, 5499, 6212) for possible instrument error. Results indicated fathometer S/N 6212 consistently reading 1 foot shoaler than fathometer 5497 and 5799. This cast also revealed that the NOAA Ship RUDE (9040) records 0.7 foot deeper on all fathometers than does the NOAA Ship HECK (9140). These errors were applied to all final soundings via the TC/TI tape. - See section 4. of the Evaluation Report.

Settlement and squat corrections were determined on 25 January 1983, JD025, by AMC and ship personnel at Port Norfolk Reach Channel. A copy of settlement and squat results are appended to this report. (Supplemental Data File). - Data not included in this report. Data from survey FE-244 was used for settlement and squat.

Speed changes were noted in daily sounding records and settlement and squat correctors were entered on sounding correction abstracts. The Sounding Corrector Abstracts are appended to this report. (Appendix D).

All soundings were corrected for velocity of sound, instrument error, settlement and squat, and predicted tides by Atlantic Marine Center, Electronic Data Processing Section. Reduced soundings encountered in this survey ranged from 42 to 5½' feet. - See section 4. of the Evaluation Report.

E. HYDROGRAPHIC SHEETS

The field sheets used while on line were constructed and drawn onboard the NOAA Ship RUDE (9040). These sheets were prepared by the Digital PDP 11/34 computer and Houston Instruments roll bed plotter.

Field sheets were also prepared by Atlantic Marine Center, Electronic Data Processing Section using sounding and position data provided by the NOAA Ships RUDE (9040) and HECK (9140). These field sheets consisted of one sheet of sounding and fix position plots and one sheet of plotted soundings, mainscheme, crosslines, and mainscheme splits. All plotted soundings were corrected for velocity of sound, instrument error, settlement and squat and predicted tides as mentioned in section D.

F. CONTROL STATIONS

Datum used was NAD 1927. All electronic and visual control stations used during this survey were of Third Order, Class I positional accuracy standards or better. A complete list of signals is found in appendix F. - See section 4. of the Evaluation Report.

G. HYDROGRAPHIC POSITION CONTROL

Vessel positioning for all work was accomplished with ARGO medium range positioning system, in the range/range mode at frequency 1646.7 KHz. The following is a list of equipment and serial numbers used:

Vessel	Vesno	Equipment	S/N
NOAA Ship RUDE (S590)	9040	RPU	RO47855
		CDU	CO37942
		ALU	AO47846
		Power Supply	VO478104
		Strip Chart	00152
		Thermal Printer	AO4127
NOAA Ship HECK (S591)	9140	RPU	RO47864
		CDU (JD117-118)	CO47825
		CDU (JD126)	CO37940
		ALU	AO980310
		Power Supply	VO478106
		Strip Chart	00146
		Thermal Printer	2126AO6714
Shore Station 01 H-24-TX		RPU	RO47843
		ALU	AO47853
		Power Supply	VO478107
Shore Station 02 CHAN		RPU	RO379107
		ALU	AO379106
		Power Supply	VO379131

Vessel calibrations were performed in Galveston by steering a known range and observing precomputed sextant angles and ARGO rates. The first observation was used to set exact precomputed values into the CDU. Subsequent fixes were then taken to ensure that the proper values were, in fact, set in. This scheme was used by the NOAA Ship HECK (9140) for opening and closing calibration during the period JD117 to 118. The NOAA Ship RUDE (9040) used this scheme for the opening calibration on JD117.

There was no closing calibration by the NOAA Ship RUDE due to the loss of the ARGO system before closing calibration could be accomplished. The master station, NOAA Ship HECK (9140), switched automatically into the standby mode when the HECK was alongside the Corps of Engineers Pier at Galveston, Texas. This occurred while the RUDE was enroute to the calibration site on JD119 to perform closing calibration. Numerous checks on drilling platforms in and around the survey areas, which were confirmed by the NOAA Ship HECK (9140) (Supplemental Data File), and careful annotation and examination of the strip chart recorder revealed that one lane had been lost by the RUDE while at anchorage on JD119. This loss occurred sometime between the whole lane checks on Platform APCWC at 014358 and 114445 GMT, JD119. The strip chart records indicated that no gain or other loss of lanes occurred for the remainder of the time the ARGO was in operation. - See section 4. of the Evaluation Report.

ARGO calibrations were performed in Calcasieu Pass, Louisiana, using a fixed point calibration scheme. A fixed point alongside the Coast Guard Pier at Monkey Island, Cameron, Louisiana was selected as the calibration point. The azimuth and taped distance from this fixed point and the Cameron C.G. radio tower were determined and this information was fed into the HP-9815 computed Geodetic Package. The distances from the fixed point to the two shore stations were then computed and these values converted into lanes. These computed lane values were the basis for the opening calibration set. – See section 4. of the Evaluation Report.

A complete file of daily calibrations, whole lane checks, and calibration value computations are appended to this report (Supplemental Data File).

H. SHORELINE

There was no shoreline contained within the survey limits.

I. CROSSLINES

Throughout this survey 7.2 NM of crosslines were run. This constituted 7% of the total electronic hydrography run. – See section 3. of the Evaluation Report.

