FE347
SIDE SCAN

Diagrams 1116-3, 1278-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ..... Side Scan Sonar

Field No. RU-20-1-90

Office No. FE-347SS

LOCALITY

State ..... Louisiana

General Locality ..... Gulf of Mexico

Locality ..... Offshore Approaches to Cameron

19 90

CHIEF OF PARTY
LCDR G.H. Tuell

LIBRARY & ARCHIVES

DATE ..... February 9, 1993

FE347
SIDE SCAN

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

CP-5
11344
11345
11330
11340

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTER NO. FE-347-SS

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. RU-20-2-90

State Louisiana

General locality Gulf of Mexico

Locality Offshore Approaches to Cameron

Scale 1:20000 Date of survey Year Days (162) - (242) June 11 - August 30, 1990

Instructions dated February 9, 1990 Project No. OPR-K454-RU-90

Vessel NOAA SHIP RUDE S-590 EDP No. 9040

Chief of party LCDR Grady H. Tuell

Surveyed by LT Jon E. Rix, LTJG Ralph Rogers, ENS Philip A. Gruccio, AST Mark Sramek ENS Matthew J. Oberlies

Soundings taken by echo sounder, ~~hand lead, pole~~ RAYTHEON DSF-6000N & Pneumatic Depth Gage (PDG)

Graphic record scaled by JER, RRR, PAG, MAS, MJO

Graphic record checked by JER, RRR, PAG, MAS, MJO

Protracted by N/A Automated plot by Xynetics 1201 Plotter (AHS) BRUNING-NICOLET ZETA 124 CS Plotter (Field)

Verification by Atlantic Hydrographic Section

Soundings in ~~fathoms~~ meters at ~~MLW~~ MLLW

REMARKS: The following AWOIS items were either resolved or disproved:

344, 396, 399, 401, 6971, 6972, 7973, 6974, 6975, 6976, 6978, 6979

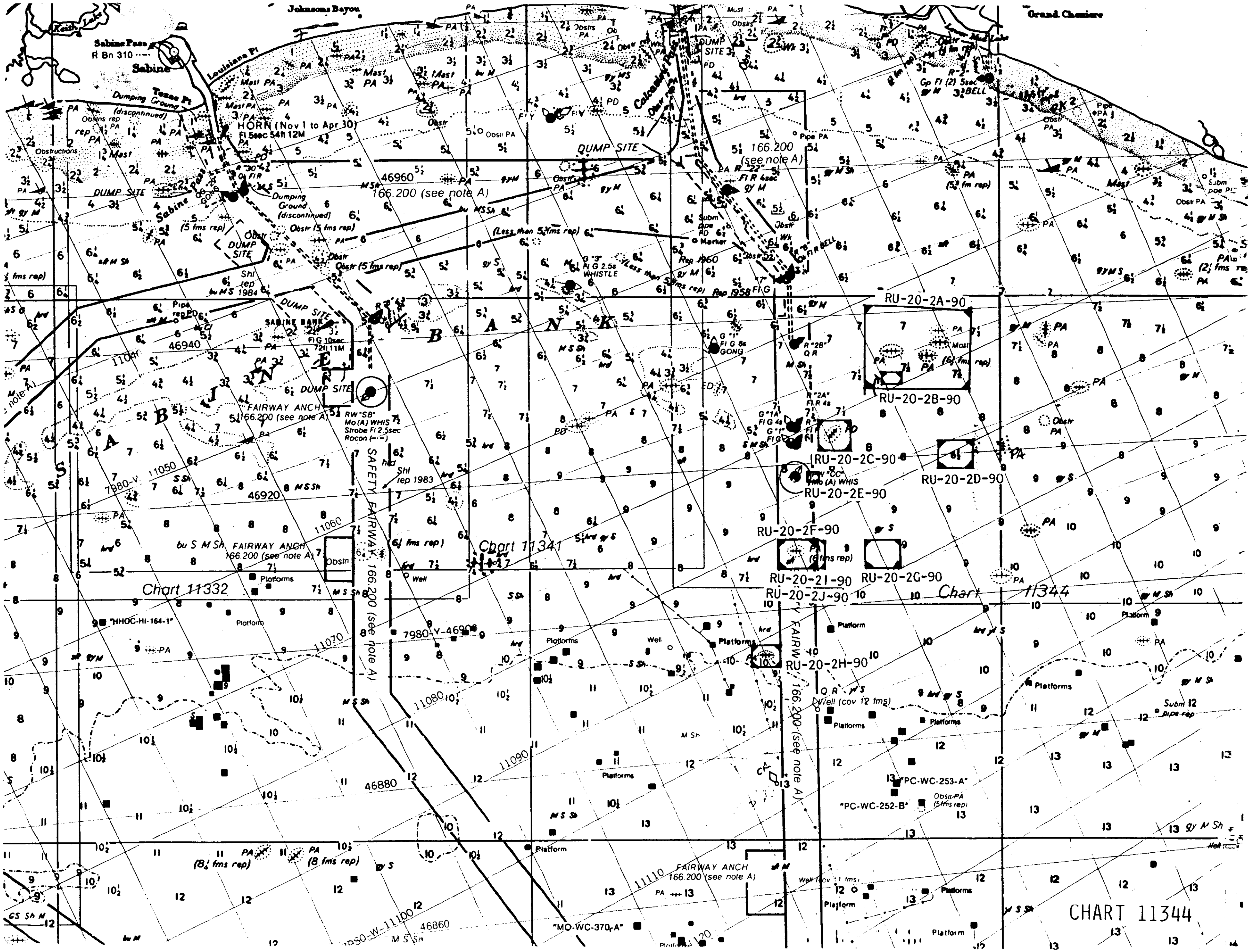
Contact 196.02S in AWOIS 396 was originally found on survey D-104 (RU-80-1-90).

AWOIS + SVRF 8/93 RWD

XWW 3/28/94

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

☆ U.S. G.P.O. 1972-769-565/519 REG.#6


Johnsons Bayou
Grand Chenier
Sabine Pass
R Bn 310
Sabine
Texas Pt
Louisiana Pt
Dumping Ground (discontinued)
HORN (Nov 1 to Apr 30)
Fl 5sec 54ft 12M
DUMP SITE
Sabine Pass
Calcasieu Pass
166.200 (see note A)
46960
SABINE BANK
Fl G 10sec 72ft 11M
FAIRWAY ANCH 166.200 (see note A)
RW "SB" Mo (A) WHIS Strobe Fl 2.5sec Racon
SAFETY FAIRWAY 166.200 (see note A)
46940
46920
11040
11050
11060
11070
11080
11090
11100
11110
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46880
46860
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Chart 11344
RU-20-2A-90
RU-20-2B-90
RU-20-2C-90
RU-20-2D-90
RU-20-2E-90
RU-20-2F-90
RU-20-2I-90
RU-20-2G-90
RU-20-2J-90
RU-20-2H-90
"HHOC-HI-164-1"
"PC-WC-253-A"
"PC-WC-252-B"
"MO-WC-370-A"
Platforms
Platform
Well
Shl rep 1984
Shl rep 1983
Rep 1960
Rep 1958
G "3" Fl G 2.5s WHISTLE
G "1" Fl G 6s GONG
R "2B" Q R
Gp Fl (2) 5sec BELL
Well (cov 12 fms)
Subm pipe rep
CHART 11344

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A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K454-RU-90, Approaches to Cameron, Louisiana, and Sabine Pass, Texas, dated February 9, 1990, and as amended by:

Change No. 1 dated May 24, 1990

The purpose of this project is to conduct investigations of wrecks and obstructions, and to conduct limited reconnaissance hydrography in and near the approaches to Cameron, Louisiana, and Sabine, Texas. The project responds to requests from the U.S. Coast Guard (Eighth District), Lake Charles Pilots, and to recommendations from a 1984 NOS Planning Staff report entitled "A Study of NOS Surveys in Major U.S. Ports."

B. AREA SURVEYED

This report covers survey operations performed on AWOIS items located in the offshore approaches to Cameron, Louisiana. The items lie between latitudes 29° 30' and 29° 09' North, and longitudes 93° 02' and 93° 17' West. Data acquisition began on June 11, 1990 (DOY 162) and was concluded on August 30, 1990 (DOY 242). The AWOIS items are discussed in section N.

C. SURVEY VESSELS

The following vessels were used during this project:

VESSELS	ELECTRONIC DATA PROCESSING NUMBER	PRIMARY FUNCTION
NOAA Ship RUDE (S590)	9040	Side Scan Operations
RUDE Launch (RU3)	1290	Diving Operations
RUDE Skiff (RU1)	N/A	Diving Operations

Since the towfish and the high frequency signal of the survey fathometer both operate in the 100 kHz range, interference was seen on the side scan trace when the towfish was towed close astern. Therefore, when interference was considered excessive, only the low frequency was used for collecting sounding data as provided for in section 1.2.4 of the Side Scan Sonar Manual.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

Survey data acquisition and processing were accomplished using the HDAPS system with the following software versions:

Survey Version	Survey Dates	Post-Survey Version	Post-Survey Dates
4.32	JUN 11 - JUL 2, 1990	4.14	JUN 11 - AUG 16, 1990
4.33	JUL 3 - AUG 16, 1990	4.15	AUG 17 - AUG 30, 1990
4.51	AUG 17 - AUG 30, 1990		

Raw data collected during this project were stored on 3.5-inch floppy disks, which were numbered by sheet, vessel, and day of year. Edited data were recorded on hard disk and backed up on 1/4 inch 32-track cartridge tapes, numbered in the same manner as the raw data.

Other software used were VELOCITY 1.11 (to generate sound velocity corrector tables), NADCON 1.01 (to convert from NAD 27 to NAD 83), and LOTUS 123 (to generate baseline correctors for the Falcon mini-rangers).

E. SONAR EQUIPMENT

Side scan sonar (SSS) operations were conducted using an EG&G Model 260 slant range corrected side scan sonar recorder and either a Model 272-T (single frequency) or 272-TD (dual frequency) towfish. The towfish was configured with a 20° tow fish beam depression, which is the normal setting and which yields the best beam correction. Refer to each day's raw data printouts for a list of applicable equipment serial numbers.

During normal survey operations, the 100 kHz frequency and the 100 or 75-meter range scales were used. When conditions (water depth and sea state) permitted, the side scan was operated on the 100-meter range scale. Otherwise, the 75-meter scale was used as these conditions deteriorated. When conducting reconnaissance on contacts, the 50 and 25-meter scales were used to obtain a more detailed look at the contact, and to determine its significance. Maximum line spacing was based upon obtaining an overlap of 2.0 mm at the achievable scale of the survey as specified in Section 2.1.3.1 of the Side Scan Sonar Manual. Navigation quality was excellent; the maximum residual was generally less than 5 meters. Therefore, the achievable scale of the survey was 1:10,000, requiring a 20 meter overlap (i.e. 180-meter line spacing for 100-meter range scale).

Side scan sonar operations were conducted in accordance with the Side Scan Sonar Manual, dated September 1988. Daily confidence checks were performed by either towing the fish past a previously located contact, or by noting recognizable bottom characteristics at the edges of the sonar range scale in use. Sonargrams and fathograms were scanned on-line and off-line for contacts. Significant contacts were reconned at the 50 or 25-meter range scale and were investigated by divers if deemed necessary. Overlap was checked on-line and on the edited swath plot for holidays. All holidays were filled in by running additional side scan sonar lines.

F. SOUNDING EQUIPMENT

All hydrographic soundings were acquired using a Raytheon 6000N digital survey fathometer (DSF). Normally, both the high (102 kHz) and the low (24 kHz) frequency sounding data were recorded; however, only the high frequency was used for plotting purposes. When poor image quality resulted from interference between the side scan sonar and the DSF high frequency, only the low frequency data was collected and plotted. Refer to each day's raw data printouts for a list of equipment serial numbers.

All diver-determined least depths were measured with a ~~pneumo~~ Pneumatic depth gage (PDG). RUDE is equipped with a 3-D Instruments 0-70 FSW (feet saltwater) precision depth gage, S/N 142697.

G. CORRECTIONS TO SOUNDINGS

Velocity correction data was collected periodically throughout the survey area. A Digibar Sound Velocity Probe (S/N 169) was used for all casts. A Data Quality Assurance Test was conducted before each cast to ensure the ~~meter~~ device was operating within prescribed tolerances. All data were processed using the program Velocity 1.11. The computed velocity correctors were entered into the HDAPS sound velocity table and applied on-line to both high frequency and low frequency echosounder depths.

The following casts were made:

Date	DOY	LAT/LON	HDAPS Velocity Tables
JUN 12, 1990	163	29° 16.0'N / 93 ° 13.0'W	2
JUL 20, 1990	201	29° 29.2'N / 93 ° 06.4'W	5
AUG 09, 1990	221	29° 07.9'N / 93 ° 16.2'W	6

Settlement and squat correctors for RUDE were determined on the Elizabeth River in Norfolk, Virginia, on March 06, 1990. An observer was stationed on shore with a leveling instrument, to measure changes in relative height as the ship passed by at various speeds. Settlement and squat correctors were applied to soundings through the HDAPS offset table.

Heave data were collected by a Datawell b.v. heave, pitch and roll sensor (S/N 19128-C) and applied to soundings in real time. Only the heave corrections were applied to the plotted depths.

During the winter 1988 dry dock period, an exact vertical measurement was taken from the DSF transducer to a fixed point on the bridge wing. After the ship was refloated, the height above the waterline was determined for this point. The ship's static draft was calculated to be exactly 2.26 meters (7.4 feet). This draft value was applied to the sounding data via the HDAPS offset table.

used 2.3 meters during processing

See SEPARATE IV for data records.

The tidal datum for this project is mean lower low water. The operating tide station (877-0570) at Sabine Pass, Texas, served as control for datum determination. The station at Galveston, Texas, served as the reference station for predicted tides. The following correctors for time and height were taken from the Project Instructions.

Project Area	Time Corrector High Water / Low Water	Height Ratio
Offshore in the Gulf of Mexico	-1 hr 30 min/-1 hr 30 min	x1.44

Tidal correctors were applied on-line using the HDAPS predicted tides table. Approved tides and zoning were applied during office processing.

See (APPENDIX V)* for HDAPS predicted tide tables.

A request for smooth tides was mailed on September 19, 1990. A copy of this letter is provided in (APPENDIX V)*

The ship's shallow water (0-70 FSW) pneumo depth gage was purchased this field season and was calibrated by the manufacturer (3-D Instruments) on April 27, 1990. Periodic lead line system checks were conducted to ensure the gage was functioning properly.

See SEPARATE IV for calibrations and system checks.

H. CONTROL STATIONS

The horizontal datum for this project, unless noted otherwise, is the North American Datum of 1983 (NAD 83). Geodetic support to establish hydrographic control on the Louisiana and Texas coasts for this survey was provided by N/CG23322 in 1989. This field work was conducted in accordance with Project Instructions for Job HC-8901, 1989. All stations were Third-Order, Class I or better.

Coordinates of the control stations used during this project were taken from the NAD 83 preliminary unadjusted field positions provided to RUDE by N/CG23322 in 1989. The control station list is provided in APPENDIX III, including station names, numbers, and geographic positions. APPENDIX III also contains (recovery notes)* for these stations.

Because two different navigation systems were in use, station numbers are in two series. The ARGO system network was deployed on stations 101-104. The Mini-Ranger network was deployed on stations 201-204. All stations remained in their original deployment throughout this survey as is shown on the control station table included in SEPARATE III.

* = Data removed from the Descriptive Report and filed with the field records.

I. HYDROGRAPHIC POSITION CONTROL

Vessel survey navigation was accomplished by the range-range method utilizing the Cubic Western Data ARGO DM54 hydrographic positioning system. The Motorola Mini-Ranger Falcon 484 system was only used to calibrate the ARGO system.

The Mini-Ranger and ARGO systems are interfaced with the HDAPS system in such a way that only the ranges are recorded; the position computation capability of the Falcon system is not utilized. Vessel position is computed by a least squares algorithm within the NAVITRONIC NAVISOFT 300 software.

RUDE routinely conducted survey operations using four LOP's, although occasionally one or more ranges were de-selected from the solution due to lane loss. At no time during this project did the maximum residual consistently exceed 10 meters, or 0.5 mm at the survey scale. The 95% confidence error circle radius never exceeded 30 meters, or 1.5 mm at the survey scale.

MINI-RANGER

A pre-project baseline calibration of the Mini-Ranger system was conducted at the Atlantic Marine Center on February 27, 1990. A second baseline calibration was conducted in Lake Charles, LA on July 22, 1990 for units which were replaced during the field season. During these calibrations, the range correctors were determined for each combination of transponder and shipboard R/T and RPU. A Minimum Acceptable Signal Strength (MASS) was also determined for each of the Mini-Ranger codes.

See the Electronic Control Report submitted under separate cover for the data records of the calibrations.

The range corrector and MASS for each Mini-Ranger code was entered in the HDAPS system using the Pre-Survey C-O Table Utility. These tables provided the mechanism by which HDAPS automatically applies the proper range corrector and removes from the position computation those LOP's with signal strengths below MASS. The C-O Tables used during this survey are included in SEPARATE III.

ARGO

To our knowledge, this survey is only the second NOS survey to utilize ARGO in the multiple LOP mode, the first being RUDE's recently-submitted survey of the inshore approaches to Cameron (FE-346-SS). Four ARGO shore stations were routinely used. This command feels strongly that the use of four ARGO LOP's in the HDAPS position computation provides an over-determined solution which is very analogous to the use of Mini-Ranger; and, that once the system was calibrated, monitoring of the geometry, ECR, and maximum residual is sufficient action to analyze the quality of the navigation. Therefore, a strip chart recorder was not used. Instead, the HDAPS system operator constantly monitored these critical navigation parameters. Should one or more of the

parameters exceed the required tolerances, the position quality graphics screen was studied to identify the deteriorated LOP, and that ARGO station was removed from the position computation. RUDE found that isolated thunderstorms ashore would occasionally cause an ARGO station to lose one or more lanes, and that this was usually the cause of the infrequent ARGO problems encountered. ARGO was never used for survey navigation with less than three LOP's.

CALIBRATION OF THE ARGO SYSTEM

Because ARGO had not been used in the multiple LOP mode with the HDAPS system prior to this season, the HYDRO MANUAL and FIELD PROCEDURES MANUAL contained little guidance as to what techniques and schedules should be used for ARGO network calibration. Various telephone and written correspondence was conducted with N/CG24 and N/CG244 personnel on the subject. Early in the project, a memorandum was sent to N/CG244 outlining RUDE's calibration procedures. A copy of this memorandum is included in APPENDIX VI of this survey.

Two ARGO calibration techniques were used: Secondary by Primary system calibration, and lane recovery by known rates.

The Secondary (ARGO) by Primary (Mini-Ranger) method involved calibration of the ARGO directly to the Mini-Ranger. The Secondary by Primary calibration software included in the HDAPS Survey software was used for this calibration process. This software calculated a position based upon Mini-Ranger rates, and correctors were displayed for each of the ARGO rates. These correctors were applied to the ARGO rates. The procedure was iterated until each ARGO rate had a residual of less than 10 meters.

The second technique used to calibrate ARGO was a Lane Recovery Technique. This procedure involved establishing a repeatable range which could be steered, while marking known points on the range by turning sextant angles to a target on the beam. Ranges were established using well heads or oil rigs at convenient locations in the survey area. Coordinates were not computed for the range markers. The range was used only to return RUDE to a recoverable point where the ARGO rates were known. The range was established only after first conducting a secondary by primary calibration. The ARGO rates on the range were verified by two additional runs of the range following Secondary by Primary calibrations.

The ranges used in this survey were established on DOY 106 and 192 and verified by three independent runs. A third range was established on DOY 221, but was never used for calibration. The forms used to establish the ranges are included in SEPARATE III.

Routinely, the ARGO system was calibrated each time RUDE returned to sea after inporting in Cameron or Lake Charles, LA. However,

calibrations were also conducted whenever navigation parameters fell below 1:20,000 requirements. The table below shows dates of ARGO calibrations and the technique employed.

DOY	METHOD
106	Secondary by Primary Established Range 1
143	Secondary by primary Verified Range 1 with 2 runs
162	Secondary by Primary
169	Secondary by Primary
177	Range 1
191	Secondary by Primary Range 1
192	Established Range 2
193	Range 2
197	Range 2 Primary Closing Check
200	Range 2
201	Primary Closing Check
204	Secondary by Primary (lost records)
211	Secondary by Primary

DOY	METHOD
215	Primary Closing Check
220	Secondary by Primary
221	Established Range 3
225	Secondary by Primary
233	Secondary by Primary
239	Secondary by Primary
242	Primary Closing Check

Note: The data records for the calibration on DOY 204 were lost; however, the daily position printouts and residuals for that week show the validity of the calibration.

The Primary Closing Checks were not a calibration. This procedure consisted of simply comparing one or more Mini-Ranger LOP's to the ARGO fix for a simple confidence check. See SEPARATE III for the data records of the calibrations.

All offsets were calculated and entered into the HDAPS offset table. This table included measurements from the antenna to the transducer, bow, and A-frame. The position of the towfish was automatically calculated by HDAPS by using the offset table, line course, and cable length.

See SEPARATE IV for offset tables.

In late August, RUDE received change 90-01 to the Field Procedures Manual. This document arrived aboard RUDE when field

operations were about 95% complete. The change verified RUDE's on-line ARGO positioning techniques and calibration procedures, however, one provision of this change was not followed. Section 3.3.1.2 of the Field Procedures Manual discusses an ARGO calibration technique based on running a fixed range. The lane-set points must be determined by running each range three times and computing average values. These average values are to be used when running the range for the purpose of lane recovery.

During this survey, RUDE did run each range three times. However, these runs were sometimes widely separated chronologically. Therefore, RUDE did not use the "average" values when running the range for lane recovery. Instead, the rates which were first determined on the range were generally used. This technique yielded acceptable lane recovery results as evidenced by the high quality of the ARGO fixes following use of the range for lane recovery.

The provision of the change to FPM was not violated intentionally. RUDE had no advance notice of the requirement for "average" values and this survey was nearly completed when the copy of change 90-01 arrived in Cameron.

The AWOIS listing published position provided to RUDE for the items covered by this report were in NAD 27. These positions were converted to NAD 83 using the NADCON Program Version 1.01. See SEPARATE III for copies of these conversions. - These positions were checked by using CORPSCON during office processing.

J. SHORELINE

Not Applicable

K. CROSSLINES

Not Applicable

L. JUNCTIONS

Not Applicable

M. COMPARISON WITH PRIOR SURVEYS

See Section N., COMPARISON WITH THE CHART.

N. COMPARISON WITH THE CHART

AWOIS Item reports follow:

N1. AWOIS ITEM 344 INVESTIGATION (See sheet 1 of 9)

Area of Investigation

AWOIS Item:	344
State	Louisiana
Parish:	Cameron
Locality:	10 nm S of Buoy "CC," Calcasieu Channel
Latitude:	29° 10' 00.876" N } NAD 83
Longitude:	93° 15' 00.565" W }
Depth:	Unknown (Wreck)

AWOIS Item Description

AWOIS item 344 was described in LNM31/77 as the F/V Hat I, sunk in approximately 54 feet of water at latitude 29° 10' 00" N, longitude 93 ° 15' 00" W, (NAD 27). The wreck was charted at latitude 29° 10' 15" N, so as not to displace a 60-foot charted depth. Present survey requirements called for a 200% side scan sonar investigation to a 3000-meter search radius for disproval; and echosounder development, or diver investigation and least depth, if found; or salvage documentation. The wreck is charted on NOAA chart 11330, Mermentau River to Freeport, 5th Edition, dated July 30, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	344
Positioning:	ARGO
Sonar Search:	DOY 221, 222, 225, 226, 227, 233, 234, 235
Diving:	DOY 226, 227, 239, 240
Sonification:	200% SSS coverage
Contacts:	Six significant contacts discovered, 4658.29S, 4836.18P, 4904.13P, 5456.34P, 6019.22S, and 6468.38S
Field Sheet:	RU-20-2H-90

RUDE attempted to contact the owner of the F/V Hat I at the address given in the AWOIS listing. Mr. Watkins did not reply to out correspondence. A copy of RUDE's letter is included in Appendix VI.

Two minor problems were experienced with the side scan sonar system. On DOY 233 between fixes 5803 and 5889, the side scan recorder paper take up speed was inconsistent and occasionally compressed data records. However, the imagery was of good quality and any significant contacts would have been visible. On DOY 234, the towfish was swapped due to degraded imagery on the starboard channel. All poor-quality imagery was rejected and re-run using the backup towfish.

On DOY 233, all magnetic data for fixes 5647 though 5723 were lost when the HYFLEX system was switched off. Therefore, these data are not shown on the edited swath plot. Because the data were of high quality, they were not re-run. The on-line swath plot should be used when examining these images.

Five significant contacts were identified during 200% coverage. These contacts were investigated by divers and a least depth and position was determined for each.

Contact 4658.29S Investigation

(a) Contact 4658.29S Dive Summary

Contact 4658.29S was investigated by divers on August 28, 1990 (DOY 240). LTJG Rogers and ENS Oberlies descended the marker buoy line to the bottom at 19 meters. A circle search of 20-meter radius was conducted about the marker buoy anchor. A 1-meter high pile of tangled wire rope was found on the bottom. A least depth was obtained by ~~pneumo~~ Pneumatic (PDG) depth gage.

(b) Contact 4658.29S Description

Contact 4658.29S is a 1-meter high pile of 10-centimeter diameter, steel wire rope. The wire rope is tangled in the middle, creating a pile, and one end extends along the bottom approximately 15 meters from the pile.

(c) Contact 4658.29S Least Depth Determination

A least depth of Contact 4658.29S was taken by divers using a ~~pneumo~~ Pneumatic depth gage on the highest point of the contact.

Contact:	4658.29S	
Date:	August 28, 1990 (DOY 240)	
Time:	1627 Z	
Average ~~Pneumo~~ PDG Depth:	18.3	meters
~~Pneumo~~ PDG Gage Corrector:	+.0	
~~PREDICTED~~ Tidal Zone Cor:	-0.~~2~~4	
Actual Least Depth:	17.9 ~~18.1~~	meters (58 ft)

(d) Contact 4658.29S Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	4658.29S
HDAPS Position Numbers:	6665 - 6667
Average Easting:	78134.5 E
Average Northing:	71891.5 N

Computed Latitude:	29° 08' 54.41	N
Computed Longitude:	93° 15' 44.03	W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11093.5	26536.8	46890.0	64038.6
Loran SNR:	964	941	674	565
Master:	877			

(e) Contact 4658.29S Recommendation

RUDE recommends that this item be charted at the above position as an obstruction over which the least depth is known, using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of ~~18~~ 17.9 meters (58 ft.) inside a danger circle, labeled "Obstn." — Concur

Contact 4836.18P Investigation

(a) Contact 4836.18P Dive Summary

Contact 4836.18P was investigated by divers on August 27, 1990 (DOY 239). LTJG Rogers and ENS Oberlies descended the marker buoy line to the bottom at 18 meters. A circle search of 20-meter radius was conducted about the marker buoy anchor. A large tractor tire (approximately 3 meters in diameter) was found, and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 4836.18P Description

Contact 4836.18P is a large rubber tractor tire, approximately 3 meters in diameter, with an inside diameter of 1 meter. It rose approximately 1 meter above the surrounding bottom and is not considered a danger to navigation. — Concur

(c) Contact 4836.18P Least Depth Determination

A least depth of Contact 4836.18P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	4836.18P
Date:	August 27, 1990 (DOY 239)
Time:	2239 Z
Average ~~Pneumo~~ PDG Depth:	18.1 meters
PDG ~~Pneumo~~ Gage Corrector:	+0.0
~~PREDICTED~~ Tidal Zone Cor:	-0.13
Actual Least Depth:	17.98 meters (58 ft.)

(d) Contact 4836.18P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:			4836.18P	
HDAPS Position Numbers:			6654 - 6656	
Average Easting:			79509.5 E	
Average Northing:			73713.3 N	
Computed Latitude:		29° 09'	53.4	" N
Computed Longitude:		93° 14'	53.0	" W
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11092.3	26550.1	46892.4	64038.2
Loran SNR:	975	919	635	531
Master:	876			

(e) Contact 4836.18P Recommendation

RUDE recommends that this item not be charted. – Concur (Very close to another obstruction.)

Contact 4904.13P Investigation

(a) Contact 4904.13P Dive Summary

Contact 4904.13P was investigated by divers on August 14, 1990 (DOY 226). LCDR Tuell and ENS Gruccio descended the marker buoy line to the bottom at 20 meters. A 7-meter by 3-meter tank was found near the buoy line on the bottom. A least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 4904.13P Description

Contact 4904.13P is a 7-meter long by 3-meter wide, steel tank, rising about 2 meters off the bottom.

(c) Contact 4904.13P Least Depth Determination

A least depth of Contact 4904.13P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	4904.13P
Date:	August 14, 1990 (DOY 226)
Time:	1506 Z
Average ~~Pneumo~~ PDG Depth:	18.0 meters
~~Pneumo~~ PDG Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.~~8~~6
Actual Least Depth:	17.~~8~~4 meters (57 ft.)

(d) Contact 4904.13P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	4904.13P
HDAPS Position Numbers:	5076 - 5079
Average Easting:	79955.5 E
Average Northing:	74792.3 N
Computed Latitude:	29° 10' 28.5" N
Computed Longitude:	93° 14' 36.4" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11091.4	26555.7	-------	64037.6
Loran SNR:	950	913	0	611

(e) Contact 4904.13P Recommendation

RUDE recommends that this item be charted at the above position as an obstruction over which the least depth is known, using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of ~~18~~ 17.4 (57.ft.) meters inside a danger circle, labeled "Obstn." — Concur

Contact 5456.34P Investigation

(a) Contact 5456.34P Dive Summary

Contact 5456.34P was investigated by divers on August 15, 1990 (DOY 227). LTJG Rogers and ENS Oberlies descended the marker buoy line to the bottom at 20 meters. Two meters from the buoy line, the divers found a 3.5-meter long steel ladder lying on the bottom. A least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 5456.34P Description

Contact 5456.34P is a 3.5-meter long, 1.5-meter wide steel ladder of the type used on mineral production platforms. It rose about 1.5 meters off the bottom.

(c) Contact 5456.34P Least Depth Determination

A least depth of Contact 5456.34P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	5456.34P
Date:	August 15, 1990 (DOY 227)
Time:	1421 Z

Average ~~Pneumo~~ PDG Depth:	18.4 meters
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-.~~3~~ 7

Actual Least Depth:	~~18.1~~ 17.7 meters (58 ft.)

(d) Contact 5456.34P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	5456.34P
HDAPS Position Numbers:	5478 - 5480
Average Easting:	76358.2 E
Average Northing:	73800.7 N
Computed Latitude:	29° 09' 56.5~~43~~3" N
Computed Longitude:	93° 16' 49.6~~16~~2" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
	-------	-------	-------	-------
Average Loran:	11090.5	26531.3	46892.9	64037.5
Loran SNR:	976	912	712	626
Master:	883			

(e) Contact 5456.34P Recommendation

RUDE recommends that this item be charted at the above position as an obstruction over which the least depth is known, using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of ~~18~~ 17.7 meters (58 ft.) inside a danger circle, labeled "Obstn." – Concur

Contact 6019.22S Investigation

(a) Contact 6019.22S Dive Summary

Contact 6019.22S was investigated by divers on August 28, 1990 (DOY 240). LTJG Rogers and ENS Oberlies descended the marker buoy line to the bottom at 19 meters. A circle search of 15-meter radius was conducted about the marker buoy anchor. Two 2-meter long steel cylinders were found on the bottom. A least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 6019.22S Description

Contact 6019.22S is two 2-meter long steel cylinders, each 1 meter in diameter. The cylinders are hollow on one end and have a closed cone protruding from the other end. They rise approximately 1 meter above the bottom.

(c) Contact 6019.22S Least Depth Determination

A least depth of Contact 6019.22S was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	6019.22S
Date:	August 28, 1990 (DOY 240)
Time:	1429 Z
Average ~~Pneumo~~ PDG Depth:	18.2 meters
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-.~~3~~ 5
Actual Least Depth:	17.~~6~~ 7 meters (58 ft.)

(d) Contact 6019.22S Positioning

Two detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	6019.22S
HDAPS Position Numbers:	6658 - 6659
Average Easting:	79248.6 E
Average Northing:	73673.2 N
Computed Latitude:	29° 09' 52.2~~1~~4" N
Computed Longitude:	93° 15' 02.66~~5~~" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11092.1	26548.4	46892.3	64038.0
Loran SNR:	925	913	750	561
Master:	898			

(e) Contact 6019.22S Recommendation

RUDE recommends that this item be charted at the above position as an obstruction over which the least depth is known, using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of ~~18~~ 17.7 meters (58 ft.) inside a danger circle, labeled "Obstn." — Concur —

Contact 6468.38S Investigation

(a) Contact 6468.38S Investigation

Contact 6468.38S was investigated by side scan sonar coverage on August 23, 1990 (DOY 235). Three side scan sonar images of the contact were studied to determine size and height. No dive was made for a better description. A ~~least~~ estimated depth was determined through shadow height and the nearest depth scaled from the echosounder.

(b) Contact 6468.38S Description

Contact 6468.38S is suspected to be a piece of metal debris, approximately 1.5 meters square. The object rose approximately 1.3 meters above the surrounding bottom.

(c) Contact 6468.38S Least Depth Determination

A ~~least~~ estimated depth of Contact 6468.38S was determined through an echo sounding development near the contact, and a height off bottom calculated from the most significant of three side scan sonar images.

Contact:	6468.38S
Date:	August 23, 1990 (DOY 235)
Time:	1930 Z
Nearest Echo Sounding:	16.4 meters
Contact Height:	-1.3
Sound velocity Corrector:	0.5
Effective vessel draft:	2.3
~~PREDICTED~~ Tidal Zone Cor:	-0.4
~~Actual Least~~ Estimated Depth:	17.2 meters (56 ft.)

(d) Contact 6468.38S Positioning

The position of the contact was determined from the average of three separate side scan sonar images of the contact, one of which was orthogonal to the others.

Contact:	6468.38S
HDAPS Position Numbers:	6468.38S, 6588.28P, and 6591.00P
Average Easting:	79576.2 E
Average Northing:	76119.6 N
Computed Latitude:	29° 11' 11.65" N
Computed Longitude:	93° 14' 50.31" W

Loran-C Rates were not observed.

(e) Contact 6468.38S Recommendation AWOIS # 8735

RUDE recommends that this item be charted at the above position as an obstruction over which the least depth is known, using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of 17.4 meters inside a danger circle, labeled "Obstn." – Do not concur. – It is recommended that an obstruction with an estimated depth of 17.2 meters (56 ft.) be charted as shown on sheet 1 of 9.

AWOIS Item 344 Summary and Recommendations

AWOIS item 344 is considered disproved Concur through 200% side scan

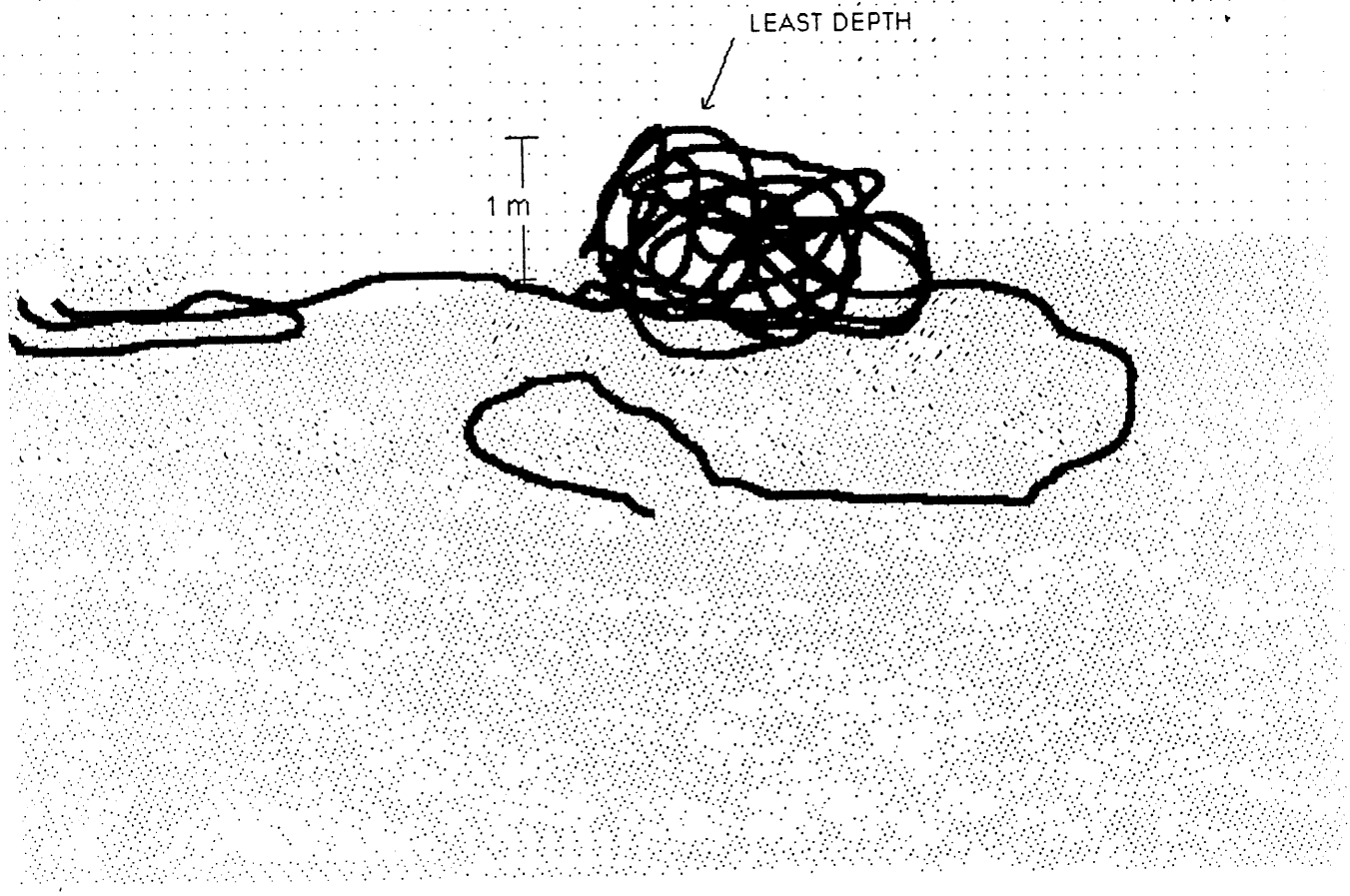
sonar investigation. RUDE recommends that the wreck symbol be deleted from future chart editions. Although the 60 foot depth charted at latitude 29° 08' 40" N, longitude 93 15' 00" W was verified during this survey, RUDE recommends that this depth be deleted from the chart in order to depict the obstructions determined in this survey at their true locations. The obstruction symbol required to chart contact 4904.13P would cover the charted 60 foot depth--the depth over the obstruction is 58 feet. — Recommend charting the area as shown on the present survey.

Contacts 4658.29S, 4904.13P, 5456.34P, 6019.22S and 6468.38S should be charted as recommended in their respective paragraphs (e) above.

Depths acquired while investigating this item were found to be in general agreement with those on chart 11330 and on prior surveys H-8738 and H-5411, except on the eastern portion, where the survey soundings are 1 meter (3 feet) deeper than charted depths. RUDE recommends that the present (shoaler) depths remain as charted. RUDE further recommends that the chart comparison be repeated during the hydrographic verification process after the application of approved tides. After application of approved tides, a comparison with H-8738 (1962-63) showed a general trend of the present survey being 1 to 2 feet (0.3 - 0.6 meter) deeper than the prior survey.

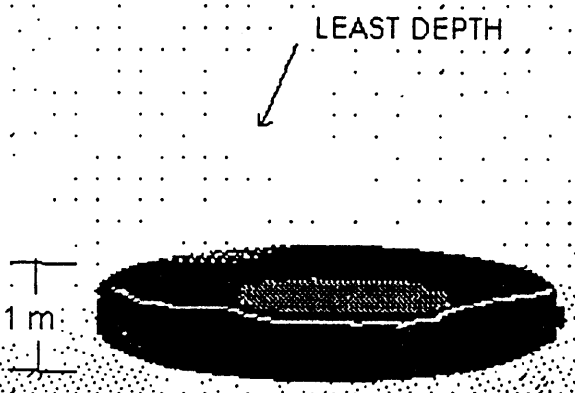
AWOIS 344

CONTACT # 4658.29S



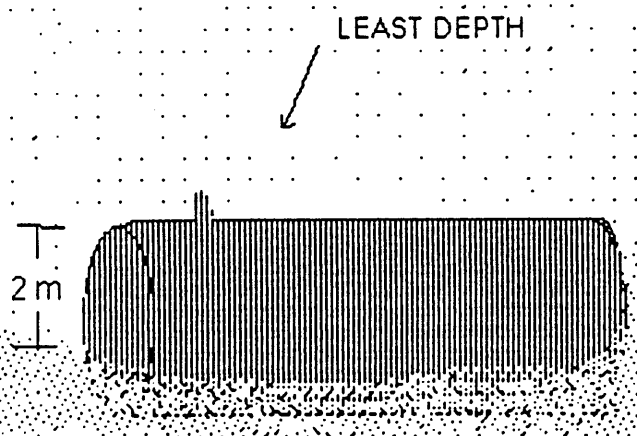
AWOIS 344

CONTACT # 4836.18P



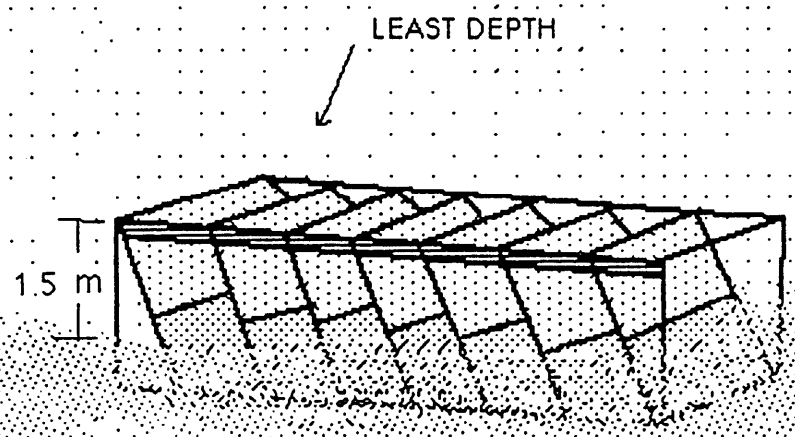
AWOIS 344

CONTACT # 4904.13P



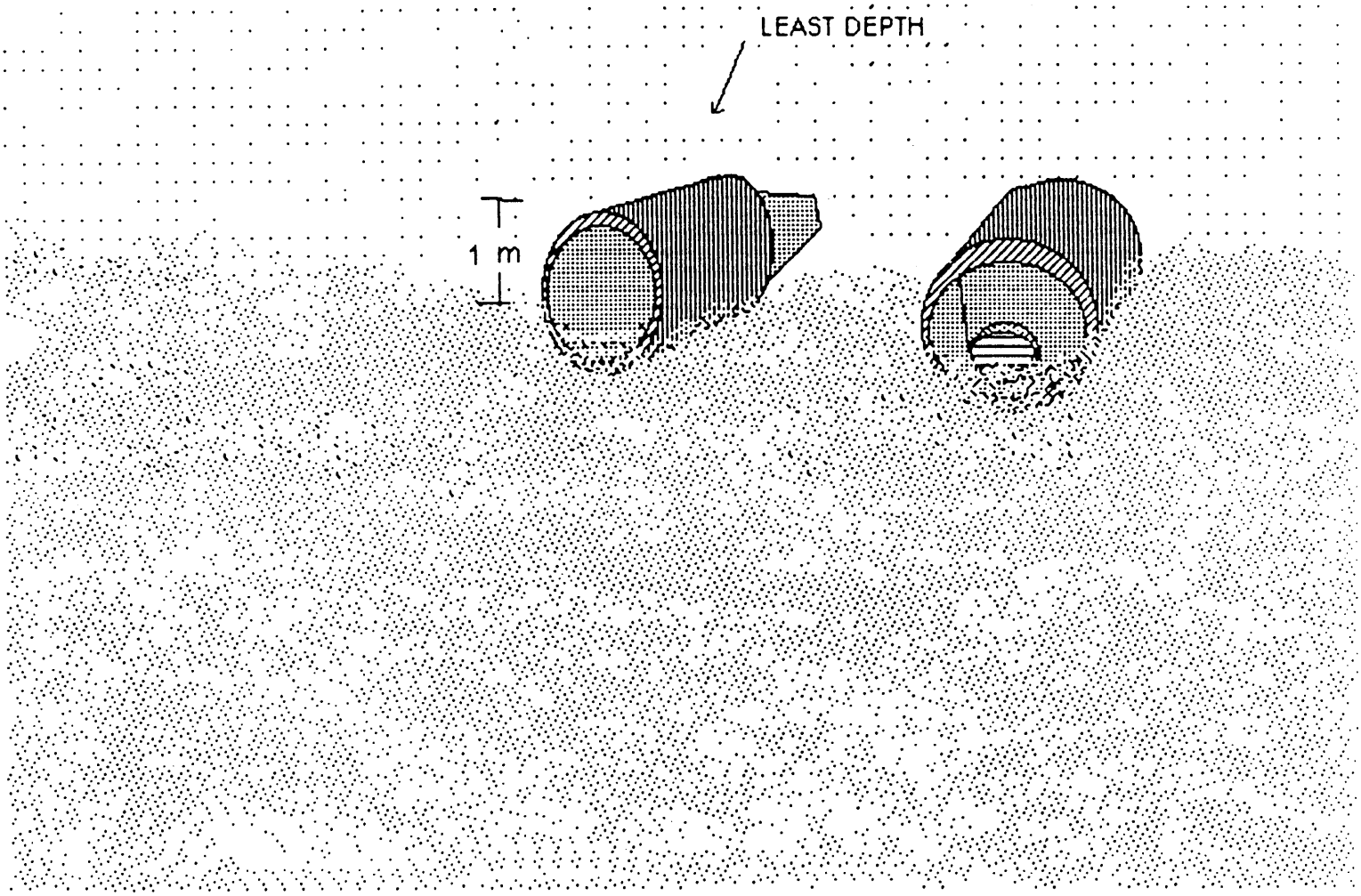
AWOIS 344

CONTACT # 5456.34P



AWOIS 344

CONTACT # 6019.22 S



N2. AWOIS ITEM 396 INVESTIGATION See sheets 2 & 3 of 9

Area of Investigation

AWOIS Item:	396
State	Louisiana
Parish:	Cameron
Locality:	7.3 nm E of Buoy "2B," Calcasieu Channel
Latitude:	29° 26' 49.842" N } NAD 83
Longitude:	93° 04' 49.551" W }
Depth:	unknown (wreck)

AWOIS Item Description

AWOIS item 396 was described in LNM2/82 as a dangerous submerged wreck with a least depth of 40 feet, located at latitude 29° 26' 49" N, longitude 93 ° ~~12~~ 02' 49" W (NAD 27). Present survey requirements called for 200% side scan sonar investigation to a 3000-meter search radius; and echosounder development or diver's investigation and least depth, if found; or salvage documentation. AWOIS item 396 appears on chart 11344, Rollover Bayou to Calcasieu Pass 26th edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	396
Positioning:	ARGO
Sonar Search:	DOY 177
Diving:	DOY 191
Sonification:	1% SSS coverage
Contacts:	One significant contact: 1307.13P
Field Sheet:	RU-20-1A-90

There were no significant problems encountered with the positioning or side scan systems. Only one potentially significant contact was identified on the side scan sonar coverage. The contact was discovered on the first line. Additional recon lines were run about the contact prior to conducting diving operations. This contact was investigated by divers, and a least depth and position were determined.