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

N/A

K. COMPARISON WITH PRIOR SURVEYS

The shoalest sounding observed during this survey, reduced for draft, velocity, settlement and squat, and predicted tides, was 42 feet at 29°16'36"N, 093°40'58"W. This sounding was in agreement with those soundings in that vicinity on prior survey H-8738. All other soundings were consistently ~~2-4~~ 1'2 feet deeper than the soundings from H-8738. See Attachment 6 for additional information. See section 6. of the Evaluation Report.

L. COMPARISON WITH CHART

There was no indication of shoaling in the vicinity of 29°15.7'N, 093°40.7'W, as reported in 1980, found in this survey. Reduced soundings in this vicinity all ranged from 45 to 49 feet. It is recommended that the "Shoaling reported in 1980" symbol be deleted from Charts 11340 and 11341. – Concur – See section 7. of the Evaluation Report.

No evidence of the 37-foot sounding, reported in 1980 and charted at 29°16.0'N, 093°40.2'W, was observed during this survey. Reduced soundings in the area of this reported shoal sounding ranged from 44 to 47 feet. It is recommended that the "37 (rep 1980)" sounding be deleted from Charts 11340 and 11341. – Concur – See section 7. of the Evaluation Report.

The shoalest sounding observed during this survey was the 42-foot sounding at 29°16'36"N, 093°40'58"W. This sounding was 0.25 NM west of a charted 42-foot sounding. All other soundings found by this survey were consistently ~~2-4~~ 1'2 feet deeper than those charted. See Attachment 6 for additional information. – See section 6. of the Evaluation Report.

M. ADEQUACY OF SURVEY

See Attachment 6 for charting recommendations.

N. AIDS TO NAVIGATION

There were no U.S. Coast Guard Aids to Navigation contained in the survey area.

O. STATISTICS

Total number of positions	127
NM of soundings	102.9
Sq. NM of hydrography	6.1
Bottom Samples	18

P. MISCELLANEOUS

Side scan sonar investigations were used in an attempt to find spikes reported in the NOAA Ship WHITING's reconnaissance survey to be in position 29°16'29.5"N, 093°40'48"W. This method was attempted on 6 May 1983 (JD126) after all hydrography had been run in the area without finding any indication of the spikes. This side scan sonar search also failed to produce any indication that spikes exist. — See sections 4. & 6. of the Evaluation Report. (For area covered, see the field overlay of vessel positions for the side scan sonar investigation.)

Q. RECOMMENDATIONS

See Attachment 6 for charting recommendations.

R. AUTOMATED DATA PROCESSING

N/A

S. REFERENCE TO REPORTS

Supplemental data file contains ARGO station values, daily calibrations, Settlement and Squat data.

APPROVAL SHEET
RH-20-04-83

Field operations contributing to the accomplishment of this survey were conducted under my supervision with frequent personal checks of progress and adequacy. This report and field sheet have been closely reviewed. See Attachment 6 for charting recommendations.

Russell C. Arnold

Russell C. Arnold
LCDR, NOAA
Commanding Officer
NOAA Ships RUDE & HECK

B. FIELD OPERATIONS

Prevailing southeasterly winds of 20-plus knots finally moderated near the end of April, and good progress was made on survey work during this reporting period. OPR-K667-RU/HE-83 was divided into four work areas per project instructions, with field sheet numbers and titles as follows:

Area 1 (Per Project Inst.)	Field Number	Field Title
1	R/H-20-01-83	Approach to Calcasieu Pass
2	R/H-20-02-83	Heald Bank
3	R/H-20-03-83	South of Calcasieu Pass
4	R/H-20-04-83 - FE-245	South of Sabine Bank

Results from these surveys are summarized below:

~~Area 1, - R/H-20-01-83, Approach to Calcasieu Pass~~

~~This sheet involved wire drag investigation of 15 charted submerged piles east of the Calcasieu Pass Channel between Buoys R"32" and R"42". The ships contacted the U.S. Army Corps of Engineers and the Calcasieu Pass Pilots, both of whom claimed that the piles no longer existed. As no "hard copy" evidence could be obtained from either group, the ships conducted wire drag operations, clearing all of the piles within 2 feet of the bottom except for the first pile south of Buoy R"40". The ships either hung this pile or an obstruction of some sort at the same position on 2 occasions before clearing to an effective depth of 13½ feet (Note: divers were not available to investigate this hang). Drags between Buoys R"30" and R"40" were literally through the soft mud, evidence of which was the number of "TOB's" obtained by the testers.~~

~~Hydrography was run on the west side of the channel between Buoys "31" and "41" in the Discontinued Spoil Area, as indicated on Chart 11347.~~

~~Charting Recommendation~~

~~Remove the submerged piles from the charts of the area. Chart a submerged obstruction, cleared to 13½ feet at Latitude 29°43.42'N, Longitude 93°20.13"W (See attached Notice to Mariners on this item).~~

~~Soundings from the hydrography run in the Discontinued Spoil area west of the channel should also be charted. Hydrography revealed a gently sloping bottom from north to south, with depths very similar to those directly across the channel on the east side.~~

~~Area 2, R/H-20-02-83, Heald Bank~~

~~This sheet involved hydrographic investigation of two shoal areas in the Galveston Safety Fairway southwest of Heald Bank. The first area, a 34-foot shoal reported in 1981, 0.95 nautical mile south of Buoy R"2", was run at 180 meter spacing and later split to 90 meter spacing. No evidence of this shoal was found. Soundings obtained by the ships in this area agreed with soundings on Chart 11332 within 1-4 feet, reduced for predicted tides, settlement and squat, velocity of sound, and instrument corrections. RUDE & HECK soundings were always deeper than charted soundings.~~