A second significant contact (196.02S) was located just outside of the search radius while surveying a reconnaissance hydro line. The contact name and position numbers are from survey D-104 (RU-80-1-90). Original sonargrams are submitted with that survey. However, the results of the diver investigation and charting recommendations are discussed below.

Contact 1307.13P Investigation — See sheet 2 of 9

(a) Contact 1307.13P Dive Summary

Contact 1307.13P was investigated by divers on July 10, 1990 (DOY 191). LT Cohen and LTJG Rogers descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A 20-meter long steel-hulled shrimp boat was found on the bottom. A least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1307.13P Description

Contact 1307.13P is a 20-meter long steel-hulled shrimp boat, with nets and doors on its deck, rising 4 meters off the bottom.

(c) Contact 1307.13P Least Depth Determination

A least depth of Contact 1307.13P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1307.13P
Date:	July 10, 1990 (DOY 191)
Time:	1855 Z
Average ~~Pneumo~~ pneumatic (PDG) Depth:	11.6 meters
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.54
Actual Least Depth:	11.12 meters (36 ft.)

(d) Contact 1307.13P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1307.13P
HDAPS Position Numbers:	1817 - 1819
Average Easting:	95650.6 E
Average Northing:	105043.1 N
Computed Latitude:	29° 26' 49.559" N
Computed Longitude:	93° 04' 51.554" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11067.7	26732.2	46933.4	64026.7
Loran SNR:	Not Noted	Not Noted	Not Noted	Not Noted

(e) Contact 1307.13P Recommendation

This wreck was found very close to the reported position of the AWOIS item. RUDE recommends that the wreck be charted at the above position using symbol No. 26, section "K," (wreck, least depth known by sounding only) from Nautical Chart No. 1. This symbol should show a depth of 11.2 meters (3½ fm) inside a danger circle, labeled "Wk." – Concur

Contact 196.02S Investigation – See sheet 3 of 9

(a) Contact 196.02S Dive Summary

This contact was originally identified when running a reconnaissance line for survey D-104. Original sonar records are submitted with that survey.

Contact 196.02S was investigated by divers on July 20, 1990 (DOY 201). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A 20-meter long steel-hulled boat was found on the bottom. A least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 196.02S Description

Contact 196.02S is a 20-meter long, twin screw, steel-hulled vessel, rising 4 meters off the bottom.

(c) Contact 196.02S Least Depth Determination

A least depth of Contact 196.02S was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	196.02S
Date:	July 20, 1990 (DOY 201)
Time:	1653 Z
Average ~~Pneumo~~ pneumatic (PDG Depth:	11.2 meters
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-.97
Actual Least Depth:	10.25 meters (34 ft.)

(d) Contact 196.02S Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	196.02S
HDAPS Position Numbers:	226 - 228
Average Easting:	95666.4 E
Average Northing:	101932.3 N

Computed Latitude:			29° 25' 08.5[illegible]" N	
Computed Longitude:			93° 04' 51.38[illegible]" W	
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11070.9	26723.9	46929.3	64028.1
Loran SNR:	Not Noted	Not Noted	Not Noted	Not Noted

(e) Contact 196.02S Recommendation AWOIS # 8736

RUDE recommends that this item be charted at the above position using symbol No. 26, section "K," (wreck, least depth known by sounding only) from Nautical Chart No. 1. This should show a least depth of ~~11~~ 10.3 meters (34 ft) inside a danger circle, labeled "Wk." – Concur

AWOIS Item 396 Summary and Recommendations

AWOIS item 396 is considered resolved. It is presently charted as a wreck PA, 40 feet reported. This symbol should be deleted from future chart editions. - Concur

Contact 1307.13P is believed to be the AWOIS item. This wreck should be charted as is recommended in the text above. – Concur

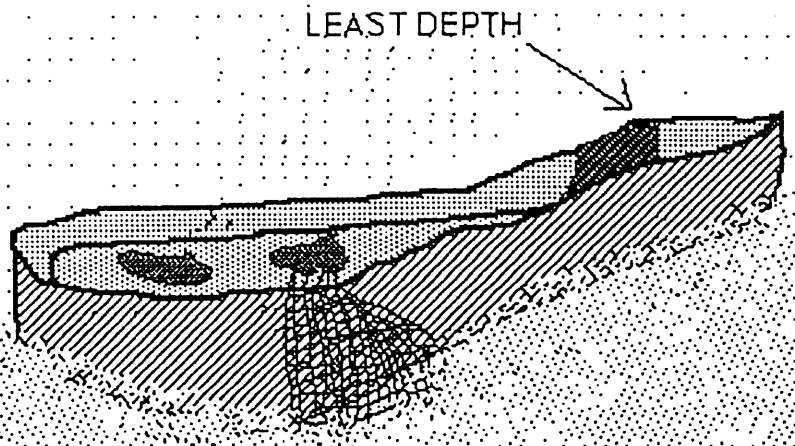
Contact 196.02P should be charted as discussed above.

A letter containing this information was forwarded to the 8th U. S. Coast Guard District for inclusion in the next Local Notice to Mariners (See APPENDIX I).

Depths acquired while investigating this item were generally in agreement with those depicted on chart 11344 and on prior survey H-5315. However, as very few soundings were collected during the investigation of item 396, a comprehensive comparison could not be made. RUDE therefore recommends that the charted soundings in this area be retained. However, a review of sounding data from AWOIS item 6979 should be made for a more thorough evaluation of depths in the vicinity. After application of smooth tides, a comparison with prior survey H-5315 (1933) shows a general trend of present survey depths being 1 ft (0.3 meter) deeper than prior survey depths.

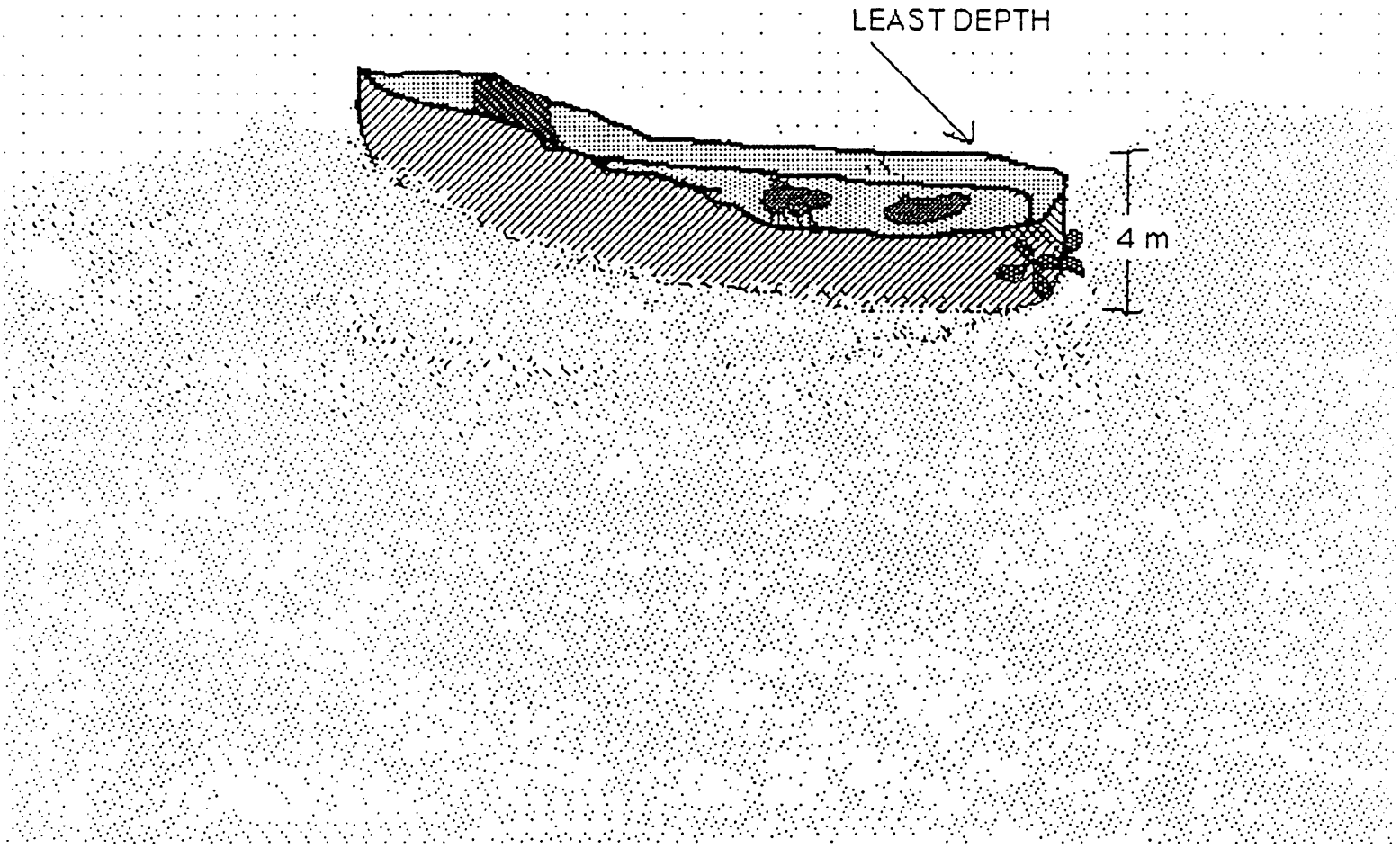
AWOIS 396

CONTACT # 1307.13 P



AWOIS 396

CONTACT # 196.02 S



N3. AWOIS ITEM 399 INVESTIGATION

Area of Investigation

AWOIS Item:	399
State	Louisiana
Parish:	Cameron
Locality:	5.5 nm E of Buoy "2B," Calcasieu Channel
Latitude:	29° 27' 00.843" N } NAD 83
Longitude:	93° 19' 00.554" W } NAD 83
Depth:	Unknown (wreck)

AWOIS Item Description

AWOIS item 399 was described in LNM32/79 as the 84 foot M/V Grace C, sunk in West Cameron Lease Block 138 at latitude 29° 27' N, longitude 93 ° 07' W (NAD 27). The owner was listed as C&E Boat Rentals Inc., Route 2, Box 165, Cut Off, LA 70345. Present survey requirements called for 200% side scan sonar investigation to a 3000-meter search radius; and echosounder development, or diver's investigation and least depth, if found; or salvage documentation. AWOIS item 399 appears on chart 11344, Rollover Bayou to Calcasieu Pass, 26th edition, dated March 5, 1988.

Survey Procedures

A letter was sent to the owner of the M/V Grace C on May 2, 1990 using the address stated in the AWOIS listing. RUDE received a letter dated May 7, 1990 from C&E Boat Rentals, Inc. stating that the vessel had been salvaged in September 1979 and was sold to a Bert McKay of Wrangell, Alaska in March of 1987. See APPENDIX VI for a copy of the correspondence.

AWOIS Item 399 Summary and Recommendations

AWOIS item 399, Field Sheet RU-20-2A-90, was resolved through salvage documentation. RUDE recommends that the symbol, No. 28, Section "K," (dangerous wreck, depth unknown) from Nautical Chart No. 1, charted at latitude 29° 27' 00.962" N, longitude 93° 07' 00.554" W, be deleted. - Concur

No depths were acquired while investigating this item.

N4. AWOIS ITEM 401 INVESTIGATION - See sheet 2 of 9

Area of Investigation

AWOIS Item:	401
State	Louisiana
Parish:	Cameron
Locality:	8.2 nm E of Buoy "2B", Calcasieu Channel
Latitude:	29° 27' 33.840" } NAD 83
Longitude:	93° 03' 52.549" }
Depth:	Unknown (Wreck)

AWOIS Item Description

AWOIS item 401 was described in NM5/68 as a trawler which burned and sank at latitude 29° 27' 39" N, longitude 93° 03' 14" W. NM33/69 reported the wreck Lori at latitude 29° 27' 33" N, longitude 93° 03' 52" W (NAD 27), with three feet of mast showing. Present survey requirements called for a 200% side scan sonar investigation to a 500-meter search radius; and echosounder development, or diver investigation and least depth, if found; or salvage documentation. The wreck is charted on NOAA chart 11344, Rollover Bayou to Calcasieu Pass, 26th Edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	401
Positioning:	ARGO
Sonar Search:	DOY 177, 178, 205
Sonification:	200% SSS coverage
Contacts:	One contact: 1546.18S, discussed in section N12; AWOIS 6979
Field Sheet:	RU-20-2A-90

Because the specified search radius of AWOIS Item 401 lay completely within the search radius of AWOIS Item 6979, the two items were run concurrently. Therefore, all of the data pertaining to item 401 resides with that of item 6979. One potentially significant contact was identified within the AWOIS 401 search area; however, divers determined that it was not the remains of a vessel. The records from the divers' investigation of this contact may also be found with the data from AWOIS 6979.

AWOIS Item 401 Summary and Recommendations

AWOIS item 401 is considered disproved through 200% side scan sonar investigation. RUDE recommends that symbol No. 25, section "K," (Wreck showing mast or masts above chart datum only) from Nautical Chart No. 1, be deleted. - Concur

Comparisons between depths acquired during this survey and those depicted on chart No. 11344 and on prior survey H-5315 are discussed in section N12; AWOIS Item 6979. After application of smooth tides, a comparison with prior survey H-5315 (1933) shows a general trend of present survey depths being 1 ft. (0.3 meter) deeper than prior survey depths.

N5. AWOIS ITEM 6971 INVESTIGATION - See sheet 4 of 9

Area of Investigation

AWOIS Item:	6971
State:	Louisiana
Parish:	Cameron
Locality:	6.8 nm SE of Buoy "CC," Calcasieu Channel
Latitude:	29° 15' 57.863" N } NAD 83
Longitude:	93° 06' 53.559" W } NAD 83
Depth:	18 meters (well)

AWOIS Item Description

AWOIS item 6971 was described in NM6/69 as a well, owned by Continental Oil Co., and covered by 58 feet at latitude 29° 15' 57" N, longitude 93° 06' 53" W (NAD 27). Present survey requirements called for a 400% side scan sonar investigation to a 100-meter search radius, towing at 2.5 knots; and echo sounder development, or diver investigation and least depth, if found. The well is charted on NOAA chart 11344, Rollover Bayou to Calcasieu Pass, 26th Edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6971
Positioning:	ARGO
Sonar Search:	DOY 171
Sonification:	400% SSS Coverage
Contacts:	No significant contacts discovered
Field Sheet:	RU-20-2G-90

There were no significant problems encountered with either the positioning or the side scan sonar systems. No contacts were identified on the side scan sonar coverage. During operations, every attempt was made to keep the towing speed below 2.5 knots. However, because of strong wind and currents, this was not always possible--even when using only one engine. The speed never exceeded 3.0 knots, and generally was between 2.2 and 2.6 knots.

In order to reduce the number of swath plots submitted, the edited swath plot depicts only the 1st 100% side scan sonar coverage in its correct geographic position. The additional 300% coverage was deliberately offset for legibility.

Side scan sonar confidence checks for 75-meter range scale are filed with data for AWOIS 6973, DOY 171.

AWOIS Item 6971 Summary and Recommendations

AWOIS item 6971 is considered disproved through 400% side scan sonar investigation. RUDE recommends that the well presently charted at latitude 29° 15' 57.863" N, longitude 93° 06' 53.559" W, be deleted. - Concur

Depths acquired during this survey were found to be in general agreement with those depicted on chart No. 11344 and on prior survey H-5418. RUDE recommends retention of the charted depths. Do not Concur

After application of smooth tides, a comparison between H-5418 (1933) and the present survey shows present survey depths are generally 1ft (0.3 meter) deeper than prior survey depths. Chart as shown on the present survey.

Telcon with Mr. Jack Hebert of CONOCO OIL, INC. 9/28/93. He stated that the "well was abandoned in 1971. It had a 30" casing and was cut below the mud line."

N6. AWOIS ITEM 6972 INVESTIGATION See sheet 4 of 9

Area of Investigation

AWOIS Item:	6972
State	Louisiana
Parish:	Cameron
Locality:	6.0 nm SE of Buoy "CC," Calcasieu Channel
Latitude:	29° 16' 18.863" N } NAD 83
Longitude:	93° 07' 38.560" W } NAD 83
Depth:	16 meters (well)

AWOIS Item Description

AWOIS item 6972 was described in NM19/64 as a well owned by Continental Oil Co., and covered by 52 feet at latitude 29° 16' 18" N, longitude 93 ° 07' 38" W (NAD 27). Present survey requirements called for a 400% side scan sonar investigation to a 100-meter search radius, towing at 2.5 knots; and echo sounder development, or diver investigation and least depth, if found. The well is charted on NOAA chart 11344, Rollover Bayou to Calcasieu Pass, 26th Edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6972
Positioning:	ARGO
Sonar Search:	DOY 171
Sonification:	400% SSS Coverage
Contacts:	No significant contacts discovered
Field Sheet:	RU-20-2G-90

There were no significant problems encountered with either the positioning or the side scan sonar systems. No contacts were identified on the side scan sonar coverage. During operations, every attempt was made to keep the towing speed below 2.5 knots. However, because of strong wind and currents, this was not always possible--even when using only one engine. The speed never exceeded 2.7 knots, and generally was between 2.3 and 2.6 knots.

In order to reduce the number of swath plots submitted, the edited swath plot depicts only the 1st 100% side scan sonar coverage in its correct geographic position. The additional 300% coverage was deliberately offset for legibility.

Side scan sonar confidence checks for 75-meter range scale are filed with data for AWOIS 6973, DOY 171.

AWOIS Item 6972 Summary and Recommendations

AWOIS item 6972 is considered disproved through 400% side scan sonar investigation. RUDE recommends that the well presently charted at latitude 29° 16' 18.863" N, longitude 93° 07' 38.560" W, be deleted. – Concur ✓

Depths acquired during this survey were found to be in general agreement with those depicted on chart No. 11344 and on prior survey H-5418. RUDE recommends retention of the charted depths. – Do not concur ✓

After application of smooth tides, a comparison between H-5418 (1933) and the present survey shows present survey depths are generally 1 ft. (0.3 meter) deeper than prior survey depths. Chart as shown on the present survey.

Telcon with Mr. Jack Hebert of CONOCO OIL, Inc. 9/28/93. He stated that the "well was abandoned in 1964. It had a 30" casing and was cut below the mud line."

N7. AWOIS ITEM 6973 INVESTIGATION - See sheets 5 and 6 of 9.

Area of Investigation

AWOIS Item:	6973
State	Louisiana
Parish:	Cameron
Locality:	4.0 nm S of Buoy "CC," Calcasieu Channel
Latitude:	29° 16' 00.867" N } NAD 83
Longitude:	93° 13' 00.565" W } NAD 83
Depth:	12 meters (wreck)

AWOIS Item Description

AWOIS item 6973 was described in LNM2/82 as a dangerous submerged wreck, reported in the safety fairway at latitude 29° 16' N, longitude 93 ° 13' W (NAD 27). A 38 foot clearance was reported over the wreck in surrounding depths of 50 feet. Present survey requirements called for a 200% side scan sonar search as delimited on the PSR chart for disproval; and echo sounder development or diver investigation and least depth, if found. The PSR chart indicated a 3000-meter search radius, centered about the wreck's presumed position in the safety fairway. No investigation was required in the portion of the circle that fell outside the fairway to the east and west. The AWOIS listing was updated on July 10, 1990, stating that 100% side scan sonar coverage would be acceptable for disproval, if the search area were enlarged to include the portion of the circle that fell to the east of the fairway. AWOIS item 6973 appears on chart 11344, Rollover Bayou to Calcasieu Pass, 26th edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6973
Positioning:	ARGO
Sonar Search:	DOY 162, 163, 164, 169, 170, 171, 172, 190, 197, 198
Diving:	DOY 170, 171, 172
Echo Sounding:	DOY 170
Sonification:	100% SSS coverage
Contacts:	Four significant contacts were found, 1.00P, 7.06S, 23.23S, 79.19S
Field Sheets:	RU-20-2F-90, RU-20-2I-90 (hydro), RU-20-2J-90 (Two side scan sheets were required due to change in search area)

There were no significant problems encountered with the side scan system. On DOY 170 and 197 ARGO station 2, TENN, was deselected due to high residuals. All data were acquired using at least 3 LOP's.

Four potentially significant contacts were identified during the first 100% coverage. These contacts were investigated by divers, and a least depth and position were determined for contact 7.06S. Contact 23.23S proved to be too extensive for a diver least depth, so an echo sounder development was done to determine the least depth, instead. Two other contacts, 1.00P and 79.19S, were investigated by divers and determined to be insignificant anchor scours.

Contact 7.06S Investigation

(a) Contact 7.06S Dive Summary

Contact 7.06S was investigated by divers on June 20, 1990 (DOY 171). LCDR Tuell and ENS Gruccio descended the marker buoy line to the bottom at 19 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A large tractor tire (approximately 3 meters in diameter) was found, and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 7.06S Description

Contact 7.06S is a large rubber tractor tire, approximately 3 meters in diameter, with an inside diameter of 1 meter. It rose approximately 1 meter above the surrounding bottom and is not considered a danger to navigation.

(c) Contact 7.06S Least Depth Determination

A least depth of Contact 7.06S was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	7.06S
Date:	June 20, 1990 (DOY 171)
Time:	1937 Z
Average ~~Pneumo~~ pneumatic Depth:	16.7 meters
PDG ~~Pneumo~~ Gage Corrector:	+0.0
PREDICTED Tidal Zone Cor:	-~~0.1~~5
Actual Least Depth:	16.~~8~~2 meters (534)

(d) Contact 7.06S Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	7.06S
HDAPS Position Numbers:	1055 - 1057
Average Easting:	84233.8 E
Average Northing:	86751.9 N

Computed Latitude:	29° 16' 56.6[illegible]" N			
Computed Longitude:	93° 11' 56.9[illegible]" W			
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11081.0	26614.1	46909.8	64033.3
Loran SNR:	946	886	645	548
Master:	881			

(e) Contact 7.06S Recommendation

RUDE recommends that this item not be charted as it does not pose a danger to navigation. – Concur

Contact 23.23S Investigation

(a) Contact 23.23S Dive Summary

Contact 23.23S was investigated by divers on June 19, 1990 (DOY 170). LCDR Tuell and ENS Gruccio descended the marker buoy line to the bottom at 19 meters. At the bottom, divers discovered numerous sections of 1-meter diameter pipe, stacked up over an extensive area. The divers were unable to cover the entire area and did not take a least depth.

(b) Contact 23.23S Description

Contact 23.23S is a pile of 1-meter diameter, 12-meter long, pipe. The pile rose 3 to 5 meters off the surrounding bottom and covered an extensive area.

(c) Contact 23.23S Least Depth Determination

A least depth of Contact 23.23S was determined through an echo sounder development run at 5-meter line spacing. A track plot of line spacing achieved is shown on RU-20-2I-90. The highest points on the contact ~~was~~ were found at position number 943.08 and 955.

Contact:	23.23S	
Date:	June 19, 1990 (DOY 170)	
Time:	2242 Z	
	Pos # 943+1	Pos # 955
Shoalest echo sounding:	9.9 ~~10.5~~ meters	9.7 meters
Sound velocity Corrector:	+0.3	+0.2
Effective vessel draft:	+2.3	+2.3
~~PREDICTED~~ Tidal Zone Cor:	+0.3 1	+0.1
Actual Least Depth:	13.2 6 meters (41 ft.)	12.3 meters (40 ft.)

(d) Contact 23.23S Positioning

The position of the highest point was determined from the location of the shoalest sounding from the echo sounder development.

Contact:	23.23S	
HDAPS Position Number:	943.08F	
Easting:	84211.4 E	
Northing:	84049.8 N	
Computed Latitude:	29° 15' 28.8~~66~~" N	Pos# 955 29° 15' 28.55" N
Computed Longitude:	93° 11' 58.03~~2~~" W	93° 11' 57.19" W

Pos# 943+1 5

AWOIS #6770

Loran-C Rates were not observed.

(e) Contact 23.23S Recommendation

RUDE recommends that this item be charted with symbol No. 41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1 at latitude 29° 15' 28.~~866~~" N, longitude 93° 11' 5~~8.032~~" W. This symbol should show a least depth of 1~~3.4~~ meters inside a danger circle, labeled "Obstn." – Concur

Based on personnel correspondence with N/CG24~~3~~ and through discussions with local sources, RUDE determined these pipes to be AWOIS 6973. The survey requirements in the AWOIS listing were updated July 10, 1990 to reflect telephone conversations with the 8th U. S. Coast Guard District, and with LCDR Grady Tuell. A description was added identifying the vessel as a pipe carrier, 30 to 40 meters long; and the eastern limit of the search area was extended to include the entire 3000-meter radius. It also stated that disproval would be accepted after only 100% sonification based on the identification of this contact. The search area was expanded to the full 3000-meter radius on the east side of the fairway; and, when no other contacts were found, the item was considered resolved. A copy of the initial letter from this command to N/CG241 is included in Appendix VI.

AWOIS Item 6973 Summary and Recommendations

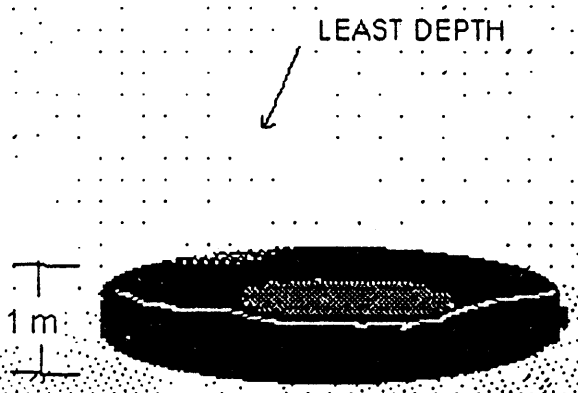
AWOIS item 6973 is considered resolved. RUDE recommends that symbol No. 26, Section "K," (Dangerous wreck, depth unknown) from Nautical Chart No. 1, charted at latitude 29° 16' 00.867" N longitude 93 ° 13' 00.565" W, be deleted. – Concur

The wreckage discovered at contact 23.23S, should be charted as recommended in paragraph (e), above. A letter containing this information was forwarded to the 8th U. S. Coast Guard District for inclusion in the next Local Notice to Mariners (See APPENDIX I). – Concur

Depths acquired during this survey were found to be generally .3 meter (1 foot) deeper than those depicted on chart No. 11344 and on prior surveys H-5418 and H-8738. RUDE recommends that the charted (shoaler) depths be retained. - Do not concur — Chart as shown on the present survey.

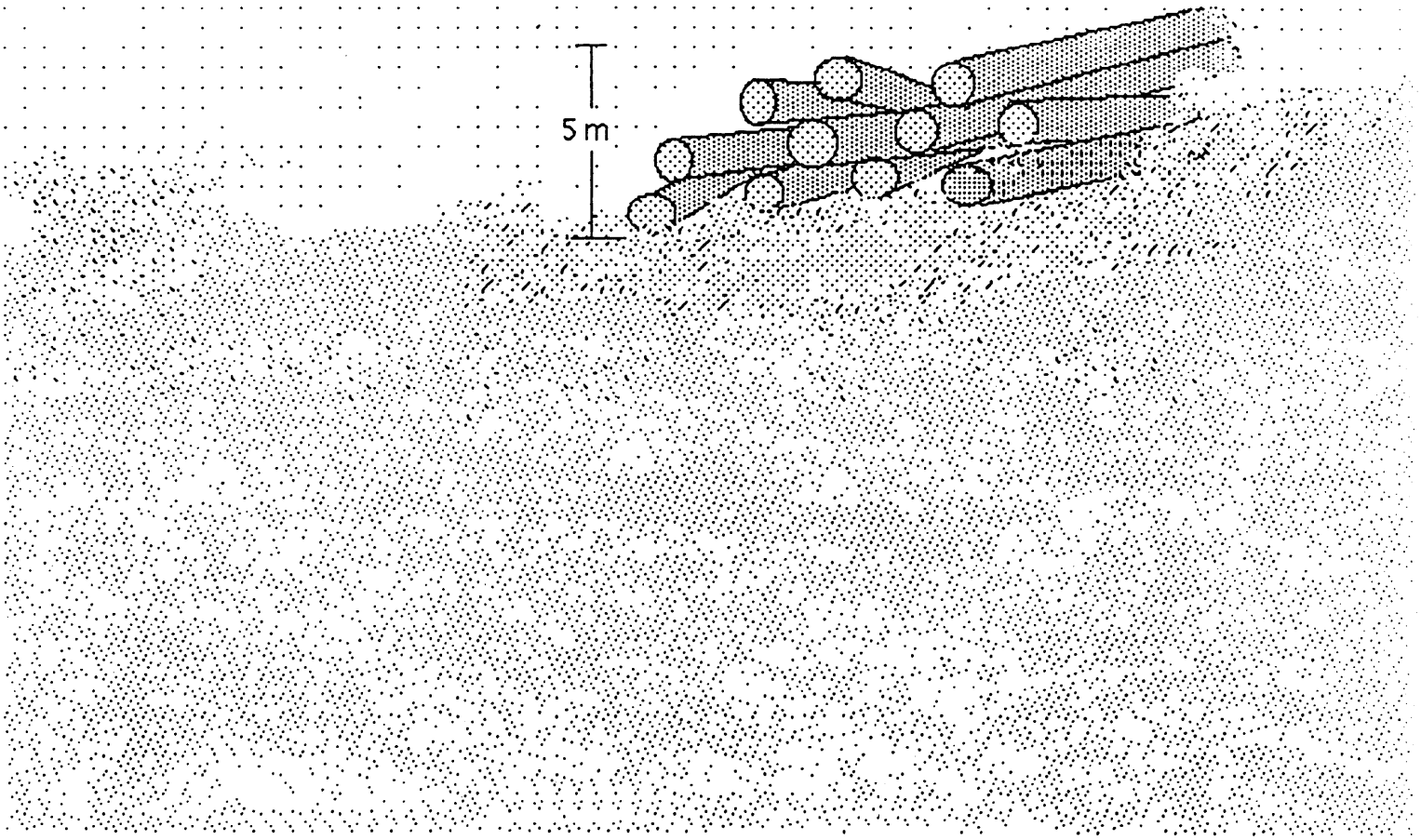
AWOIS 6973

CONTACT # 706 S



AWOIS 6973

CONTACT # 23.23S



N8. AWOIS ITEM 6974 INVESTIGATION

Area of Investigation

AWOIS Item:	6974
State	Louisiana
Parish:	Cameron
Locality:	1.0 nm E of Buoy "CC", Calcasieu Pass
Latitude:	29° 19' 54.859" N } NAD 83
Longitude:	93° 12' 02.563" W }

AWOIS Item Description

AWOIS item 6974 was described in LNM16/79 as a visible pipe (well casing stub) with light and fog horn, located at latitude 29° 19' 54"N, longitude 93° 12' 02"W (NAD 27). Present survey requirements called for a visual search of a 100-meter radius about the reported position. If the item was not visible at low water, no further investigation was required. The item is charted on NOAA chart 11344, Rollover Bayou to Calcasieu Pass, 26th Edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6974
Positioning:	ARGO
Visual Search:	DOY 171, 0027 Z
Field Sheet:	RU-20-2F-90

There were no significant problems encountered with the positioning system, and four detached positions were taken to insure the ship's location (fixes 979 - 982). The search area was investigated visually at low water, and the item was not seen. As no side scan or fathometer data were collected, there were no contacts identified, and no soundings with which to compare those on NOAA chart 11344 or H8738/62-63.

AWOIS Item 6974 Summary and Recommendation

AWOIS item 6974, as reported, is considered resolved through visual search.

RUDE recommends that symbol No. 23, section "L", (Above water wellheads) from Nautical Chart No. 1, at position 29° 19' 54.859" N, longitude 93 ° 12' 02.563" W, be replaced with symbol No. 21.1, section "L" (Suspended well, depth over wellhead unknown). — Concur,

N9. AWOIS ITEM 6975 INVESTIGATION – See Sheet 7 of 9

Area of Investigation

AWOIS Item:	6975
State	Louisiana
Parish:	Cameron
Locality:	9.2 nm E of Buoy "CC," Calcasieu Channel
Latitude:	29° 21' 13.851" N } NAD 83
Longitude:	93° 02' 49.552" W } NAD 83
Depth:	12.2 meter sounding

AWOIS Item Description

AWOIS item 6975 was described in H5418/33 as a 40-42 foot shoal, running NW - SE, approximately 1300 meters long and centered at latitude 29° 21' 13" N, longitude 93° 02' 49" W (NAD 27). Present survey requirements called for an echo sounder development of the shoal within a 500-meter search radius, using 50-meter line spacing, and running splits as required to determine the least depth. A bottom sample from the shoal area was also required. AWOIS item 6975 appears on chart 11344, Rollover Bayou to Calcasieu Pass, 26th edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6975
Positioning:	ARGO
Echo Sounding:	DOY 172
Field Sheet:	RU-20-2D-90

There were no significant problems encountered with the echo sounder or positioning systems. No contacts were identified during the coverage. 50-meter line spacing was initially used; and then 25-meter splits were run to further develop the shoal and determine the least depth. A bottom sample yielding coarse brown sand and broken shell was collected on the shoal. A detached position was taken at this point and can be found in the day's data.

A ~~least~~ shoalest depth of AWOIS 6975 was determined through an echo sounder development with a 25-meter line spacing. The highest point of the contact was found at position number 1065.2.

Date:	June 21, 1990 (DOY 172)	
Time:	1316 Z	160826 Z
Shoalest echo sounding:	10.~~3~~4 meters	10.3 meters
Sound velocity Corrector:	+0.3	+0.3
Effective vessel draft:	+2.~~3~~5	+2.6
~~PREDICTED~~ Tidal Zone Cor:	-0.~~1~~6	-0.6
Actual Least Depth:	12.~~2~~6 meters (41 feet)	12.6 meters (41 feet)

The position of the highest point was determined from the location of the shoalest point on the echo sounder development.

HDAPS Position Number:	1065.2F	
Easting:	98978.0 E	
Northing:	94768.7 N	
Computed Latitude:	29° 21' 15.4~~6~~5~~1~~" N	29° 21' 16.06" N
Computed Longitude:	93° 02' 49.5~~6~~7~~4~~" W	93° 02' 50.60" W

Loran-C Rates were not observed.

AWOIS Item 6975 Summary and Recommendations

AWOIS item 6975 is considered resolved. RUDE recommends that it be charted as a 12.~~2~~6 meter (4~~0~~1 foot) shoal centered at latitude 29° 21' ~~15.461~~ 16.06" N, longitude 93° 02' ~~49.564~~ 50.60" W. — Concur

Depths acquired during this survey were found to be in general agreement with those depicted on chart No. 11344 and on prior survey H-5418. RUDE recommends retention of the charted depths.

Do not concur. Prior survey H-5418 (1933) covers the area investigated. Present survey depths are generally 2ft (0.6 meter) deeper than prior survey depths.

N10. AWOIS ITEM 6976 INVESTIGATION — See sheet 8 of 9

Area of Investigation

AWOIS Item:	6976
State	Louisiana
Parish:	Cameron
Locality:	2.1 nm ENE of Buoy "2" Calcasieu Channel
Latitude:	29° 22' 24.854" N } NAD 83
Longitude:	93° 10' 48.560" W }
Depth:	Unknown (Wreck)

AWOIS Item Description

AWOIS item 6976 was described in NM 2/67 as being the M/V Jelyge, sunk in 35 feet of water about 1/2 to 1 mile west of an oil rig charted in latitude 29° 22' 24.0" N, longitude 93° 10' 58.0" W (NAD 27). The scaled position of the wreck is 29° 22' 24.0" N 93 ° 10' 48.0" W (NAD 83). Present survey requirements called for 200% side scan sonar investigation to a 1000-meter search radius; and echosounder development, or diver investigation and least depth, if found. AWOIS item 6976 appears on chart 11344, Rollover Bayou to Calcasieu Pass, 26th edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6976
Positioning:	ARGO
Sonar Search:	DOY 178, 179, 192, 193, 200, 208
Sonification:	200% SSS coverage
Contacts:	11 Significant contacts: 1638.29S, 1682.24S, 1697.39S, 1698.00S, 1701.23P, 1741.19P, 1744.25P, 1751.29S, 1753.21P, 1791.31P, 2289.07P.
Field Sheet:	RU-20-2C-90

Side scan and fathometer records provided clear and reliable data throughout the investigation. On DOY 178, 179, and 213, survey navigation was accomplished using only 3 LOP's due to loss of lanes on ARGO site 1 and 2. While operating close to an active oil rig within the southern part of the search area, the RUDE experienced ARGO reception interference as evidenced on the first 100% coverage between positions 1629-1647, and on the second 100% between positions 2234-2237 & 2264-2267.

Numerous contacts were first sighted on the side scan trace which were later investigated with reconnaissance side scan and ultimately resolved through diver investigation. Listed below are descriptions and recommendations for each of these contacts.

Contact 1682.24S Investigation

(a) Contact 1682.24S Dive Summary

Contact 1682.24S was investigated by divers on July 26, 1990 (DOY 207). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 14 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A large metal box-shaped frame was found on the bottom, partially submerged in the mud. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ Pneumatic depth gage.

(b) Contact 1682.24S Description

Contact 1682.24S is a large metal box-shaped frame (2m x 1m x 1m) partially submerged, rising 1 meter above the surrounding bottom.

(c) Contact 1682.24S Least Depth Determination

A least depth of Contact 1682.24S was taken by divers using a ~~pneumo~~ Pneumatic depth gage on the highest point of the contact.

Contact:	1682.24S
Date:	July 26, 1990 (DOY 207)
Time:	2101 Z
Average ~~Pneumo~~ PDG Depth:	14.2
~~Pneumo~~ PDG Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-.3
Actual Least Depth:	13.9 meters (45 ft)

(d) Contact 1682.24S Positioning

Two detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:			1682.24S	
HDAPS Position Numbers:			3394 - 3395	
Average Easting:			85458.8 E	
Average Northing:			96256.4 N	
Computed Latitude:		29° 22'	05.2[illegible]" N	
Computed Longitude:		93° 11'	10.6[illegible]" W	
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11071.9	26647.1	46922.4	64029.1
Loran SNR:	976	916	503	432
Master:	881			

(e) Contact 1682.24S Recommendation

Contact 1682.24S should be charted at latitude 29° 22' 05.2~~8~~0" N, longitude 93 ° 11' 10.6~~1~~8" W as an obstruction over which the depth is known, using symbol No. 41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of 13.9 meters (45ft) inside a danger circle, labeled "Obstn." — Concur

Contact 1697.39S Investigation

(a) Contact 1697.39S Dive Summary

Contact 1697.39S was investigated by divers on July 11, 1990 (DOY 192). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A pipe and stern wreckage of a steel boat were found rising approximately 1 meter off the surrounding bottom. The divers disagreed as to the identification of the debris. For this reason, it was not considered to be the wreckage of the M/V Jelyge. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1697.39S Description

Contact 1697.39S is a metal pipe and metal wreckage from the stern of a boat, rising 1 meter above the surrounding bottom.

(c) Contact 1697.39S Least Depth Determination

A least depth of Contact 1697.39S was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1697.39S
Date:	July 11, 1990 (DOY 192)
Time:	2013 Z
Average ~~Pneumo~~ PDG Depth:	14.2
~~Pneumo~~ PDG Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.~~1~~5
Actual Least Depth:	13.~~8~~7 meters (45ft)

(d) Contact 1697.39S Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1697.39S
HDAPS Position Numbers:	~~178~~ 1820 - ~~180~~ 1822
Average Easting:	85320.2 E
Average Northing:	97278.2 N

Computed Latitude:		29° 22' 38.418" N		
Computed Longitude:		93° 11' 15.656" W		
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11070.8	26649.2	46923.8	64028.6
Loran SNR:	Not noted.	Not noted.	Not noted.	Not noted.

Master: Not noted.

(e) Contact 1697.39S Recommendation AWOIS # 8737

Contact 1697.39S should be charted at latitude 29° 22' 38.418" N, longitude 93° 11' 15.656" W as an obstruction over which the depth is known, using symbol No. 26~~41~~, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of 13.7 meters (45ft) inside a danger circle, labeled "~~Obstn.~~ Wk" – Concur

Contact 1698.00S Investigation

(a) Contact 1698.00S Dive Summary

Contact 1698.00S was investigated by divers on July 26, 1990 (DOY 207). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. Metal wreckage was found on the bottom, rising approximately 1.2 meters off the surrounding bottom. A 10-meter radius search was then conducted about this point and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1698.00S Description

Contact 1698.00S is metal wreckage (1m x 1m x 1.2m) rising 1.2 meters above the surrounding bottom.

(c) Contact 1698.00S Least Depth Determination

A least depth of Contact 1698.00S was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1698.00S
Date:	July 26, 1990 (DOY 207)
Time:	2217 Z
Average ~~Pneumo~~ PDG Depth:	14.1
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-.4
Actual Least Depth:	13.7 meters (45ft)

(d) Contact 1698.00S Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:			1698.00S	
HDAPS Position Numbers:			3400 - 3402	
Average Easting:			85289.2 E	
Average Northing:			97279.0 N	
Computed Latitude:		29° 22'	38.447" N	
Computed Longitude:		93° 11'	16.805" W	
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11070.8	26648.9	46923.8	64028.8
Loran SNR:	967	906	544	461
Master:	Not noted			

(e) Contact 1698.00S Recommendation AWOIS # 8738

Contact 1698.00S should be charted at latitude 29° 22' 38.447" N, longitude 93 ° 11' 16.805" W as an obstruction over which the depth is known, using symbol No. 26.41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of 13.7 meters (45ft) inside a danger circle, labeled "~~Obstn.~~". This ~~obstruction~~ should not be charted because of the proximity to (less than 40 meters) contact 1697.39S which is recommended to be charted.

Contact 1701.23P Investigation

(a) Contact 1701.23P Dive Summary

Contact 1701.23P was investigated by divers on July 12, 1990 (DOY 193). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A partially submerged five-foot cubed concrete block was found rising approximately .75 meter off the surrounding bottom. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ Pneumatic depth gage.