~~The second area, several soundings in the mid to upper 30-foot range, was run at 180-meter spacing. RUDE & HECK reduced soundings were again deeper than soundings obtained by the MT MITCHELL in 1978 (H-9775) in this area by 0-3 feet. No evidence of the reported shoaling was found.~~

~~LORAN C comparisons were run by the ships while transiting between Galveston and Heald Bank, Galveston to Sabine Bank, Sabine Bank to Calcasieu Channel and Heald Bank to Sabine Bank. These comparisons show LORAN C fixes using W and X rates, plotting consistently to the northwest of ARGO positions by 0.15 to 0.40 nautical miles. Using the prescribed X and Y rates, there is good agreement between ARGO~~ and LORAN C.

~~Charting Recommendation~~

~~The 34 foot reported at 29°04'N, 094°13'54"W, would be difficult to miss, as it would represent an 18-foot rise above the next shoalest charted sounding in the area. This command is confident that no such shoal exists. Remove this reported sounding from the charts.~~

~~The area of soundings in the mid to upper 30 foot range was surveyed by the MT MITCHELL in 1978, and no such shoal was evident then. The RUDE and HECK confirmed the MT MITCHELL survey of this area. It is recommended that soundings from the MT MITCHELL's survey, which are slightly shoaler than RUDE & HECK soundings, be reapplied to the chart.~~

~~Area 3, R/H-20-03-83, South of Calcasieu Pass~~

~~This sheet involved hydrographic investigation of shoaling in the center of the Safety Fairway south of Calcasieu Pass. Main scheme hydrography was run at 180-meter spacing and split to 90-meter spacing. RUDE and HECK soundings on this sheet were 1-3 feet deeper than prior survey H-8738, which was conducted in 1963. The shoalest sounding obtained by the RUDE and HECK in the center of the Fairway was 42 feet.~~

~~Charting Recommendation~~

~~Prior survey H-8738 indicates shoals of 38 feet on the west side of the Fairway and 36 feet on the east side, with 40 feet in the middle. The RUDE and HECK got 40 feet on the west side, 38 feet on the east side, and 42 feet in the middle. The best water in this section of Fairway is still up the middle. Remove the 38 foot reported 1976 from the chart. Continue to chart soundings from H-8738 as they are shoaler than RUDE and HECK soundings.~~

~~Remove the platform at Latitutde 29°22'47"N, Longitude 93°14'54"W. This platform no longer exists at that location.~~

Area 4, R/H-20-04-83, South of Sabine Bank — FE-245

This sheet involved hydrographic investigation of reported shoaling in the Sabine Safety Fairway. Two spikes reported by the WHITING in 1982 were also investigated and side scanned. Basic hydrography was run at 180-meter spacing and then split to 90-meter spacing in the reported areas for the spikes and shoaling.

Soundings obtained by the RUDE and HECK were deeper by generally 1/2' to 1 1/2 feet than the prior survey, H-8738 and Chart 11341.

Charting Recommendation

Soundings from prior survey H-8738 should be reapplied to the chart as they are consistently shoaler than RUDE and HECK soundings. No further evidence of shoaling was obtained. — Concur - See section 6. of the Evaluation Report. — Concur - see section 7. of the Evaluation Report.

The WHITING spikes were investigated with side scan sonar with negative results. The southern spike is within 0.20 NM of the 40-foot sounding from H-8738 (WHITING got 41.3 feet) and the northern spike is within 0.20 NM of a 42-foot sounding obtained by the RUDE and HECK (WHITING got a 38.5 that was extremely conservative; this command believes that the spike was wake-induced; see attached copy of fathogram). This command considers the WHITING spikes resolved; no charting action is warranted. — See section 6 of the Evaluation Report.

The wreck of the GULF TIDE at Latitude 29°15.8'N, Longitude 93°39.4'W, was investigated by the RUDE and HECK in 1973 and cleared to an effective depth of 40 feet, (see attached copy of draft instructions, item underlined in bold black), yet 10 years later the charts of the area still carry the wreck symbol with "40 ft rep". As this 40-foot sounding is the controlling depth for this portion of the Safety Fairway, NOS should correct the wreck symbol to reflect the RUDE and HECK's 1973 work. — Do not concur. — See section 6.b. of the Evaluation Report.

~~OPR-J657-RU/HE-83, was begun on 12 May 1983, with the installation of an ARGO electronic control station on Egmont Key, Florida (TAMPA PILOTS). A second ARGO station was established in Venice, Florida (LORAN) on 14 May 1983. Field work for this project consisted of side scan sonar investigation. Operations on item AW015 #02671 began and were completed on 16 May 1983. Operations on item AW015 #00174 began on 18 May 1983 and were completed on 19 May 1983. Side scan sonar coverage of 400% revealed no indication of either wreck and resolved that neither wreck remains or is a hazard to navigation. It is therefore recommended that the corresponding wreck symbols be deleted from Charts 11400 and 11424. ARGO station TAMPA PILOTS was taken down on 20 May 1983 and station LORAN was taken down on 23 May 1983.~~

~~Appendix F~~

List of Stations

~~PROJECT:~~

~~K667 FE-245~~

SIGNALS/STATIONS

H-24-TX-78, 1978

~~H-24-TX~~

ID NBR	1
LAT	293513.603
LON	941717.965
FREQ	1646.70 KHZ
FILE	1

Source: ~~AMC~~ Operations

CHAN, 1963

ID NBR	2
LAT	294556.168
LON	932051.826
FREQ	1646.70 KHZ
FILE	2

Source: N.G.S.