(b) Contact 1701.23P Description

Contact 1701.23P is a five-foot cubed concrete block resting on the bottom, rising .75 meter above the surrounding bottom.

(c) Contact 1701.23P Least Depth Determination

A least depth of Contact 1701.23P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1701.23P
Date:	July 12, 1990 (DOY 193)
Time:	1515 Z
Average ~~Pneumo~~ PDG Depth:	14.6
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.~~4~~5
Actual Least Depth:	14.~~8~~1 meters (46 ft)

(d) Contact 1701.23P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1701.23P
HDAPS Position Numbers:	1883 - 1885
Average Easting:	85403.8 E
Average Northing:	96733.7 N
Computed Latitude:	29° 22' 20.7~~8~~1" N
Computed Longitude:	93° 11' 12.61~~0~~" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11071.4	26648.2	46923.1	64028.9
Loran SNR:	Not noted.	Not noted.	Not noted.	Not noted.

Master: Not noted.

(e) Contact 1701.23P Recommendation

Contact 1701.23P should be charted at latitude 29° 22' 20.7~~8~~1" N, longitude 93 ° 11' 12.61~~0~~" W as an obstruction over which the depth is known, using symbol No. 41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of 14.~~8~~1 meters (46 ft) inside a danger circle, labeled "Obstn." — Concur

Contact 1741.19P Investigation

(a) Contact 1741.19P Dive Summary

Contact 1741.19P was investigated by divers on July 12, 1990 (DOY 193). LT Cohen and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A partially submerged five-foot cubed concrete block was found rising approximately .75 meter off the surrounding bottom. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1741.19P Description

Contact 1741.19P is a five-foot cubed concrete block resting on the bottom, rising .75 meter above the surrounding bottom.

(c) Contact 1741.19P Least Depth Determination

A least depth of Contact 1741.19P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1741.19P
Date:	July 12, 1990 (DOY 193)
Time:	1642 Z
Average ~~Pneumo~~ PDG Depth:	14.3
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.35
Actual Least Depth:	13.8 meters (45ft)

(d) Contact 1741.19P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1741.19P
HDAPS Position Numbers:	1888 - 1890
Average Easting:	86190.5 E
Average Northing:	96844.9 N
Computed Latitude:	29° 22' 24.263" N
Computed Longitude:	93° 10' 43.433" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11071.6	26653.1	46923.2	64028.9
Loran SNR:	Not noted.	Not noted.	Not noted.	Not noted.

Master: Not noted.

(e) Contact 1741.19P Recommendation

Contact 1741.19P should be charted at latitude 29° 22' 24.263" N, longitude 93 ° 10' 43.433" W as an obstruction over which the depth is known, using symbol No. 41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of ~~14~~ 13.8 meters (45ft) inside a danger circle, labeled "Obstn." — Concur

Contact 1744.25P Investigation

(a) Contact 1744.25P Dive Summary

Contact 1744.25P was investigated by divers on July 12, 1990 (DOY 193). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A partially submerged five-foot square concrete block was found rising approximately 1 meter off the surrounding bottom. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1744.25P Description

Contact 1744.25P is a five-foot cubed concrete block resting on the bottom, rising 1 meter above the surrounding bottom.

(c) Contact 1744.25P Least Depth Determination

A least depth of Contact 1744.25P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1744.25P
Date:	July 12, 1990 (DOY 193)
Time:	2320 Z
Average ~~Pneumo~~ PDG Depth:	14.2
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.~~4~~5
Actual Least Depth:	13.~~8~~7 meters (45 ft)

(d) Contact 1744.25P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1744.25P
HDAPS Position Numbers:	1901 - 1903
Average Easting:	86152.2 E
Average Northing:	97410.2 N
Computed Latitude:	29° 22' 42.6~~0~~2" N
Computed Longitude:	93° 10' ~~31.441~~ 44.79" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11071.0	26654.5	46923.9	64028.6
Loran SNR:	Not Noted.	Not noted.	Not noted.	Not noted.

Master: Not noted.

(e) Contact 1744.25P Recommendation

Contact 1744.25P should be charted at latitude 29° 22' 42.600" N, longitude 93 ° 10' ~~31.441~~ 44.79" W as an obstruction over which the depth is known, using symbol No. 41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of 13.8 meters (45ft) inside a danger circle, labeled "Obstn." – Concur

Contact 1751.29S Investigation

(a) Contact 1751.29S Dive Summary

Contact 1751.29S was investigated by divers on July 27, 1990 (DOY 208). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A partially submerged five-foot cubed concrete block was found rising approximately 1 meter off the surrounding bottom. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1751.29S Description

Contact 1751.29S is a five-foot cubed concrete block resting on the bottom, rising 1 meter above the surrounding bottom.

(c) Contact 1751.29S Least Depth Determination

A least depth of Contact 1751.29S was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1751.29S
Date:	July 27, 1990 (DOY 208)
Time:	1327 Z
Average ~~Pneumo~~ PDG Depth:	14.6
~~Pneumo~~ PDG Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.5
Actual Least Depth:	14.1 meters (46 ft)

(d) Contact 1751.29S Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1751.29S
HDAPS Position Numbers:	3404 - 3406
Average Easting:	86368.0 E
Average Northing:	97306.0 N

Computed Latitude:		29° 22' 39.22~~8~~9" N		
Computed Longitude:		93° 10' 36.~~778~~80" W		
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11071.3	26655.4	46923.8	64028.9
Loran SNR:	964	912	613	520
Master:	908			

(e) Contact 1751.29S Recommendation

Contact 1751.29S should be charted at latitude 29° 22' 39.22~~8~~9" N, longitude 93 ° 10' 36.~~778~~80" W as an obstruction over which the depth is known, using symbol No. 41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of 14.1 meters (46.4 ft) inside a danger circle, labeled "Obstn." – Concur

Contact 1753.21P Investigation

(a) Contact 1753.21P Dive Summary

Contact 1753.21P was investigated by divers on July 12, 1990 (DOY 193). LT Cohen and LTJG Rogers descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. Two partially submerged five-foot cubed concrete blocks were found rising approximately 1.5 meters off the surrounding bottom. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ Pneumatic depth gage.

(b) Contact 1753.21P Description

Contact 1753.21P is two five-foot cubed concrete blocks resting together on the bottom, rising 1.5 meters above the surrounding bottom.

(c) Contact 1753.21P Least Depth Determination

A least depth of Contact 1753.21P was taken by divers using a ~~pneumo~~ Pneumatic depth gage on the highest point of the contact.

Contact:	1753.21P
Date:	July 12, 1990 (DOY 193)
Time:	1858 Z
Average ~~Pneumo~~ PDG Depth:	14.3
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.~~2~~4
Actual Least Depth:	1~~4.0~~3.9 meters (45 ft)

(d) Contact 1753.21P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:			1753.21P	
HDAPS Position Numbers:			1892 - 1894	
Average Easting:			86427.4 E	
Average Northing:			97044.8 N	
Computed Latitude:		29° 22'	30.740" N	
Computed Longitude:		93° 10'	34.623" W	
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11071.6	26655.2	46923.4	64028.8
Loran SNR:	Not noted.	Not noted.	Not noted.	Not noted.

(e) Contact 1753.21P Recommendation

Contact 1753.21P should be charted at latitude 29° 22' 30.740" N, longitude 93 ° 10' 34.623" W as an obstruction over which the depth is known, using symbol No. 41, Section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This symbol should show a least depth of ~~14~~ 13.9 meters (45.8 ft) inside a danger circle, labeled "Obstn." — Concur

Contact 1791.31P Investigation

(a) Contact 1791.31P Dive Summary

Contact 1791.31P was investigated by divers on August 1, 1990 (DOY 213). ENS Gruccio and ENS Oberlies descended the marker buoy line to the bottom at 15 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A conglomeration of both cut and intact tires was found rising approximately 1.5 meters off the surrounding bottom and is not considered a danger to navigation. A search was then conducted about this point and a least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1791.31P Description

Contact 1791.31P is a mass of tires, both cut and intact, resting on the bottom partially submerged in the mud, rising 1.5 meters off the surrounding bottom.

(c) Contact 1791.31P Least Depth Determination

A least depth of Contact 1791.31P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1791.31P
Date:	August 1, 1990 (DOY 213)
Time:	1853 Z
Average ~~Pneumo~~ PDG Depth:	15.0
PDG ~~Pneumo~~ Gage Corrector:	+.0
PREDICTED Tidal Zone Cor:	-0.14
Actual Least Depth:	14.6 meters (48 ft)

(d) Contact 1791.31P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1791.31P
HDAPS Position Numbers:	4128 - 4130
Average Easting:	86917.3 E
Average Northing:	96851.0 N
Computed Latitude:	29° 22' 24.~~401~~39" N
Computed Longitude:	93° 10' 16.4~~XX~~8" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11072.0	26657.6	46923.0	64029.2
Loran SNR:	935	828	368	300
Master:	742			

(e) Contact 1791.31P Recommendation

RUDE recommends that this item not be charted. — Concur

AWOIS Item 6976 Summary and Recommendations

While twelve contacts were initially discovered through side scan investigation, the nine described above were investigated by divers; one other was disproved through reconnaissance side scan sonar; and two contacts (1638.29S & 2289.07P) were not dove upon due to their proximity to an active oil platform in the search area. AWOIS item 6976 is considered disproved through 200% side scan sonar investigation. RUDE recommends that the wreck symbol be deleted from future chart editions. Contacts 1682.24S, 1698.00S, 1697.39S, 1701.23P, 1741.19P, 1744.25P, 1751.29S, and 1753.21P should be charted as recommended in their respective paragraphs (e) above. — Concur

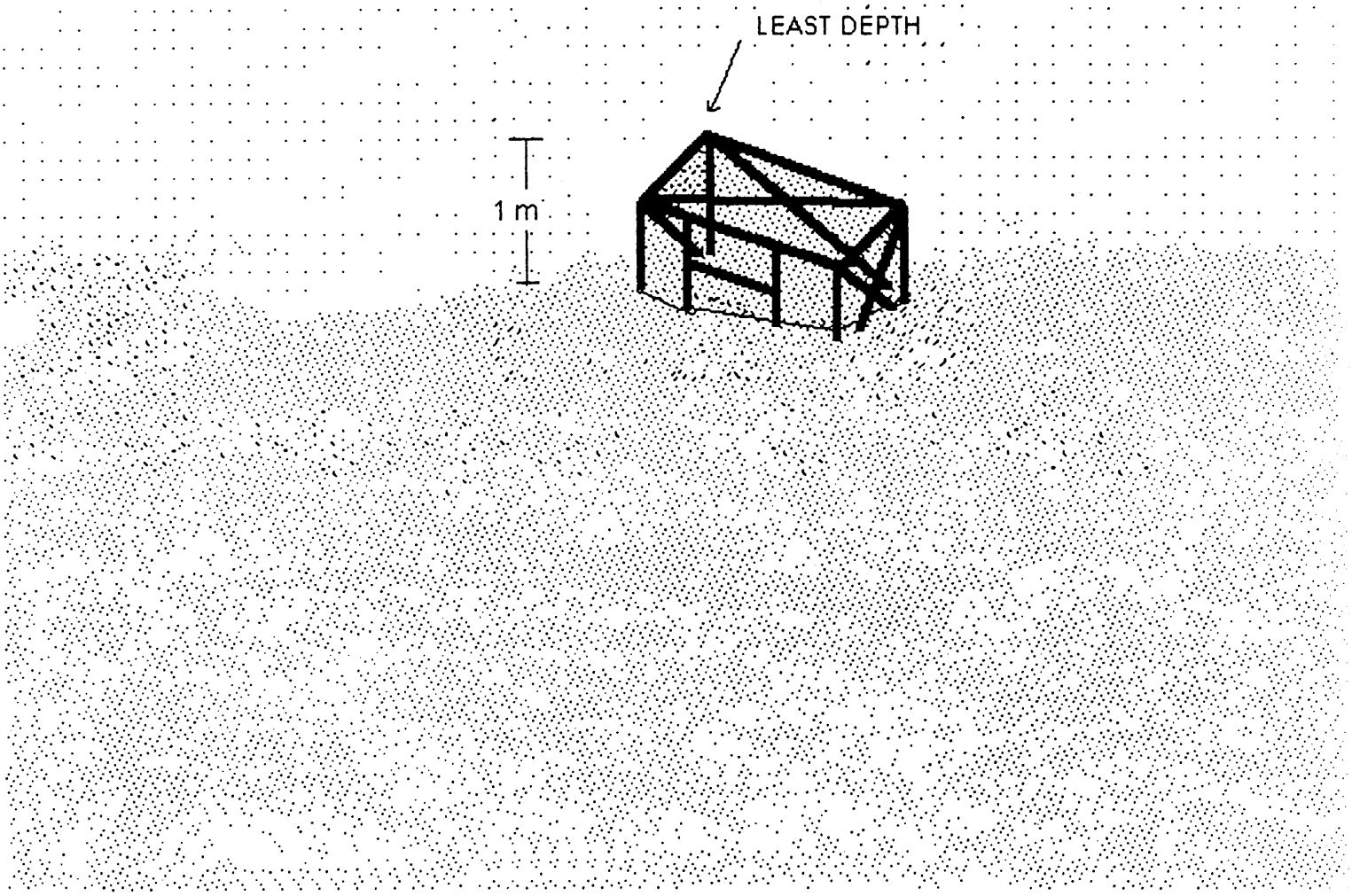
Depths acquired during this survey were found to be 1.5 meters (5 feet) greater than the sole charted sounding immediately to the west of the search area; .3 to .6 meters (1-2 feet) greater than the sounding inside the search radius; and .9 to 1.2 meters (3-4

feet) greater than the sounding immediately to the east of the search area as shown on chart 11344. Depths from this survey were found to be 1.5 - 1.8 meters (5 to 6 feet) deeper than those shown on prior surveys H-5315 & H-8738. RUDE recommends that the presently charted (shoaler) depths be retained. RUDE further recommends that the depth comparisons be repeated during office verification following the application of approved tides data.

Prior surveys H-5418 (1933) and H-8738 (1962-63) cover the area investigated. Present survey depths (smooth tides applied) are generally 1 to 3 ft. (0.3-0.6 m.) deeper than prior survey depths. Recommend charting this area as shown on the present survey.

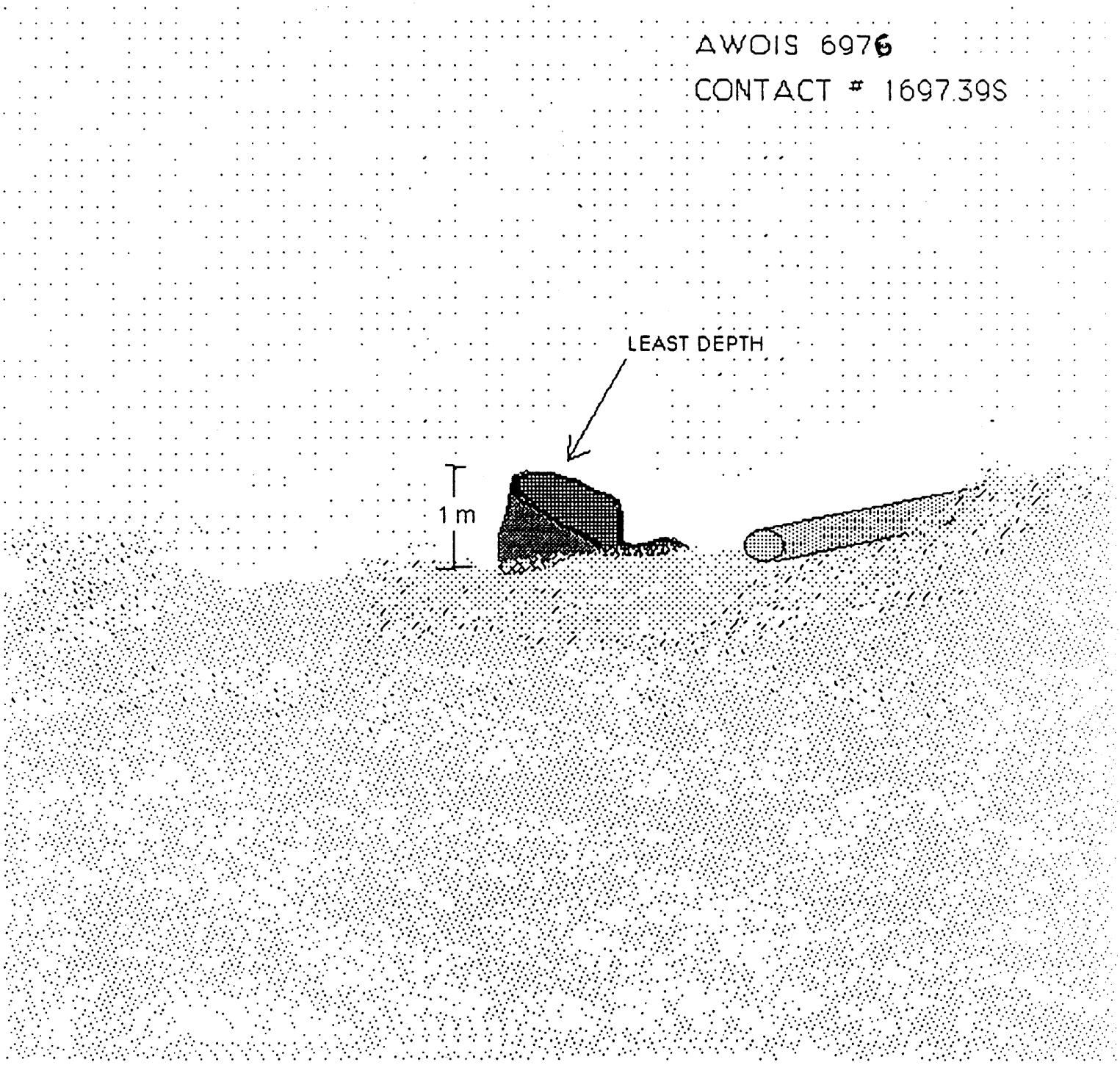
AWOIS 6976

CONTACT # 1682.24S



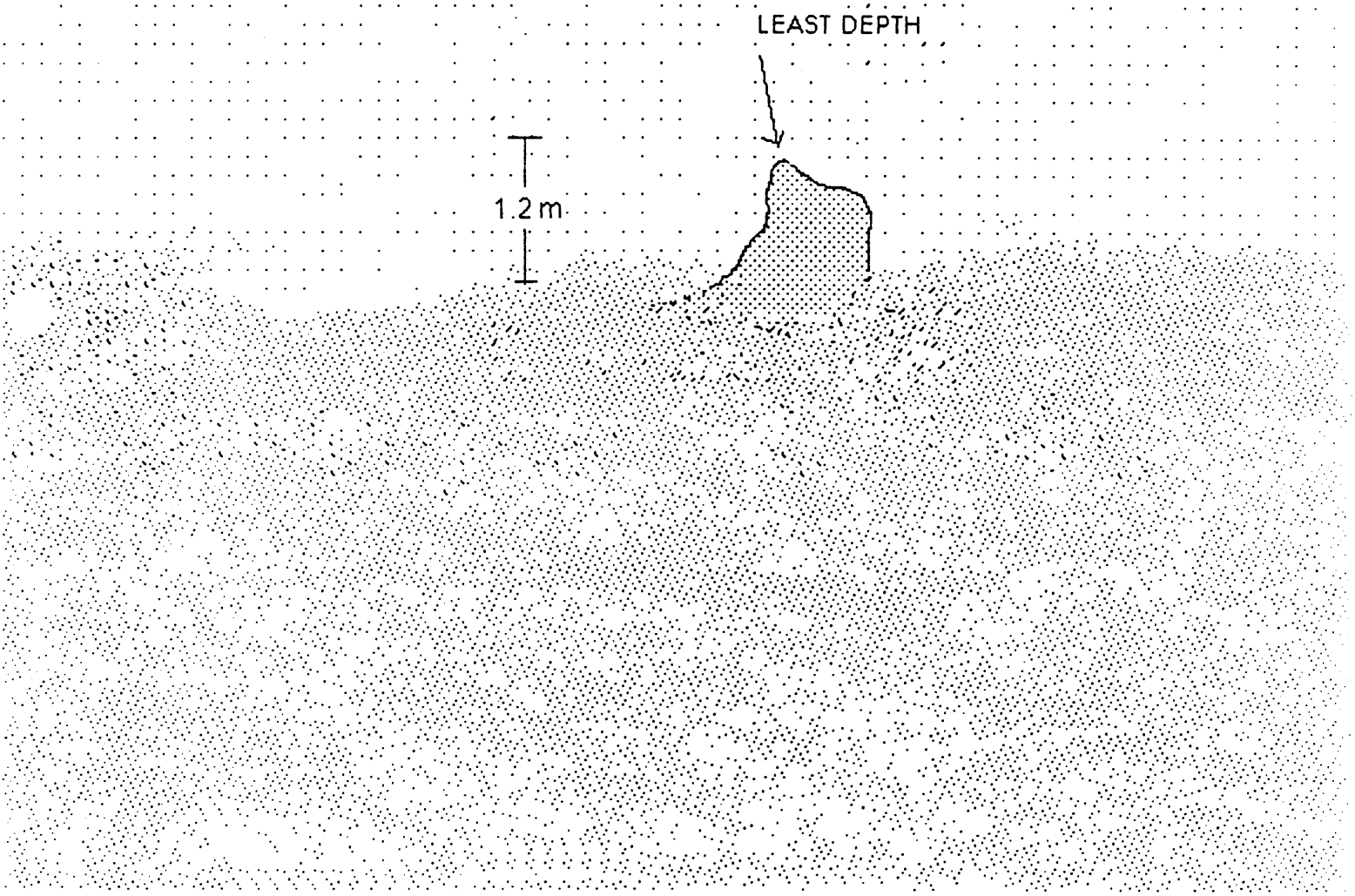
AWOIS 6976

CONTACT # 1697.39S



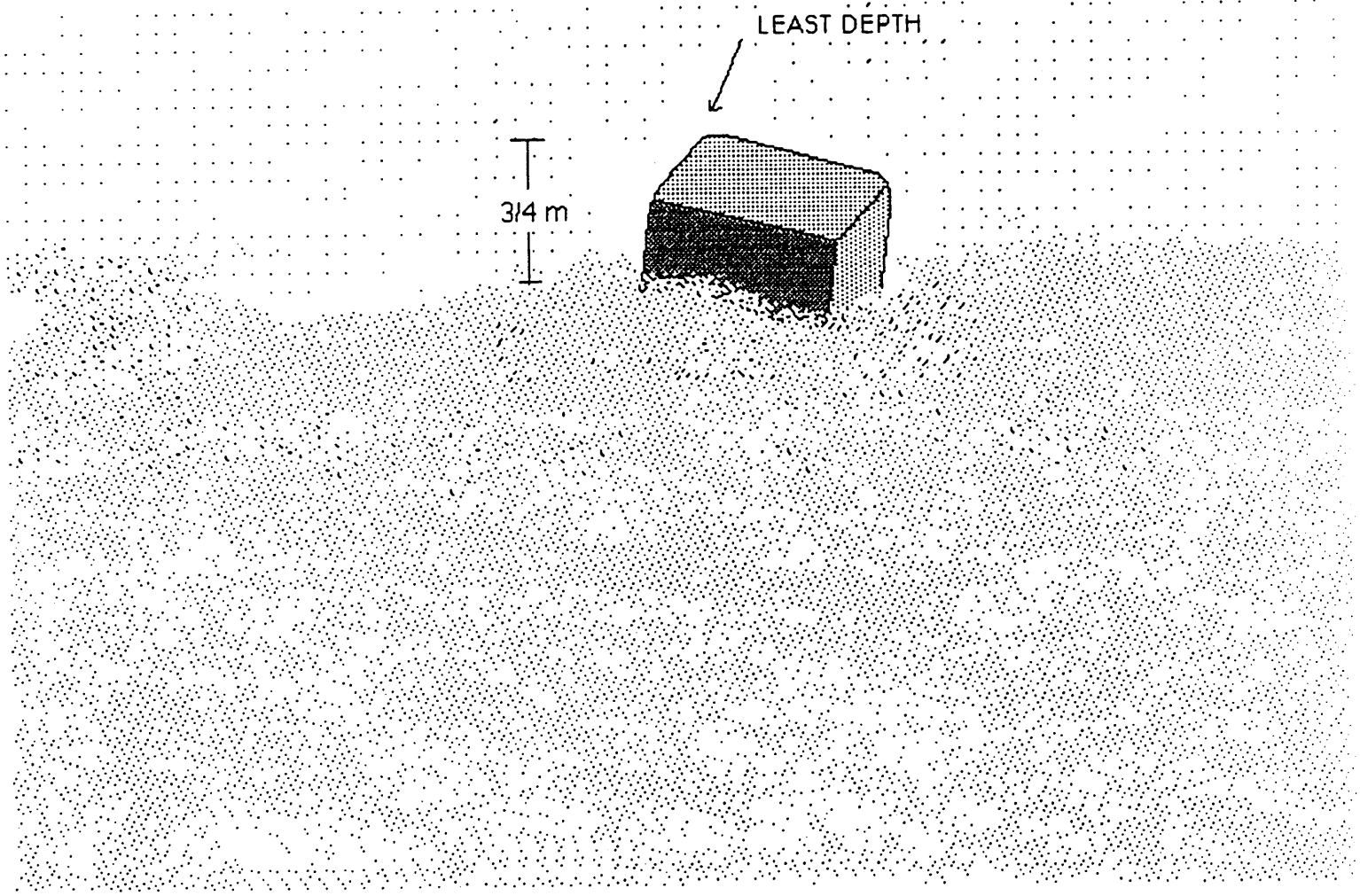
AWOIS 6976

CONTACT # 1698.00S



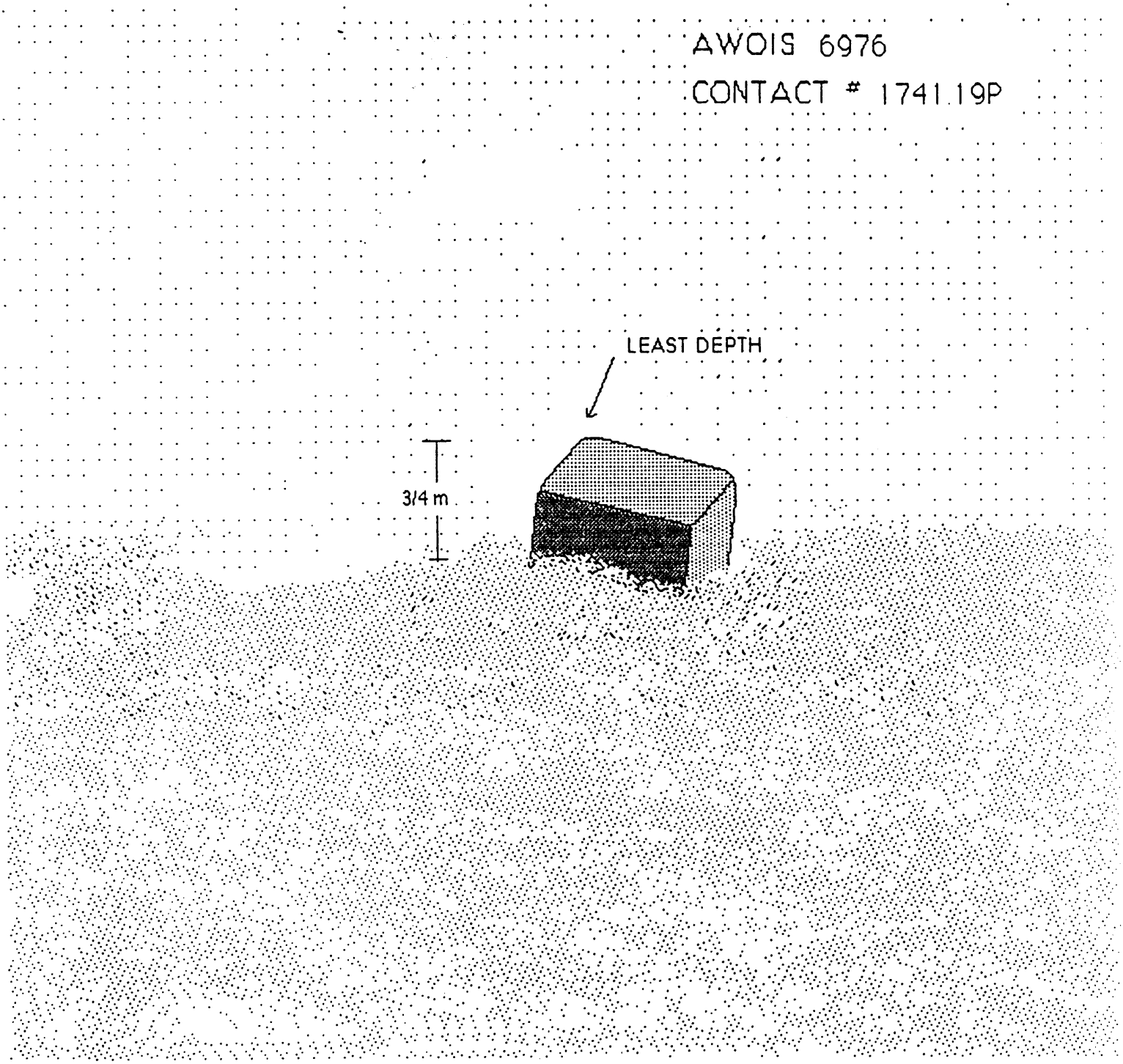
AWOIS 6976

CONTACT # 1701.23S



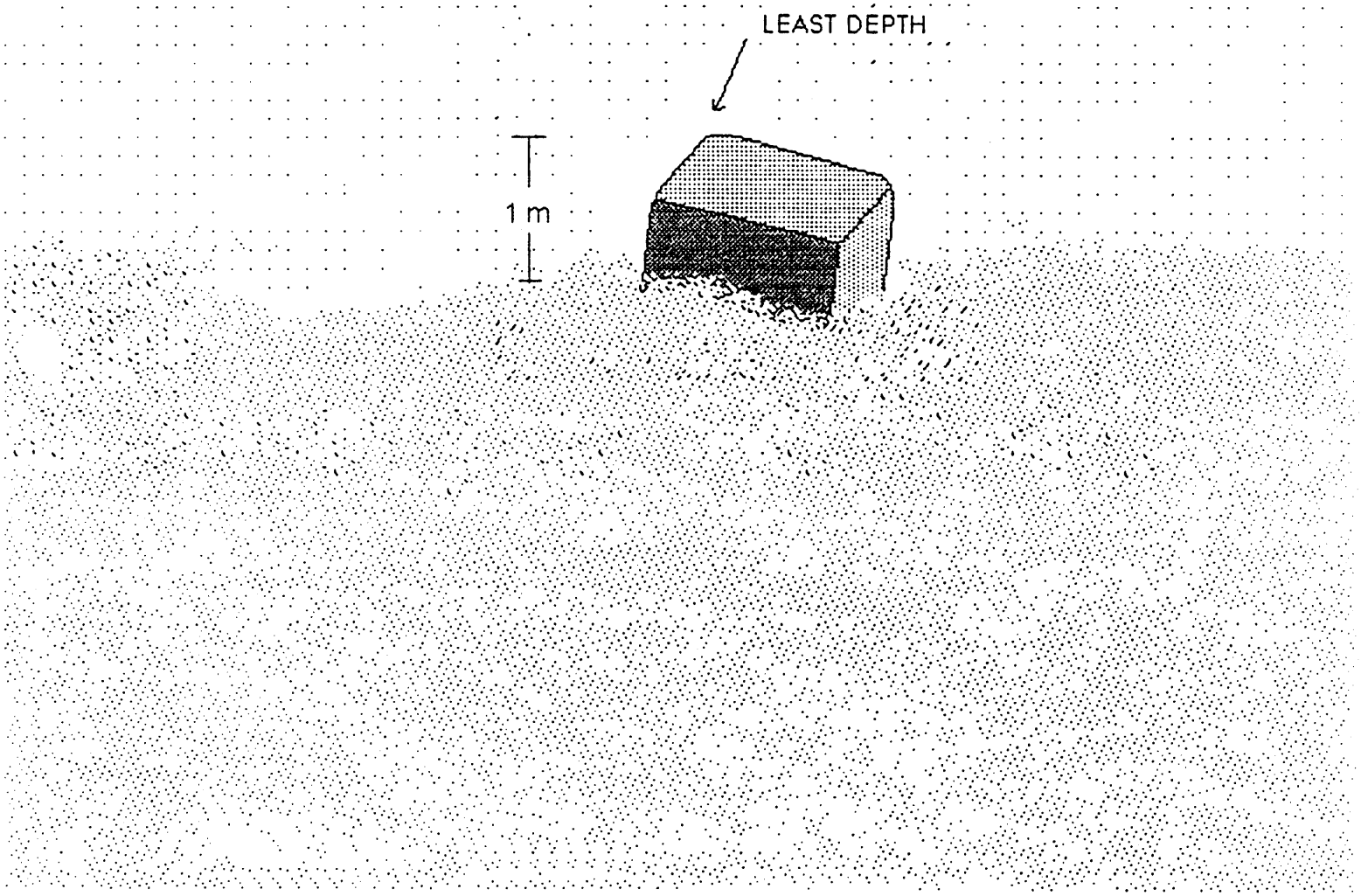
AWOIS 6976

CONTACT # 1741.19P



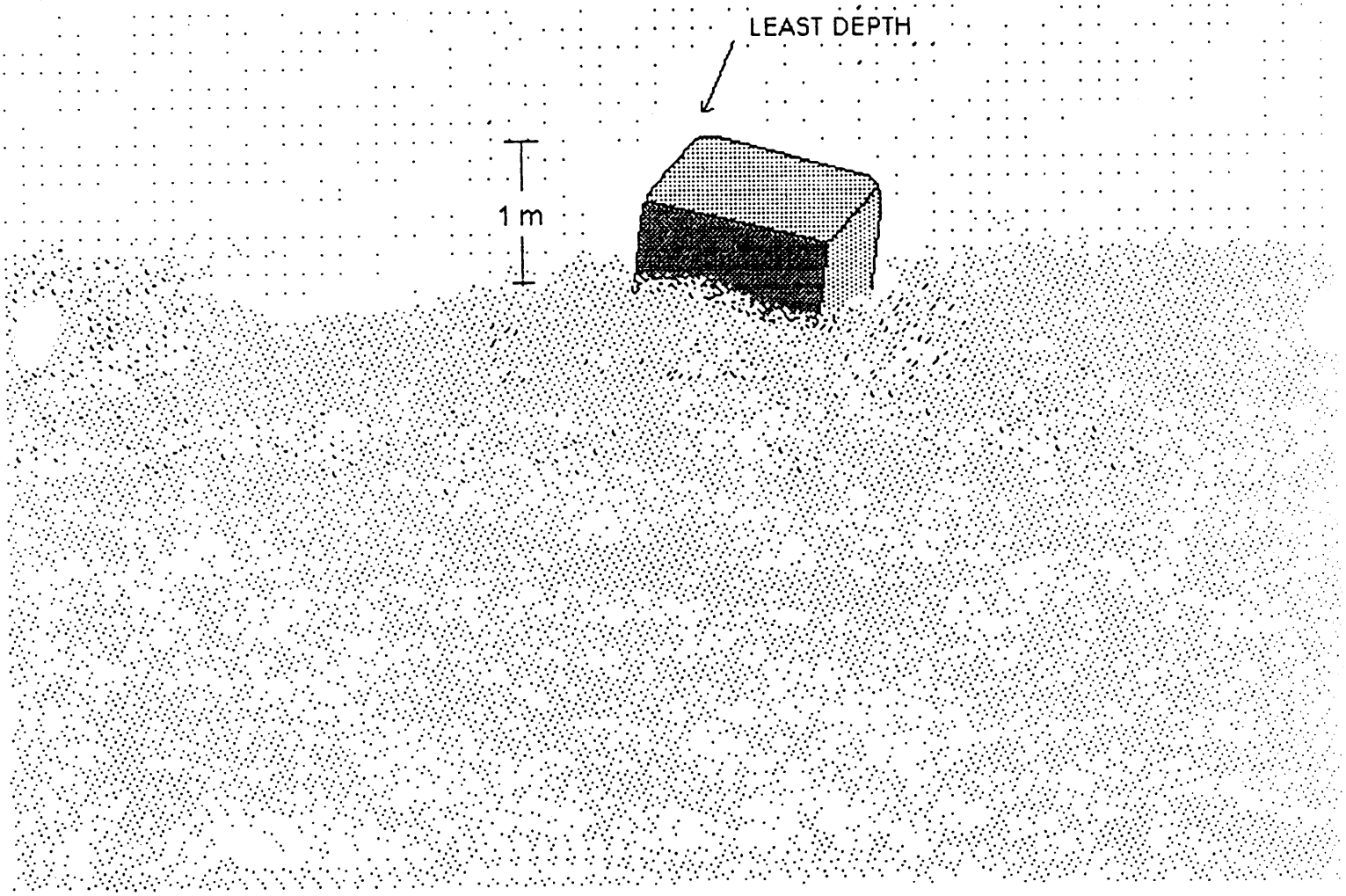
AWOIS 6976

CONTACT # 1744.25P



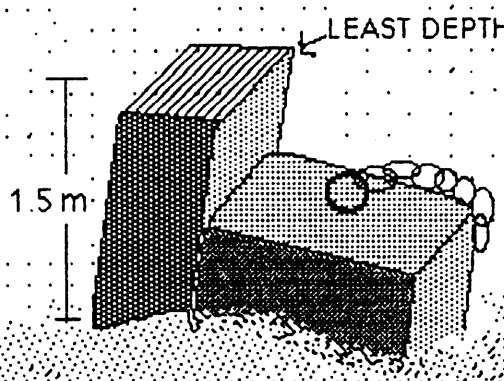
AWOIS 6976

CONTACT # 1751.29 S



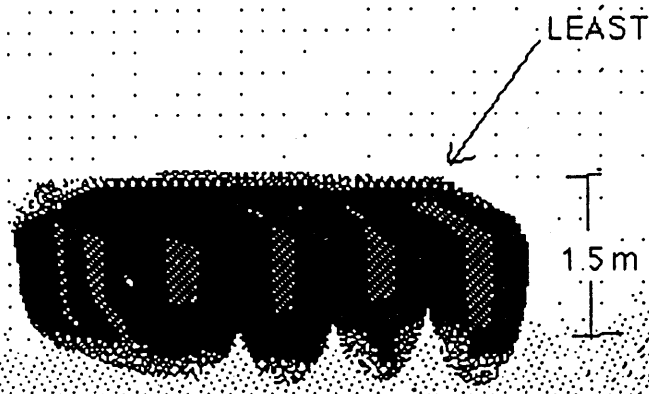
AWOIS 6976

CONTACT # 1753.21P



AWOIS 6976

CONTACT # 1791.31P



N11. AWOIS ITEM 6978 INVESTIGATION — See Sheet 9 of 9

Area of Investigation

AWOIS Item:	6978
State	Louisiana
Parish:	Cameron
Locality:	6.1 nm SSE of Buoy "2B," Calcasieu Channel
Latitude:	29° 25' 12.846" N } NAD 83
Longitude:	93° 06' 45.554" W } NAD 83
Depth:	unknown (pipe)

AWOIS Item Description

AWOIS item 6978 was described in LNM44/86 as an unmarked pipeline uncovering 4 feet at latitude 29 ° 25' 12" N, longitude 93 ° 06' 45" W (NAD 27). Present survey requirements called for a 400% side scan sonar investigation to a 100-meter search radius, towing at 2.5 knots; and echosounder development, or diver investigation and least depth, if found. AWOIS item 6978 appears on chart 11344, Rollover Bayou to Calcasieu Pass, 26th edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6978
Positioning:	ARGO
Sonar Search:	DOY 178, 206
Diving:	DOY 206
Sonification:	400% SSS coverage
Contacts:	One significant contact: 1600.22S
Field Sheet:	RU-20-2B-90

There were no significant problems encountered with the side scan or positioning systems. On DOY 178 only 3 ARGO LOP's were used due to loss of lane count on ARGO site 1. One potentially significant contact was identified on the 400% side scan sonar coverage. This contact was investigated by divers, and was determined to be insignificant.

During operations, every attempt was made to keep the towing speed below 2.5 knots. However, because of strong wind and currents, this was not always possible--even when using only one engine. The speed never exceeded 3.0 knots, and generally was between 2.2 and 2.6 knots.

In order to reduce the number of swath plots submitted, the edited swath plot depicts only the 1st 100% side scan sonar coverage in its correct geographic position. The additional 300% coverage was deliberately offset for legibility.

Contact 1600.22S Investigation

(a) Contact 1600.22S Dive Summary

Contact 1600.22S was investigated by divers on July 25, 1990 (DOY 206). Divers descended down the marker buoy line to the bottom at 14 meters. A circle search of 30-meter radius was conducted about the marker buoy anchor. A large rubber truck tire was found on the bottom, partially submerged in the mud.

(b) Contact 1600.22S Description

Contact 1600.22S is a rubber tire, 1.4 meters in diameter, rising 0.5 meters above the surrounding bottom.

(c) Contact 1600.22S Least Depth Determination

No least depth of Contact 1600.22S was taken by divers as it was determined to be insignificant. – Concur

(d) Contact 1600.22S Positioning

No detached positions were taken on Contact 1600.22S as it was determined to be insignificant. – Concur

(e) Contact 1600.22S Recommendation

This item does not pose a danger to navigation and should not be charted. – Concur

AWOIS Item 6978 Summary and Recommendations

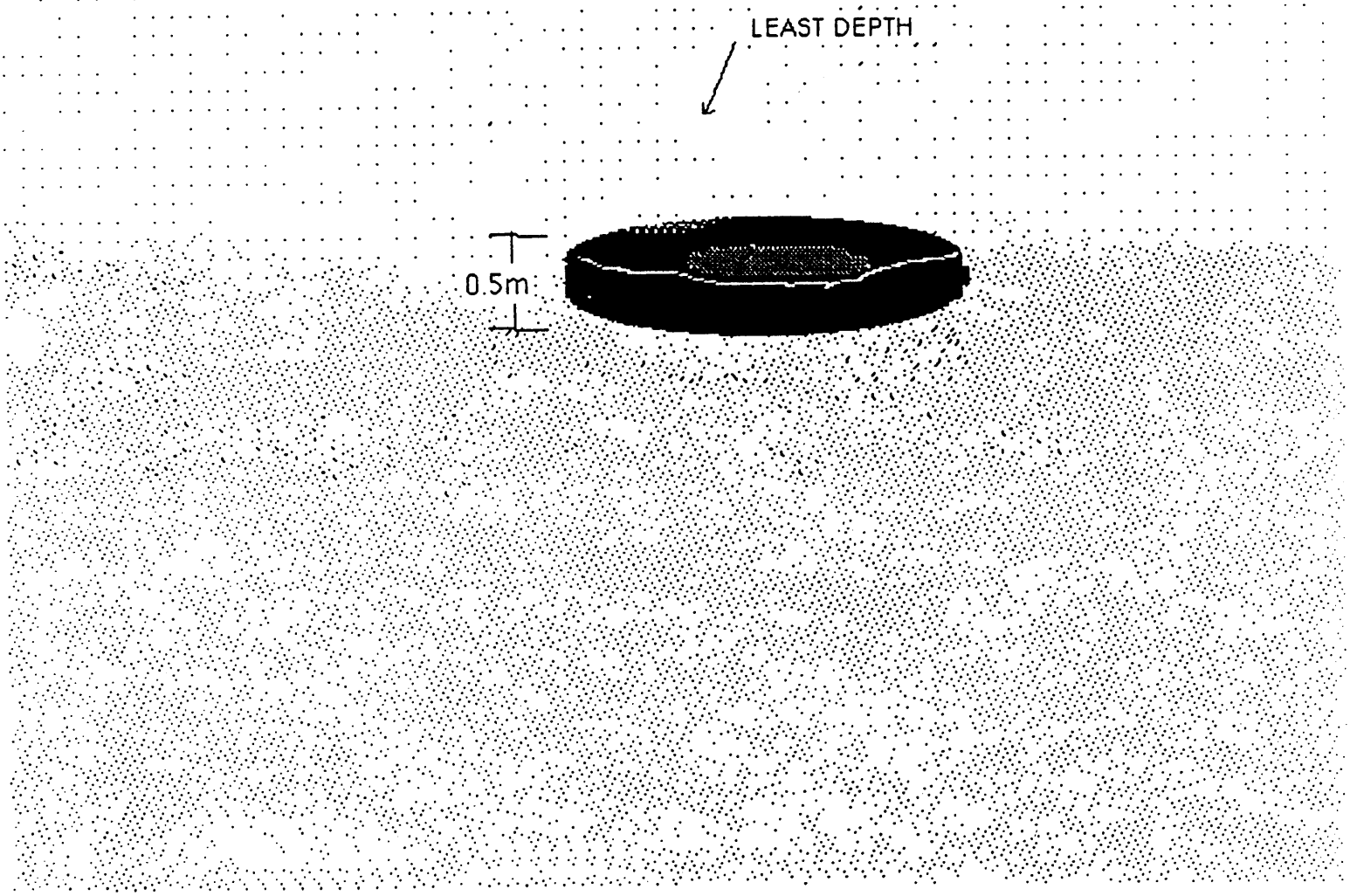
AWOIS item 6978 is considered disproved through 400% side scan sonar investigation. RUDE recommends that the pipe presently charted at latitude 29° 25' 12.846" N, longitude 93° 06' 45.554" W, be deleted. – Concur

Depths acquired during this survey were found to be in general agreement with those depicted on chart No. 11344 and on prior survey H-5315. RUDE recommends retention of the charted depths. – Do not concur

Prior survey H-5315 (1933) covers the area of this investigation. Present survey depths (smooth tides applied) are generally 1 ft (0.3 m.) deeper than prior survey depths. Recommend charting this area as shown on the present survey.