BOLIVAR POINT LIGHTHOUSE USE, 1900

~~BOLIVAR L.H.~~

ID NBR	3
LAT	292159.597
LON	944600.263
FILE	3

Source: N.G.S.

~~GALV BAY LWR. RGE FRONT LT.~~

ID NBR	4
LAT	292043.444
LON	944727.340
FILE	4

Not Used

GALVESTON COAST GUARD RADIO MAST, 1960

~~GALV. C.G. RADIO MAST~~

ID NBR	5
LAT	292001.985
LON	944605.559
FILE	5

Source: N.G.S.

HOUSTON SHIP CHANNEL OUTER RANGE FRONT LT., 1963

~~HOUSTON SHIP CHAN. OUTER RGE FRONT LT.~~

ID NBR	6
LAT	292008.340
LON	944611.100
FILE	6

Source: N.G.S.

GALVESTON ENTRANCE NORTH SIDE DREDGING RANGE REAR DAYBEACON, 1963

~~GALVESTON DREDGING RGE~~

ID NBR	7
LAT	292215.653
LON	944456.929
FILE	7

Source: N.G.S.

~~GALVESTON SOUTH JETTY LT.~~

ID NBR	8
LAT	291939.258
LON	944152.887
FILE	8

Not Used

~~SABINE PASS LIGHTHOUSE~~

ID NBR	9
LAT	294258.653
LON	935059.985
FILE	9

Not Used

~~SABINE RADIO TWR~~

ID NBR	10
LAT	294253.934
LON	935100.045
FILE	10

Not Used

~~SABINE PASS WATER TANK~~

ID NBR	11
LAT	294405.906
LON	935348.891
FILE	11

Not Used

~~SABINE PASS T.V. STATION KBMT MAST~~

ID NBR	12
LAT	294249.311
LON	935145.719
FILE	12

Not Used

~~SABINE PASS C.G. STATION CUPOLA~~

ID NBR	13
LAT	294221.785
LON	935111.229
FILE	13

Not Used

~~SABINE PASS C.G. LIFEBOAT STA. TWR.~~

ID NBR	14
LAT	294219.953
LON	935114.747
FILE	14

Not Used

~~CAMERON LOUIS. MENHADEN CO. STACK~~

ID NBR	15
LAT	294847.689
LON	932044.755
FILE	15

Not Used

~~CAMERON WATER TANK~~

ID NBR	16
LAT	294742.540
LON	931916.370
FILE	16

Not Used

~~CAMERON C.G. RADIO TOWER~~

ID NBR	17
LAT	294641.408
LON	932033.528
FILE	17

Not Used

~~CAMERON J WELL SURVEY, INC. MAST~~

ID NBR	18
LAT	294725.137
LON	931758.083
FILE	18

Not Used

~~CAMERON RADIO STA. KRE 814 MAST~~

ID NBR	19
LAT	294715.695
LON	931754.756
FILE	19

Not Used

LANE WIDTH: ~~90.985~~ m
90.991 m

~~Appendix C~~

Abstract of Positions

ABSTRACT OF POSITIONS

VESNO: RUDE 9040

RH-20-04-83

JD DAY	POSITIONS	CTRL	S1	M	S2	REMARKS
117	1-70	R/R	01	—	02	MAIN SCHEME
118	71-80	"	"		"	" " "
118	81-89	"	"		"	CROSS LINE
119	90-107	"	"		"	BOTTOM SAMPLES
119	108-127	"	"		"	DEVELOPMENTS

ABSTRACT OF POSITIONS

HECK

VESNO: 9140

RH-20-04-83

JD DAY	POSITIONS	CTRL	S1	M	S2	REMARKS
117	500-542	R/R	01	—	02	MAIN SCHEME
118	543-710	"	"		"	MAIN SCHEME
118	711-726	"	"		"	CROSS LINES
118	727-742	"	"		"	MAIN SCHEME SPLITS
126	1000-1015	"	"		"	MAIN SCHEME SPLITS
126	1200-1223	"	"		"	SIDE SCAN SONAR INVESTIGATION

~~Appendix I~~

Landmarks for Charts

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- ☐ HYDROGRAPHIC PARTY
- ☐ GEODETIC PARTY
- ☐ PHOTO FIELD PARTY
- ☐ COMPILATION ACTIVITY
- ☐ FINAL REVIEWER
- ☐ QUALITY CONTROL & REVIEW GRP.
- ☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

☐ TO BE CHARTED ☐ TO BE REVISED ☐ TO BE DELETED	REPORTING UNIT *(Field Party, Ship or Office)*	STATE	LOCALITY	DATE

The following objects HAVE ☐ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM

CHARTING NAME	DESCRIPTION *(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)*	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION *(See instructions on reverse side)* OFFICE	FIELD	CHARTS AFFECTED
	N/A							

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD		☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U.S. GPO:1975-0-665-080/1155

Supplemental Data File

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

Marine Operations Atlantic
439 West York Street
Norfolk, Virginia 23510

December 9, 1982 MOA13/034
101-15

TO: MOA1 - Capt. R. L. Speer

FROM: MOA13 - Albert L. Pardue, Jr. Albert L. Pardue Jr

SUBJECT: RUDE/HECK ELECTRONIC SYSTEM PLANNING

Discussions with shipboard personnel indicate that during the first cruise the ship will be conducting a hydrographic survey. If this is true, it is requested that EEB be notified as to the electronic systems required for the project.

Systems such as

- Sounding (719, Ross, DSF6000N, ETC)
- Computer (PDP8, PDP11)
- XBT
- Printing
- Positioning (ARGO, Del Norte)
- Reversing Thermometer
- DATA Logging

may be required and would have to be moved from other NOAA Ships. Early planning will insure a successful project.

cc: C.O. RUDE/HECK
MOA131

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIPS RUDE & HECK
439 West York St.
Norfolk, VA 23510

December 20, 1982

To: Director, Atlantic Marine Center
ATTN: MOA1

From: LCDR Russell C. Arnold
Commanding Officer

Subj: Equipping RUDE & HECK for Hydrography

Project Instructions for OPR-K667-RH-83, Calcasieu Pass, Heald Bank, Sabine Bank, Louisiana, require conducting basic hydrographic operations for which the ships are not properly equipped. It is estimated that about 1000 nautical miles of hydrography will need to be run to satisfy project requirements. There are several ways to equip the ships, depending on what type of end product is desired:

1. Data could be collected with the equipment that is presently on board. The survey would be recorded in sounding volumes, using Raytheon DE-719B fathometers and the ARGO positioning system. The final field sheet would display hand plotted position numbers and soundings, reduced for predicted tides.

In this case, the final product submitted by the ships would be sounding volumes and a hand plotted field sheet.

2. If data loggers and teletypes were added to the ships, sounding volumes could be eliminated, with the rest of the data collection process being the same as above.

In this case, the final product submitted by the ships would be annotated teletype printouts, paper punched tape, and a hand plotted field sheet.

3. Full-blown Hydroplot systems could be installed. Complete systems would be needed; no components are aboard at this time.

In this case, the final product would be annotated teletype printouts, paper punched tape and a machine plotted field sheet.

4. Portions of the Hydroplot system could perhaps be installed. The final product would depend upon which components were or were not installed. (e.g., the plotter).

This Command would like to think that the assignment of this hydrographic project to the RUDE & HECK is a one-time-only deal. These vessels are

equipped, staffed and trained to conduct and process wire drag surveys and item investigations. They are not equipped, staffed or trained to conduct and process hydrographic surveys.

The RUDE and HECK can accomplish this project using any of the scenarios outlined above. It will take a tremendous amount of effort on the part of the officer complement to do it. The ships are fortunate at present to have officers with strong hydrographic backgrounds aboard. Six months from now, that will not be the case. This Command would prefer to keep the collection and processing of the data as simple as possible, i.e., Scenario 1.

~~Appendix B~~

~~Request for Smooth Tides~~

Approved Tide Note

February 8, 1984

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Atlantic

OPR: K667

HYDROGRAPHIC SHEET: FE - 245

Locality: Offshore Sabine Pass, Texas

Time Period: April 7 - May 6, 1983

Tide Station Used: 877-0590 Sabine, Texas

Plane Of Reference (Mean Lower Low Water): 4.2 Ft.

Height Of Mean High Water Above Plane Of Reference: 1.8 Ft.

Remarks: Recommended Zoning:

For area 4 located at latitude $29^{o}16.0'$, longitude $93^{o}40.0'$.
Apply -25 minute time correction and x1.04 range ratio.

James E. Hubbard
Chief, Tidal Datum Section

~~Appendix C~~

Geographic Names List

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

FE-245

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO. 1134	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(title)	✓									1
LOUISIANA(title)	✓									2
SABINE BANK(title)	✓									3
TEXAS(title)	✓									4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
					Approved:					18
										19
					Charles E. Harrington					20
					Chief Geographer - NOS/CG27					21
					3 APRIL 1984					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

FE-245

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	2	SMOOTH OVERLAYS: POS., ARC, EXCESS	4
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	2

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDIAN FILES						
ENVELOPES						
VOLUMES						
CAHIERS						
BOXES				1		

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			410
POSITIONS REVISED	0	0	0
SOUNDINGS REVISED	0	2	2
CONTROL STATIONS REVISED	0	0	0
	TIME - HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION		15	15
VERIFICATION OF CONTROL	4		4
VERIFICATION OF POSITIONS	52		52
VERIFICATION OF SOUNDINGS	10		10
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	22		22
COMPARISON WITH PRIOR SURVEYS AND CHARTS		15	15
EVALUATION OF SIDESCAN SONAR RECORDS		1	1
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		19	19
OTHER	2	10	12
TOTALS	90	60	150