AWOIS 6978

CONTACT # 1600.22 S



N12. AWOIS ITEM 6979 INVESTIGATION — See sheet 2 of 9

Area of Investigation

AWOIS Item:	6979
State	Louisiana
Parish:	Cameron
Locality:	8.3 nm E of Buoy "2B," Calcasieu Pass
Latitude:	29° 28' 00.840" N } NAD 83
Longitude:	93° 04' 00.549" W }
Depth:	Unknown (Wreck)

AWOIS Item Description

AWOIS item 6979 was described in LNM8/86 as the 75-foot fishing vessel Coastal Rambler, sunk in 13.7 meters of water at latitude 29° 28' 00" N, longitude 93° 04' 00" W (NAD 27). Present survey requirements called for 200% side scan sonar investigation to a 3000-meter search radius; and echosounder development, or diver's investigation and least depth, if found; or salvage documentation. AWOIS item 6979 appears on chart 11344, Rollover Bayou to Calcasieu Pass, 26th edition, dated March 5, 1988.

Survey Procedures

The following data summary reflects survey procedures used for investigating this item:

AWOIS Item:	6979
Positioning:	ARGO
Sonar Search:	DOY 177, 178, 201, 205, 206, 207, 208, 211, 212, 213, 214, 241, 241
Diving:	DOY 201, 213
Sonification:	200% SSS coverage
Contacts:	4 significant contacts: 1546.18S, 1585.02P, 2901.25P, 3942.15P
Field Sheet:	RU-20-2A-90

There were no significant problems encountered with the side scan sonar system. On DOY 177, 178, and 211 ARGO rate 2, station TENN, was removed from the position computations due to high maximum residuals. All survey positions were computed using at least three LOP's and met requirements for a 1:20,000 survey.

The four contacts listed above were those found during the 200% side scan sonar coverage on which dives were made. None of these contacts, however, proved to be the Coastal Rambler.

Contact 1546.18S Investigation

(a) Contact 1546.18S Dive Summary

Contact 1546.18S was investigated by divers on July 20, 1990 (DOY 201). LTJG Rogers and ENS Gruccio descended the marker buoy line

to the bottom at 16 meters. A 10-meter circle search was conducted about the marker buoy anchor. A steel box, 2-meters x 3-meters x 6 meters, was found lying on its side on the bottom. A least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 1546.18S Description

Contact 1546.18S is a rectangular steel container, 2-meters x 3-meters x 6-meters, rising 2.5 meters off the bottom.

(c) Contact 1546.18S Least Depth Determination

A least depth of Contact 1546.18S was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	1546.18S
Date:	July 20, 1990 (DOY 201)
Time:	1515 Z
Average ~~Pneumo~~ PDG Depth:	12.6 meters
~~Pneumo~~ PDG Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.~~1~~7
Actual Least Depth:	~~12.2~~ 11.9 meters (39 ft)

(d) Contact 1546.18S Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	1546.18S
HDAPS Position Numbers:	2353 - 2355
Average Easting:	96784.7 E
Average Northing:	106601.7 N
Computed Latitude:	29° 27' 40.0~~4~~3" N
Computed Longitude:	93° 04' 09.2~~5~~6" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11066.6	26743.2	46935.5	64026.1
Loran SNR:	Not Noted	Not Noted	Not Noted	Not Noted

(e) Contact 1546.18S Recommendation

RUDE recommends that this item be charted at the above position using symbol No. 41, section "K," (obstruction, least depth known) from Nautical Chart No. 1. This should show a least depth of ~~12.2~~ 11.9 meters (39 ft) inside a danger circle, labeled "Obstn". – Concur

Contact 1585.02P Investigation

(a) Contact 1585.02P Dive Summary

Contact 1585.02P was investigated by divers on July 20, 1990 (DOY 201). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 16 meters. A 10-meter circle search was conducted about the marker buoy anchor. Three rectangular steel containers of the type described in contact 1546.18S were found, all on their side. The highest point of the three was determined, and a least depth was obtained by ~~pneume~~ pneumatic depth gage.

(b) Contact 1585.02P Description

Contact 1585.02P consists of three rectangular steel containers, 2-meters x 3-meters x 6-meters, the most prominent of which rose 2.5 meters off the bottom.

(c) Contact 1585.02P Least Depth Determination

A least depth of Contact 1585.02P was taken by divers using a ~~pneume~~ pneumatic depth gage on the highest point of the contact.

Contact:	1585.02P
Date:	July 20, 1990 (DOY 201)
Time:	1406 Z
Average ~~Pneume~~ PDG Depth:	12.0 meters
~~Pneume~~ PDG Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-.57
Actual Least Depth:	11.53 meters (37 ft)

(d) Contact 1585.02P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:			1585.02P	
HDAPS Position Numbers:			2350 - 2352	
Average Easting:			96656.4 E	
Average Northing:			107931.5 N	
Computed Latitude:		29° 28'	23.25 4/4	" N
Computed Longitude:		93° 04'	13.83 4/4	" W
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11065.2	26746.0	46937.2	64025.4
Loran SNR:	Not Noted	Not Noted	Not Noted	Not Noted

(e) Contact 1585.02P Recommendation

RUDE recommends that this item be charted at the above position using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This should show a least depth of 11.3 meters (37 ft) inside a danger circle, labeled "Obstn". - Concur

Contact 2901.25P Investigation

(a) Contact 2901.25P Dive Summary

Contact 2901.25P was investigated by divers on August 1, 1990 (DOY 213). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 15 meters. The contact, a 1-cubic meter steel box, was located visually several meters from the buoy line anchor. A least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 2901.25P Description

Contact 2901.25P is a hollow steel box, 1-meter x 1-meter x 1-meter, open on top with a handle on one side. It rises 0.8 meters off the bottom.

(c) Contact 2901.25P Least Depth Determination

A least depth of Contact 2901.25P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	2901.25P
Date:	August 1, 1990 (DOY 213)
Time:	1637 Z
Average ~~Pneumo~~ PDG Depth:	13.4 meters
PDG ~~Pneumo~~ Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-0.6
Actual Least Depth:	~~13.2~~ 12.8 meters (42 ft)

(d) Contact 2901.25P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	2901.25P
HDAPS Position Numbers:	4122 - 4124
Average Easting:	95932.7 E
Average Northing:	105962.4 N
Computed Latitude:	29° 27' 19.387" N
Computed Longitude:	93° 04' 40.962" W

Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11066.9	26736.4	46934.6	64026.2
Loran SNR:	956	889	547	379
Master:	835			

(e) Contact 2901.25P Recommendation

RUDE recommends that this item be charted at the above position using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This should show a least depth of ~~13.8~~ 12.8 meters (42 ft) inside a danger circle, labeled "Obstn". Concur

Contact 3942.15P Investigation

(a) Contact 3942.15P Dive Summary

Contact 3942.15P was investigated by divers on August 1, 1990 (DOY 213). LTJG Rogers and ENS Gruccio descended the marker buoy line to the bottom at 14 meters, and sighted a steel mooring buoy on the bottom during their descent. The least depth was obtained by ~~pneumo~~ pneumatic depth gage.

(b) Contact 3942.15P Description

Contact 3942.15P is a steel mooring buoy, 1.5 meters in diameter, rising 1.2 meters off the bottom.

(c) Contact 3942.15P Least Depth Determination

A least depth of Contact 3942.15P was taken by divers using a ~~pneumo~~ pneumatic depth gage on the highest point of the contact.

Contact:	3942.15P
Date:	August 1, 1990 (DOY 213)
Time:	1409 Z
Average ~~Pneumo~~ PDG Depth:	12.6 meters
~~Pneumo~~ PDG Gage Corrector:	+.0
~~PREDICTED~~ Tidal Zone Cor:	-.~~4~~6
Actual Least Depth:	12.~~8~~0 meters (39 ft)

(d) Contact 3942.15P Positioning

Three detached positions were taken as the ship drifted over the target that was marked by the dive buoy.

Contact:	3942.15P
HDAPS Position Numbers:	4118 - 4120

Average Easting:			94213.7 E	
Average Northing:			108830.2 N	
Computed Latitude:		29° 28'	52.7[illegible]" N	
Computed Longitude:		93° 05'	44.38[illegible]" W	
Loran-C Rates:	7980-W	7980-X	7980-Y	7980-Z
Average Loran:	11063.3	26733.8	46938.6	64024.5
Loran SNR:	971	927	657	546
Master:	884			

(e) Contact 3942.15P Recommendation

RUDE recommends that this item be charted at the above position using symbol No. 41, section "K," (Obstruction, least depth known) from Nautical Chart No. 1. This should show a least depth of 12.2 meters (40 ft) inside a danger circle, labeled "Obstn". - Concur

AWOIS Item 6979 Summary and Recommendations

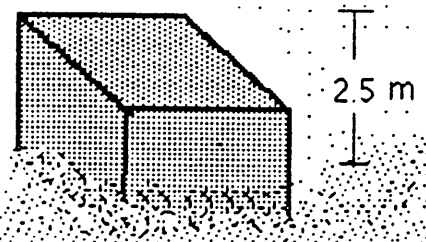
AWOIS item 6979 is considered disproved through 200% side scan sonar investigation. RUDE recommends that the wreck symbol be deleted from future chart editions. - Concur

The four obstructions discussed above should be charted as recommended in their respective paragraphs (e). A letter containing this information was forwarded to the 8th U. S. Coast Guard District for inclusion in the next Local Notice to Mariners (See APPENDIX I). - Concur

Depths acquired while investigating this item were found to be generally 0.3 to 0.6 meters (1 to 2 feet) deeper than those depicted on chart 11344 and on prior survey H-5315. RUDE recommends that the presently charted (shoaler) depths be retained. RUDE further recommends that the chart comparison be repeated during the hydrographic verification process after the application of approved tides.

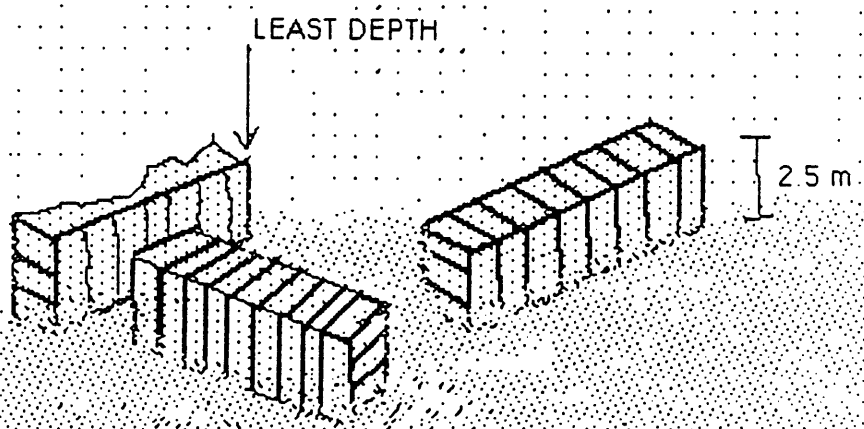
Present survey depths (smooth tides applied) are generally 1 ft (0.3 m.) deeper than prior survey depths. Recommend charting the present survey depths within this area.

AWOIS 6979
CONTACT 1546.18S

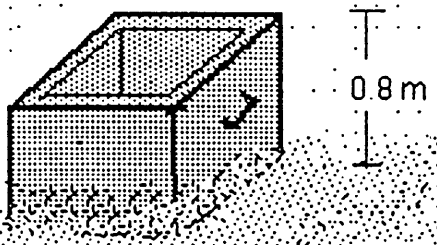


AWOIS 6979

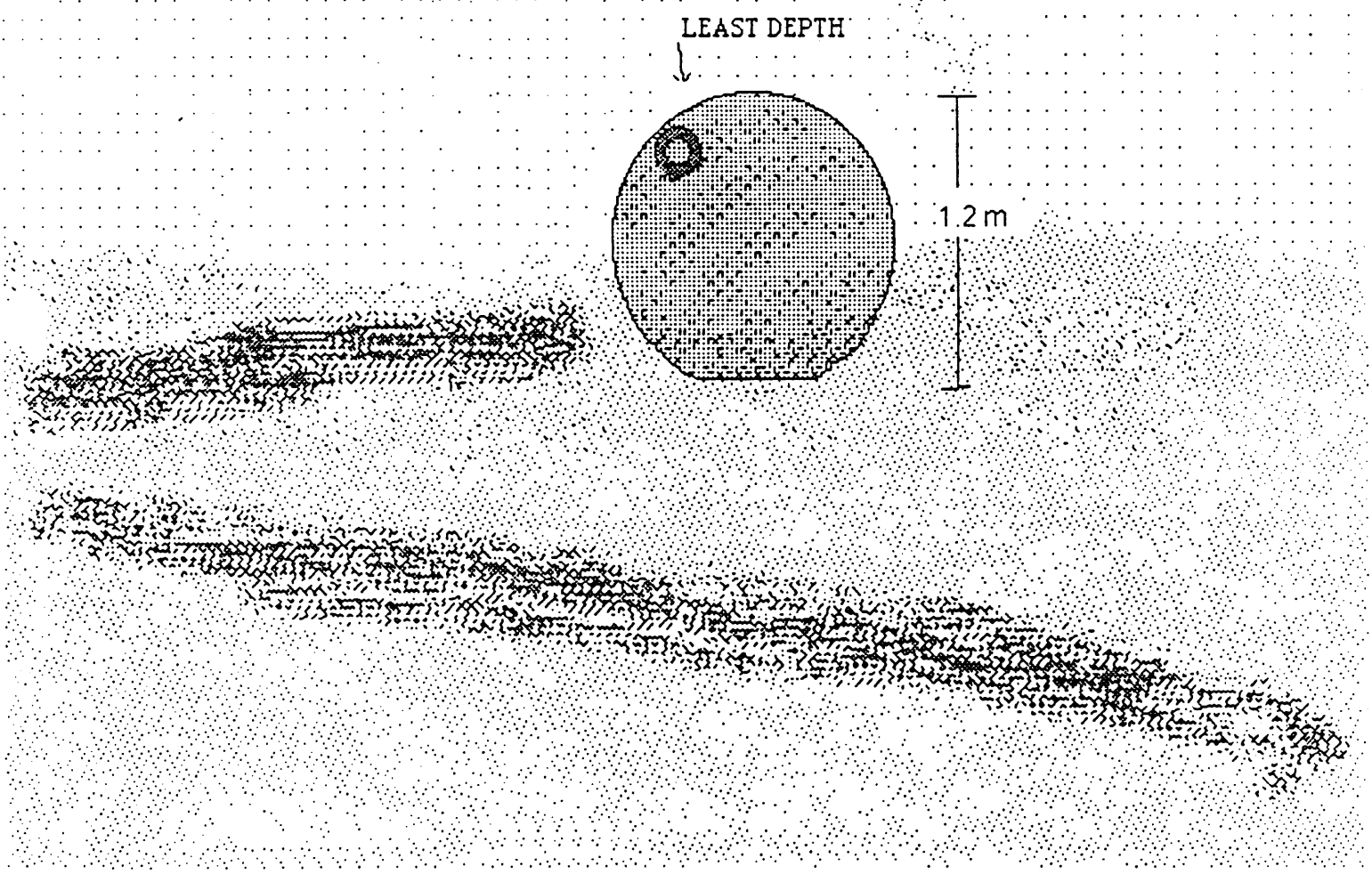
CONTACT # 1585 J2P



AWOIS 6979
CONTACT 2901.25 P



AWOIS 6979
CONTACT 3942.15 P



O. ADEQUACY OF SURVEY

All AWOIS items covered in this report are considered resolved. No part of this survey is substandard or incomplete.

P. AIDS TO NAVIGATION

Several of the buoys marking the Calcasieu Pass Channel are incorrectly charted as being black. During RUDE's transits of this channel, we noted that all of the black buoys have been replaced with green buoys. The following is a list of buoys which are now green and the charts which should be updated to reflect this change: chart 11330, 5th Edition, dated July 30, 1988, numbers 5, 7, 9, 11, 15, and 27; chart 11344, 26th Edition, dated March 5, 1988, numbers 7, 9, 27, 31, and 33; chart 11347, 23rd Edition, dated January 13, 1990, numbers 7, 9, 27, 31, and 33.

Q. STATISTICS

Number of Positions.....6680

Linear Nautical Miles Run.....571.0

Square Nautical Miles Covered.....21.0

Days of Production.....40

Detached Positions.....21

Velocity Casts.....3

Bottom Samples.....1

R. MISCELLANEOUS

The bottom sample acquired in the AWOIS 6975 area was not submitted to the Smithsonian Institution. A copy of NOAA Form 75-44 is included in Separate II.

S. RECOMMENDATIONS

The following table summarizes the recommendations made for individual AWOIS items under Section N of this text.

AWOIS	STATUS	RECOMMENDATION
344	Disproved	Delete Charted Wreck, Chart ~~four~~ five new Obstructions see page 16
396	Resolved	Delete Charted PA Wreck, Chart two new Known Wrecks see page 26

AWOIS	STATUS	RECOMMENDATION
399	Resolved	Delete Charted Wreck see page 29
401	Disproved	Delete Charted Wreck see page 30
6971	Disproved	Delete Charted Well see page 33
6972	Disproved	Delete Charted Well see page 35
6973	Resolved	Delete Charted Wreck, Chart Obstruction see page 39
6974	Resolved	Change Charted Symbol see page 43
6975	Resolved	No Changes to Chart see page 45
6976	Disproved	Delete Charted Wreck, Chart ~~four~~ eight new Obstructions see page 57
6978	Disproved	Delete Charted Pipe see page 69
6979	Disproved	Delete Charted Wreck, Chart Obstructions see page 76

T. REFERRAL TO REPORTS

RUDE Electronic Control Report - 1990 Field Season
(submitted to N/CG244 concurrent with this survey)

Horizonal Control Report HC-8901; Cameron, LA
(submitted by N/CG23322)

LETTER OF APPROVAL

REGISTRY NO. FE-347-SS

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 sheets have been closely reviewed and are considered complete and adequate for charting.

Grady H. Tuell, LCDR, NOAA
Commanding Officer
NOAA Ship RUDE

APPENDIX I.
DANGER TO NAVIGATION REPORTS

Two Danger To Navigation Reports were submitted to the Eighth Coast Guard District Aids to Navigation Branch. They covered four obstructions found during this Survey on AWOIS items 396, 6973, and 6979. The other obstructions included are from another Survey. Copies were forwarded to N/CG221 in accordance with HSG 66.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NOAA Ship RUDE
439 W. York St.
Norfolk, VA 23510-1114
July 26, 1990

Commander, Eighth Coast Guard District
Aids to Navigation Branch
Hale Boggs Federal Building, Room 1141
500 Camp Street
New Orleans, LA 70130-3396

ADVANCE INFORMATION

The NOAA Ship RUDE recently located three dangers to navigation in the vicinity of the Calcasieu Pass Channel. The first is an 80 foot, steel hulled fishing vessel. The others are steel containers, possibly washed overboard from a supply boat. All three are approximately 7.5 nm east of buoy R "28". Attachments are included showing where each plots on the chart for reference.
Two charts are affected. The positions, which are commensurate with NOS Hydrographic standards of accuracy for charting, and least depths based on predicted tides are below.

CHART	POSITION	DATUM	LEAST DEPTH
*Item 1	Dangerous wreck		
11340	29° 25' 08.524" N 93° 04' 51.382" W	NAD 83	6 Fathoms
11344	29° 25' 08.524" N 93° 04' 51.382" W	NAD 83	36 Feet
* Item 2	Obstruction		
11340	29° 28' 23.250" N 93° 04' 13.836" W	NAD 83	6 1/3 Fathoms
11344	29° 28' 23.250" N 93° 04' 13.836" W	NAD 83	38 Feet
* Item 3	Obstruction		
11340	29° 27' 40.045" N 93° 04' 09.257" W	NAD 83	6 2/3 Fathoms
11344	29° 27' 40.045" N 93° 04' 09.257" W	NAD 83	40 Feet

Please include this information in the next Local Notice to Mariners. This work was completed under project No. OPR-K454-RU-90. Any questions or comments on this matter can be referred to my Navigation Officer ENS Ralph Rogers. He can be contacted on cellular phone at (504) 736-7626, ext. 601-938-2691 between 1000 and 1400 CDT weekdays. Future correspondence should be referred to NOAA Atlantic Marine Center, Hydrographic Surveys Branch phone (804) 441-6746.

Sincerely,

Grady H. Tuell, LCDR/NOAA
Commanding Officer
NOAA Ship RUDE

* THIS SURVEY

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114

June 30, 1990

Commander, Eighth Coast Guard District
Aids to Navigation Branch
Hale Boggs Federal Building, Room 1141
500 Camp Street
New Orleans, LA 70130-3396

ADVANCE INFORMATION

The NOAA Ship RUDE recently located three dangers to navigation in the vicinity of the Calcasieu Pass Channel. The first is a pile of pipes, and should replace the wreck in position 29°16'N, 93°13'W. The others are pipes about 2.5 nm west of buoy "11". Attachments are included showing where each plots on the chart for reference.

Four charts are affected. The positions, which are commensurate with NOS Hydrographic standards of accuracy for charting, and least depths based on predicted tides are below.

CHART	POSITION	DATUM	LEAST DEPTH
* Item 1	Delete wreck and add Obst		
11340	29° 15'28.866" N 93° 11'58.032" W	NAD 83	7 1/3 Fathoms
11344	29° 15'28.866" N 93° 11'58.032" W	NAD 83	44 Feet
Item 2	Pipe		
11340	29° 32'01.124" N 93° 17'30.425" W	NAD 83	6 Fathoms
11344, 11345, 11347	29° 32'01.124" N 93° 17'30.425" W	NAD 83	35 Feet
Item 3	Pipe		
11340	29° 32'06.260" N 93° 17'22.571" W	NAD 83	6 1/2 Fathoms
11344, 11345, 11347	29° 32'06.260" N 93° 17'22.571" W	NAD 83	38 Feet

Please include this information in the next Local Notice to Mariners. This work was completed under project No. OPR-K454-RU-90. Any questions or comments can be referred to my Navigation Officer ENS Ralph Rogers. He can be contacted on cellular phone at (504) 736-7626, ext. 601-938-2691 between 1000 and 1400 CDT weekdays. Future correspondence should be referred to NOAA Atlantic Marine Center, Hydrographic Surveys Branch phone (804) 441-6746.