Pre-processing Examination by C.D.Meador	*Beginning Date* Sept. 12, 1983	*Ending Date* Sept. 15, 1983
Verification of Field Data by M.L.Stewart; J.S.Bradford; M.B.Hickson	*Time(Hours)* 90	*Ending Date* Mar. 28, 1984
Verification Check by H.R.Smith; L.G.Cram	*Time(Hours)* 4	*Ending Date* Mar. 9, 1984
Evaluation and Analysis by M.B.Hickson	*Time(Hours)* 60	*Ending Date* Apr. 5, 1984
Inspection by R.D.Sanocki	*Time(Hours)* 3	*Ending Date* Apr. 4, 1984

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO.: FE-245 FIELD NO.: R/H-20-4-83

Louisiana - Texas, Gulf of Mexico, Thirteen Miles South of Sabine Bank

SURVEYED: April 27 through May 6, 1983

SCALE: 1:20,000 PROJECT NO.: OPR-K667-RU/HE-83

SOUNDINGS: Raytheon DE-719B Fathometer CONTROL: ARGO (Range-Range)

Chief of Party.....R. C. Arnold

Surveyed by.....D. D. Winter
.....J. W. Bailey
.....T. G. Callahan

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

1. INTRODUCTION

a. Unusual problems encountered during verification of this field examination are addressed in section 4. of this report.

b. Necessary corrections and notes made by the evaluator to the Descriptive Report are denoted in red ink.

2. CONTROL AND SHORELINE

a. The source of control was not adequately described in section F. and Appendix F. of the Descriptive Report. Section 4. of this report addresses this deficiency.

b. There is no shoreline within the area of this field examination.

3. HYDROGRAPHY

a. Soundings at crossings are in good agreement. Depths are within one to two feet.

b. No standard or supplemental depth curves are drawn on the smooth sheet. Depths range from 42 to 51 feet.

c. The development of the bottom configuration and investigation 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 requirements of the Hydrographic Manual with the following exceptions:

a. In reference to LCDR Arnold's letter of December 20, 1982 to the Director, Atlantic Marine Center (see the Supplemental Data section of the Descriptive Report), it is recognized that the vessels and personnel are not properly equipped to conduct hydrography. The effort involved in accomplishing this project is commendable. It is recommended that the RUDE and HECK not be assigned hydrographic projects in the future without being adequately equipped.

b. Velocity correctors submitted were in error and were redone during verification.

c. No TC/TI abstract or printout was provided. TC/TI data was generated and applied as necessary during verification.

d. The differences identified with the three Raytheon DE-719B fathometers discussed in section D. of the Descriptive Report are unusual and indicate a significant equipment problem which warrants further investigation prior to conducting future hydrography.

e. No settlement and squat data was provided in this survey. Settlement and squat correctors applied to this survey were taken from the other hydrographic surveys of this project.

f. No Abstract of Corrections to Electronic Position Control was included in the Descriptive Report. Pattern correctors were recomputed from the calibration data and the field applied correctors edited as necessary. Since there was no closing calibration by the RUDE (9040) for hydrography on days 117, 118, and 119 (see section G. of the Descriptive Report), only the opening calibration was used for the pattern correctors.

g. No dangers to navigation were identified by the hydrographer and no report was submitted. A negative report was required.

h. No field tide note was included in the Descriptive Report.

i. The one platform located by this field examination was not adequately described. Descriptions should include the size, orientation, and light and sound (horn, whistle, bell, etc.) characteristics. The hydrographer should have made contact with the U.S. Coast Guard, Eighth District, to gain any additional information that may be available about the platform.

#362

j. The charted wreck of the GULF TIDE (Latitude 29°15'48", Longitude 93°39'25") was not investigated by this field examination. No sounding lines were run over the charted position. Side scan sonar was aboard and was used during this survey but not in the vicinity of the charted wreck. This wreck is not adequately addressed by the hydrographer. See section 6.b. of this report.

k. Control stations listed in Appendix F. of the Descriptive Report were corrected as necessary. The name listed on four stations were not as listed by N.G.S. The year of establishment was not provided for any of the stations. The fixed point alongside the Coast Guard Pier at Cameron, Louisiana, was used for calibration and therefore is a calibration station (see section G. of the Descriptive Report). This station was not listed in the signal list and was not established in accordance with section 3.2 of the Project Instructions.

l. Portions of Attachment 6. of the Descriptive Report contains information not relevant to this field examination and should have been stricken from the report.

m. Fathogram quality is poor as sea conditions were 4 to 6 feet during times of hydrography which degraded the bottom trace and makes accurate interpretation difficult.

n. Side scan sonar was used to search for the spikes found by the WHITING. No contacts were found by the side scan sonar. No confidence checks were made to ensure proper equipment operation. Since the side scan sonar provided no useable information, the data was not smooth plotted nor is it included in the final automated files.

o. Bottom samples were not plotted on the final field sheet.

p. The Geographic Names List was corrected during Evaluation and Analysis.

5. JUNCTIONS

This field examination does not junction with any contemporary hydrographic surveys. See section 6.a. of this report.

6. COMPARISON WITH PRIOR SURVEYS

a. Hydrography

D-1 (1982)
H-8738 (1962-63)

Reconnaissance hydrographic survey D-1 (1982) provided no useable information or plots for comparison and therefore no comparison was made. The two spikes with apparent scouring indicative of obstructions (a reduced depth of 38.5 feet at Latitude 29°16'29.50", Longitude 93°40'48.04" and a reduced depth of 41.3 at Latitude 29°16'10", Longitude 93°40'56") were found during this reconnaissance survey. They were investigated on the present field examination with negative results. The side scan sonar work does not meet the criteria for disproval nor were any confidence checks performed on the equipment. Therefore the spikes remain unresolved and are possibly obstructions which are recommended for additional field work. These spikes are recommended to be charted as unknown obstructions until additional field work can either prove or disprove their existence.

#6998

#6997

Prior hydrographic survey H-8738 (1962-63) is common to the entire area of this field examination and is the source of all charted hydrography within the common area except the "37 (rep. 1980)" in Latitude 29°15'58.6", Longitude 93°40'09.8". Present hydrography is generally 1 to 2 feet deeper than prior hydrography with present soundings ranging up to 6 feet deeper. The prior 40-foot sounding at Latitude 29°16'22", Longitude 93°41'02" is in an area where 43 feet was the least depth found by the present survey. The prior 40-foot sounding at Latitude 29°15'40", Longitude 93°41'35" is in an area where 43 feet was the least depth found by the present survey. The prior 41-foot sounding at Latitude 29°15'42", Longitude 93°39'50" is in an area where 43 feet was the least depth obtained by the present survey.

The present hydrography is considered adequate only to supplement prior hydrography within the common area. The prior data is adequately charted and no additional hydrography is recommended for charting.

b. Wire Drag

H-9368 WD (1973) (unverified)

Present hydrography was compared with the final field A&D sheet. Three present soundings are in conflict with the prior unverified effective depths. These three 42-foot soundings are in the vicinity of Latitude 29°16'37", Longitude 93°40'58" which was cleared by an unverified effective depth of 43 feet. No other conflicts exist between present and prior data. The spikes discussed under the comparison with survey D-1 are in conflict with this wire drag survey's effective depths; however, their presence may be subsequent to this wire drag survey.

The wreck GULF TIDE (in Latitude 29°15'48", Longitude 93°39'24") was assigned as Presurvey Review item 32 (OPR-479) on this wire drag survey. The wreck was identified as a dredge which sunk in 1947 (Notice to Mariners No. 41 of 1947) and was reported awash. Subsequent Notice to Mariners No. 40 of 1948 reported the dredge broke up and sunk in Latitude 29°15'42", Longitude 93°39'24", Position Approximate. Survey H-8738 (1962-63) obtained a 42-foot sounding in Latitude 29°15'48", Longitude 93°39'24" on what was considered a probable indication of the wreck in surrounding survey depths of 45 feet. Survey H-9368 WD did not locate the wreck and cleared the suspected position in only one direction by an unverified effective depth of 42 feet (predicted tides) which is not considered sufficient to disprove the wreck or chart a wire drag clearance depth. The present survey did not investigate the wreck. It is recommended that the wreck be retained as charted. #362

7. COMPARISON WITH CHART 11341 (27th Edition, May 15, 1982)

a. Hydrography

The charted hydrography originates with the previously discussed prior survey H-8738 (1962-63). The disposition of charted hydrography common to this field examination is adequately discussed in section 6.

of this report. The charted "37 (rep. 1980)" in Latitude 29°15'58.6", Longitude 93°40'09.8" and "Shoaling reported 1980" in approximately Latitude 29°15'40", Longitude 93°40'30" originate with Chart Letter 600 of 1980. Present hydrography adequately disproves any shoaling and these two notes should be deleted from the chart.

b. Aids to Navigation

No aids to navigation, per se, fixed or floating exist within the area of this field examination. However, a privately maintained platform, structure name: APC WC 294 A, well name: AMOCO 154 1, Lighted (four quick flashing white lights visible for 5 miles), with a fog horn (2 miles), was located by this survey. This platform is adequately charted.

8. COMPLIANCE WITH PROJECT INSTRUCTIONS

This field examination adequately complies with Project Instructions OPR-K667-RU/HE-83 dated January 6, 1983 except as noted in this report.

9. ADDITIONAL WORK

This is an adequate field examination which serves the intended purpose except as noted in this report. Additional work is recommended on the two spikes discussed in section 6.a. of this report.

J. Scott Bradford
Cartographic Technician
Verification of Field Data

Maurice B. Hickson, III
Cartographer
Evaluation and Analysis

Leroy G. Cram
Supervisory Cartographic Technician
Verification Check

INSPECTION REPORT
FE-245

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, Hydrographic Survey Processing Section
Hydrographic Surveys Branch

David B. MacFarland, LCDR, NOAA
Chief, Hydrographic Surveys Branch

Approved April 6, 1984

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

93° 37′

93° 36′

29° 18′

29° 18′

APC WC 294 A
platform (lighted) horn
priv maintd

29° 17′

29° 17′

FE-245
NORTH AMERICAN DATUM OF 1927
1:20,000 SCALE
APRIL-MAY, 1983
POLYCONIC PROJECTION

29° 16′

93° 37′

93° 36′

29° 16′

93° 42'

93° 41'

93° 40'

93° 39'

93° 38'

29° 17'

29° 16'

29° 15'

FE-245
SOUNDINGS IN FEET AT MLLW
NORTH AMERICAN DATUM OF 1927
1:20000 SCALE
APRIL-MAY, 1983
POLYCONIC PROJECTION

93° 42'

93° 41'

93° 40'

93° 39'

93° 38'

29° 17'

29° 16'

29° 15'

FE-245
EXCESS LEVEL 1

93° 42'

93° 41'

93° 40'

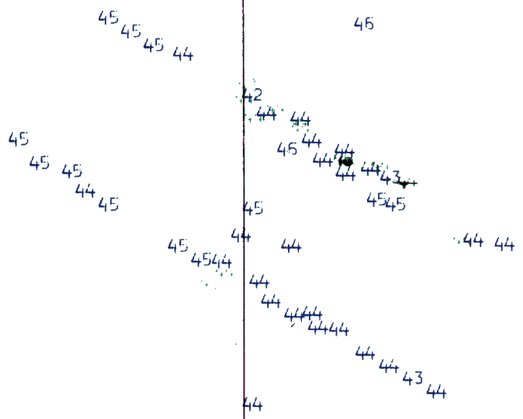
93° 39'

93° 38'

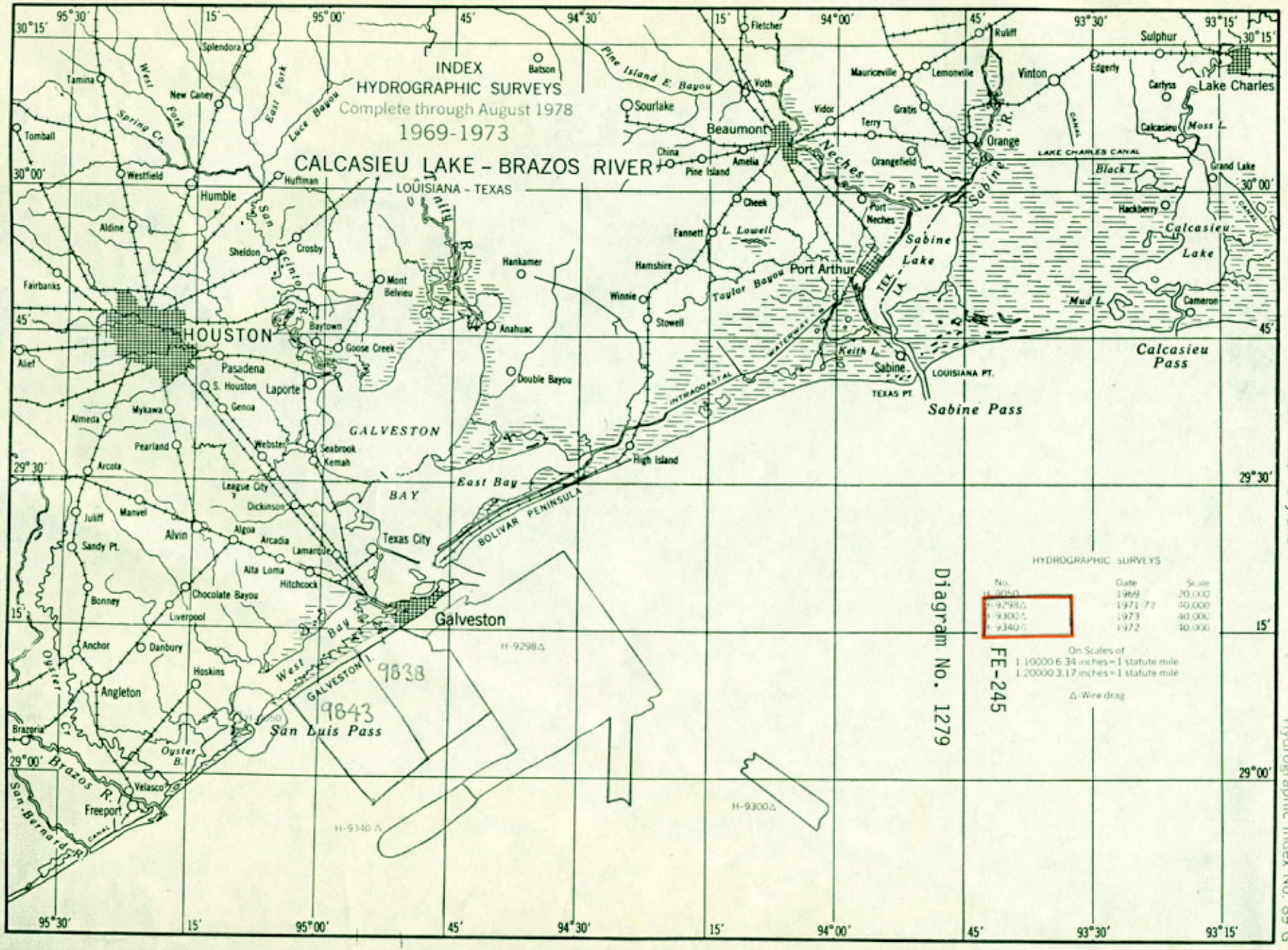
29° 17'

29° 16'

29° 15'



FE-245
EXCESS LEVELS 2&3



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

Hydrographic Index No. 89 G

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

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-245

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
11341	8/27/84	BARTHEL	~~Full~~ Part ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No. 44 ; Examined for critical corrections only, No Correction.
11332	7/3/85	SHARP	Full ~~Prior~~ ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No.
11330	7/31/85	CORDTS ✓	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 2
11340	7/31/85	CORDTS ✓	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 67
11341	7/31/85	CORDTS ✓	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 45
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

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

USCOMM-DC 8558-P63