Sincerely,

Grady H. Tuell, LCDR/NOAA
Commanding Officer

* THIS SURVEY

APPENDIX III.
LIST OF HORIZONTAL CONTROL STATIONS

HC-8901 CAMERON, LOUISIANA, HORIZONTAL POSITIONS 1989
LIST OF GEOGRAPHIC POSITIONS

SPN	STATION NAME	GPN CODE K	LATITUDE DEG MN SEC	LONGITUDE DEG MN SEC	G-N
1	SABINE PASS WATER TANK	9	29 44 6.68769	93 53 49.48644	
2	SABINE PASS TV STA KBMT MAST	9	29 42 50.09032	93 51 46.31942	
3	SABINE PASS CG STA CUPOLA	9	29 42 22.57259	93 51 11.81255	
4	SABINE PASS RADIO TOWER	9	29 42 54.71916	93 51 .63096	
5	SABINE PASS LIGHTHOUSE 1874	9	29 42 59.43426	93 51 .57058	
6	SABINE PASS JETTY CHAN RG R LT	9	29 41 52.68663	93 50 21.53021	
7	SABINE PASS JETTY CHAN RG F LT	9	29 41 31.54031	93 50 16.10654	
101 8	TOM	4	29 41 23.13530	93 50 34.74699	
9	SANDERS	5	29 45 53.45000	93 49 2.08000	
10	BRAMA 1963	9	29 46 12.65044	93 28 14.17423	
11	FROST	9	29 46 39.95063	93 16 52.86675	
12	HACK 1923	9	29 44 45.20656	93 42 24.15712	
13	HOLLYND	9	29 46 4.04708	93 24 40.57682	
14	LEE 1924	9	29 46 50.54821	93 15 18.64274	
15	OCEAN USGS 1933	9	29 45 22.16518	93 36 18.15800	
16	PEVETO 1963	9	29 45 42.18701	93 34 3.05076	
17	REFUGE 1955	9	29 52 .19370	93 27 13.00880	
18	REFUGE 2 1981	9	29 52 2.91534	93 27 6.59800	
19	RUTHERFORD 1963	9	29 45 54.39847	93 7 57.70586	
102 20	TENN ✓ SAT, 1989 Sta # 102	5	29 45 13.60600	93 38 48.38100	
201 21	JANICE	5	29 46 35.92700	93 16 45.25900	
104 22	STEVE ✓ SAT, 1989 Sta # 104	5	29 43 52.58400	92 49 50.60300	
202 23	NANCY	5	29 46 25.35400	93 11 33.25000	
3 24	LEIGH	5	29 45 50.31600	93 20 32.32100	
4 25	MIKE	5	29 45 36.11400	93 7 29.17800	
103 26	MONK ✓ SAT, 1989 Sta # 103	5	29 46 44.46600	93 20 35.74900	
27	PICOU	5	29 47 7.26300	93 11 50.66000	
	TCM SAT, 1989 Sta # 101		29 41 23.13500	93 50 34.74700	

NAD 1983

CODE 9 - Published

CODE 5 - located by Doppler Survey 1989

CODE 4 - located by 3 Point Fix 1989

III 1

5/1/90

VISOFT 300 4.33 PRE-SURVEY: CONTROL STATION TABL

Station No ?

No	Type	Lat	Lon	H	Cart	Freq	Vel	Code	MM/DD/YY
101	A	029:41:23.135	093:50:34.747	—	250	1646.7	299670	1	10/00/89
102	A	029:45:13.606	093:38:48.381	-.09	250	1646.7	299670	2	10/00/89
103	A	029:46:44.466	093:20:35.749	- .56	250	1646.7	299670	3	10/00/89
104	A	029:43:52.584	092:49:50.603	-1.13	250	1646.7	299670	4	10/00/89
201	F	029:46:35.927	093:16:45.259	5.0	139	0.0	0	4	10/00/89
202	F	029:46:25.345	093:11:33.250	7.0	139	0.0	0	6	10/00/89
203	F	029:45:50.316	093:20:32.321	6.2	139	0.0	0	8	10/00/89
204	F	029:45:36.114	093:07:29.178	6.3	139	0.0	0	2	10/00/89
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00

III 2

APPENDIX VI.
SUPPLEMENTAL CORRESPONDENCE

The following cooperative charting and Sea Grant representatives were contacted in accordance with the project instructions:

Mr. Marcus T. Strickler, USPS District
Mr. Gary Schroeder, 21CG Aux. District 8
Mr. Ronald Becker, Marine Advisory Services, LSU
Mr. Donn Ward, Marine Advisory Program, Texas A&M

Copies of the letters follow. There was no response from any of these groups.

Vessel Owners whose name and address were included in the AWOIS descriptions were contacted regarding the accuracy of our information and whether any attempt had been made to salvage their respective vessels. Copies of these letters are attached. Two of the owners responded to our inquiries. The owner of Grace C. (AWOIS 399) provided salvage documentation (attached).

Also attached is a copy of the letter from RUDE to N/CG241 requesting guidance concerning the resolution of AWOIS Item 6973. As discussed in the write-up for this item, a change was subsequently made to the survey requirements, allowing 100% coverage, but increasing the search area to include the area to the east of the safety fairway.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114
April 25, 1990

MEMORANDUM FOR: Commander Christopher Lawrence
Chief, Atlantic Hydrographic Section

FROM: Lieutenant Grady B. Tuell
Commanding Officer, NOAA Ship RUDE

SUBJECT: ARGO Calibration and Lane Recovery Procedures

Our initial problems with ARGO appear to be solved for the present. We have successfully surveyed about 100 linear miles of SSS in the multiple LOP mode and are routinely achieving navigation well within 1:20,000 standards. But, because we are inexperienced in the use of ARGO, I would appreciate your reviewing our calibration and lane recovery procedures before the season progresses further.

We have developed an iterative procedure for calibrating ARGO against MiniRanger which can be performed while drifting slowly and does not require visibility to shore stations. Acceptance of this technique relies completely upon the reasoning that multiple LOPs fed into the Houtenbos algorithm yield a unique position with quality defined by ECR and maximum residual (Field Procedures Manual 3.1.3.3).

Due to the fact that most of our AWOIS items are located 25 - 50 miles offshore, we have developed a scheme for lane recovery which does not require steaming back inshore to within range of the MiniRangers. This method is a modification of the traditional technique of steering a range and calibrating at specific points on the range defined by sextant angles turned to points near the beam. The difference is that the range and angle points are unknown positions. They are used only to provide recoverable locations at which to set or verify ARGO lane counts.

I have detailed these procedures in the attached pages. Please advise me or LT Rix if there are problems. I understand that LCDR De Bow is interested in our methods, perhaps you could forward copies to him.

Attachments

CLEARANCE Signature and Date:

AMC:RMoses

A. CALIBRATION OF ARGO SYSTEM AGAINST MINIRANGER SYSTEM

1) HDAPS is put "on-line" using MiniRanger as the primary positioning system. The position quality screen is monitored for acceptable ECR and maximum residual.

2) A MiniRanger fix is taken near some convenient point such as a buoy. Distances are computed by inverse from the buoy's position to each of the ARGO stations. These distances are then converted to lane equivalents and stored into the memory in the ARGO CDU.

3) RUDE is maneuvered back to the vicinity of the buoy and ARGO is put "on-line" by executing the SET RANGE function on the ARGO CDU.

4) RUDE is then allowed to drift slowly, but remaining within about 50 meters of the buoy. A second MiniRanger fix is taken and the ARGO rates are recorded. Distances are again computed by inverse, and the recorded ARGO lane counts are compared to the calculated lane counts. Correctors are determined for each LOP and are applied using the DELTA RANGE function on the ARGO CDU.

5) Step 4 is repeated until each ARGO LOP has a residual which is less than 0.05 lanes (about 4 meters).

6) HDAPS is put "on-line" using ARGO as the primary positioning system, and the position quality screen is monitored for acceptable ECR and maximum residual.

The entire procedure is usually accomplished in three iterations and takes about 30 minutes.

B. ARGO LANE RECOVERY AND SYSTEM CHECK

1) After calibration against MiniRanger, RUDE is transited offshore to the working grounds. With ARGO providing acceptable survey navigation in the multiple LOP mode, a range (defined by two unknown oil rigs) is steered. Fixes are taken (and lane counts recorded) at five points on this range. These points are determined by pre-set sextant angles measured to a third oil rig located on the RUDE's beam.

2) When navigation problems occur, RUDE returns to the range. The lane counts are manually set in for position 1 on the range. ARGO is put "on-line" when RUDE is at this position, and as the ship passes through each successive point on the range, residuals are recorded. If the residuals are higher than 0.05 lane, they are applied using the set DELTA RANGE function on the ARGO CDU.

3) HDAPS is put "on-line" and the position quality screen is monitored for acceptable ECR and maximum residuals.

This technique has always worked on the first pass down the range which takes about 15 minutes. We are routinely achieving ECR less than 5 meters and maximum residual less than 5 meters - sufficient for a 1:10000 survey.

We believe that RUDE can steer this range within 5 meters left or right. An analysis of the points on the first range established was conducted by fitting a "best fit" line through the coordinates computed by HDAPS. Results of this study confirm the 5 meter estimate. However, the proof that the technique works is that the ECR and maximum residuals are so low, and that they always hold when RUDE is transited through the survey area.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Ship RUDE S590
439 West York Street
Norfolk, VA 23510

March 19, 1990

Mr. Marcus R. Strickler, JN
USPS District
P.O. Box 58624
Houston, TX 77058

Dear Mr. Strickler:

The NOAA Ship RUDE will arrive in Cameron, Louisiana and begin a hydrographic survey off the coast between Cameron and Sabine, Texas. The purpose of the survey is to investigate, using side scan sonar equipment, several charted wrecks and obstructions in and near the approaches to these two ports.

Our project instructions have listed you as a potential source of local information concerning the disposition of these charted items. Soon after we have arrived in Cameron, my Executive Officer, LT Jon Rix, will contact you once again, by phone, to discuss the survey and to invite you to come and visit the ship during one of our inport periods. Any information or assistance you might have to offer would be greatly appreciated.

Should you need or desire to contact the ship prior to our arrival in Cameron, please contact CDR Robert Hunt, Operations Branch, Atlantic Marine Center, 439 West York Street, Norfolk, VA 23510, Tel: (804) 441-6440.

Sincerely

Grady H. Tuell

LT Grady H. Tuell
Commanding Officer
NOAA Ship RUDE

4

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Ship RUDE S590
439 West York Street
Norfolk, VA 23510

March 19, 1990

Mr. Gary Schroeder
21CG Aux District 8
P.O. Box 133
Shreveport, LA 71161

Dear Mr. Schroeder:

The NOAA Ship RUDE will arrive in Cameron, Louisiana and begin a hydrographic survey off the coast between Cameron and Sabine, Texas. The purpose of the survey is to investigate, using side scan sonar equipment, several charted wrecks and obstructions in and near the approaches to these two ports.

Our project instructions have listed you as a potential source of local information concerning the disposition of these charted items. Soon after we have arrived in Cameron, my Executive Officer, LT Jon Rix, will contact you once again, by phone, to discuss the survey and to invite you to come and visit the ship during one of our inport periods. Any information or assistance you might have to offer would be greatly appreciated.

Should you need or desire to contact the ship prior to our arrival in Cameron, please contact CDR Robert Hunt, Operations Branch, Atlantic Marine Center, 439 West York Street, Norfolk, VA 23510, Tel: (804) 441-6440.

Sincerely

Brady H. Tuell

LT Grady H. Tuell
Commanding Officer
NOAA Ship RUDE

5

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NOAA Ship RUDE S590
439 West York Street
Norfolk, VA 23510

March 19, 1990

Mr. Ronald Becker
Associate Director
Marine Advisory Services
133 Wetland Resources Building
Louisiana State University
Baton Rouge, LA 70803-7507

Dear Mr. Becker:

The NOAA Ship RUDE will arrive in Cameron, Louisiana and begin a hydrographic survey off the coast between Cameron and Sabine, Texas. The purpose of the survey is to investigate, using side scan sonar equipment, several charted wrecks and obstructions in and near the approaches to these two ports.

Our project instructions have listed you as a potential source of local information concerning the disposition of these charted items. Soon after we have arrived in Cameron, my Executive Officer, LT Jon Rix, will contact you once again, by phone, to discuss the survey and to invite you to come and visit the ship during one of our inport periods. Any information or assistance you might have to offer would be greatly appreciated.

Should you need or desire to contact the ship prior to our arrival in Cameron, please contact CDR Robert Hunt, Operations Branch, Atlantic Marine Center, 439 West York Street, Norfolk, VA 23510, Tel: (804) 441-6440.

Sincerely

Grady H. Tuell

LT Grady H. Tuell
Commanding Officer
NOAA Ship RUDE

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NOAA Ship RUDE S590
439 West York Street
Norfolk, VA 23510

March 19, 1990

Mr. Donn Ward
Leader, Marine Advisory Program
Agricultural Extension Service
Texas A&M University
College Station, TX 77843

Dear Mr. Ward:

The NOAA Ship RUDE will arrive in Cameron, Louisiana and begin a hydrographic survey off the coast between Cameron and Sabine, Texas. The purpose of the survey is to investigate, using side scan sonar equipment, several charted wrecks and obstructions in and near the approaches to these two ports.

Our project instructions have listed you as a potential source of local information concerning the disposition of these charted items. Soon after we have arrived in Cameron, my Executive Officer, LT Jon Rix, will contact you once again, by phone, to discuss the survey and to invite you to come and visit the ship during one of our inport periods. Any information or assistance you might have to offer would be greatly appreciated.

Should you need or desire to contact the ship prior to our arrival in Cameron, please contact CDR Robert Hunt, Operations Branch, Atlantic Marine Center, 439 West York Street, Norfolk, VA 23510, Tel: (804) 441-6440.

Sincerely

Grady H. Tuell

LT Grady H. Tuell
Commanding Officer
NOAA Ship RUDE

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114

May 2, 1990

C & E Boat Rental Inc., LA
Route 2, Box 165
Cut Off, LA 70345

Subject: M/V GRACE C

Dear Sir/Madam:

AWOIS # 399

The NOAA Ship RUDE is currently working out of Cameron, LA surveying numerous charted wrecks and obstructions for the purpose of updating the existing nautical charts of the approaches to Calcasieu and Sabine Passes.

One of the items we have been assigned is the M/V GRACE C. Our records list you as the owner and describe the vessel as being 97 gross tons, 84 feet long, with a 25 foot beam and a 9.2 foot draft. They also indicate that she sank in 1979 in approximate position 29/27/00 N, 093/07/00 W in West Cameron Lease Block 138.

Our survey techniques involve towing a side scan sonar in a predetermined radius about the presumed position of the wreck or obstruction. Once a likely sonar target is detected, we send divers down to make a visual confirmation and determine the least depth and accurate position of the item.

Any information and/or documentation we can obtain prior to commencing our search, particularly information relative to salvage (removal) of the wreckage, would be of assistance to us in our efforts to resolve these items. Would you please verify the information we have on the GRACE C and indicate if an attempt was ever made to salvage the vessel; and, if so, was the attempt successful?

Your cooperation and assistance in this matter is greatly appreciated.

Sincerely,

LT Jon E. Rix
Executive Officer, NOAA Ship RUDE

8

C & E Boat Rental, Inc.

POST OFFICE BOX 243
CUT OFF, LA. 70345

PHONE: GALLIANO
(504) 632-6166

May 7, 1990

United States Department of Commerce
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114

The M/V Grace C was salvaged in Sept. 1979. The vessel was repaired and put back in service Feb. 1980. In March of 1987, the vessel was sold to Bert McKay of Wrangell, Alaska.

Hope this information can be of assistence to you.

Yours truly,

C & E Boat Rental, Inc.

Robert J. Eymard, Sr.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114

May 30, 1990

MEMORANDUM FOR: CDR Christopher Lawrence
Chief, Atlantic Hydrographic Section

FROM: LT Grady H. Tuell
Commanding Officer, NOAA Ship RUDE

SUBJECT: AWOIS Disproval Through Salvage Documentation

A few of the items in the AWOIS listing state that "disproval may be acquired by salvage documentation." At the start of the project, we sent a letter to each of the owners of wrecks which were included in the AWOIS listing, requesting information relative to salvage efforts undertaken on their respective vessels.

Enclosed is a copy of the response we received from the owner of M/V GRACE C, AWOIS Item 399. Is this considered adequate "salvage documentation" for disproval of an item; or would additional documentation or survey work required?

enclosure

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114

May 2, 1990

W.H. Watkins Jr.
P.O. Box 7593
Beaumont, TX 77706

Subject: M/V HAT I

AWOIS # 344

Dear Sir/Madam:

The NOAA Ship RUDE is currently working out of Cameron, LA surveying numerous charted wrecks and obstructions for the purpose of updating the existing nautical charts of the approaches to Calcasieu and Sabine Passes.

One of the items we have been assigned is the M/V HAT I. Our records list you as the owner and describe the vessel as having a wooden hull, 48 gross tons, 51 feet long, with a 17.5 foot beam and a 7.4 foot draft. They also indicate that she sank in 1977 in approximate position 29/10/00 N, 093/15/00 W in approximately 54 feet of water.

Our survey techniques involve towing a side scan sonar in a predetermined radius about the presumed position of the wreck or obstruction. Once a likely sonar target is detected, we send divers down to make a visual confirmation and determine the least depth and accurate position of the item.

Any information and/or documentation we can obtain prior to commencing our search, particularly information relative to salvage (removal) of the wreckage, would be of assistance to us in our efforts to resolve these items. Would you please verify the information we have on the HAT I and indicate if an attempt was ever made to salvage the vessel; and, if so, was the attempt successful?

Your cooperation and assistance in this matter is greatly appreciated.

Sincerely,

LT Jon E. Rix
Executive Officer, NOAA Ship RUDE

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114

May 2, 1990

Roy Anthony Touchard
P.O. Box 318
Delcambre, LA 70528

Subject: M/V COASTAL RAMBLER

AWOIS # 6979

Dear Sir/Madam:

The NOAA Ship RUDE is currently working out of Cameron, LA surveying numerous charted wrecks and obstructions for the purpose of updating the existing nautical charts of the approaches to Calcasieu and Sabine Passes.

One of the items we have been assigned is the M/V COASTAL RAMBLER. Our records list you as the owner and describe the vessel as having a steel hull, 95 gross tons, 66 feet long, with a 20 foot beam and a 11.6 foot draft. They also indicate that she sank in 1986 in approximate position 29/28/00 N, 093/04/00 W in approximately 45 feet of water.

Our survey techniques involve towing a side scan sonar in a pre-determined radius about the presumed position of the wreck or obstruction. Once a likely sonar target is detected, we send divers down to make a visual confirmation and determine the least depth and accurate position of the item.

Any information and/or documentation we can obtain prior to commencing our search, particularly information relative to salvage (removal) of the wreckage, would be of assistance to us in our efforts to resolve these items. Would you please verify the information we have on the COASTAL RAMBLER and indicate if an attempt was ever made to salvage the vessel; and, if so, was the attempt successful?

Your cooperation and assistance in this matter is greatly appreciated.

Sincerely,

LT Jon E. Rix
Executive Officer, NOAA Ship RUDE

12

May 6/90

St. Jon E. Rief
By our request for information on
M/V Coastal Rambler.
I believe the location you have is
most accurate as it was received
from the Coast Guard that assisted when
the vessel sank. I was not aboard
when this happened.
I have no knowledge of any attempt
to salvage her.
I wish I could be of more help.

Ray A. Lanchard

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship RUDE S-590
439 W. York Street
Norfolk, VA 23510-1114

June 23, 1990

MEMORANDUM FOR: Robert W. Derkazarian
Operations Section, N/CG241
Hydrographic Surveys Branch

FROM: LCDR Grady H. Tuell
Commanding Officer, NOAA Ship RUDE

SUBJECT: AWOIS 6973

In the conversation with LT Rix on June 19th, you indicated that your contact with the US Coast Guard 8th District revealed the following information that was not part of the description for AWOIS 6973:

(1) The vessel was a pipe carrier
(2) It was surveyed by a company called Comap-Geo Survey several years ago

We subsequently made a dive on the sonar contact we had that appeared to be a large expanse of pipe scattered on the bottom. Divers reported a large area of 2-foot diameter pipe stacked 3 to 4 deep; however, they saw no indication of a vessel. We then towed the side scan over the pipe field using the 25-meter range scale for increased definition and saw nothing that looked like a vessel. In order to get the least depth on the pipes, we ran a fathometer development over the area at 5-meter line spacing.

The discovery of the pipes leads me to believe that we have located the site of the sunken pipe carrier. Since we did not find the vessel itself, it is entirely possible that the purpose of the private survey was to locate the vessel and salvage it.

We reconned all the other contacts we had on the first 100% coverage and saw no other features of any significance. Before we begin working on the second 100%, I would like confirmation from your office as to whether it is necessary to continue the search, or will the location of the pipes be accepted as the position of AWOIS 6973?

NOAA FORM 61-29 (12-71) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REFERENCE NO.

N/CG244-7-93

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY *(Check)*:

☐ ORDINARY MAIL ☐ AIR MAIL

☐ REGISTERED MAIL ☐ EXPRESS

☐ GBL *(Give number)* _____

TO:

NOAA/NATIONAL OCEAN SERVICE
Chief, Data Control Section, N/CG243
Bldg. WSC-2, Room 151
6015 Executive Blvd.
Rockville, MD 20852

DATE FORWARDED

29 January 1993

NUMBER OF PACKAGES

Five (5)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

FE-347SS (RU-20-2-90)
LOUISIANA, GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON

Pkg. 1: (Tube)
1 Original Descriptive Report containing ~~nine (9)~~ smooth sheets.
20 Field generated paper swath plots.

Pkg. 2: (Box)
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 162, 163, 164, 169, and 170.
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 177, 178, 201, 205, and 206.
1 Envelope containing a raw data printout for Year Day 171.
1 Envelope containing a raw field data (echograms, sonargrams, and printouts) for Year Day 171.
1 Envelope containing a raw field data (echograms, sonargrams, and printouts) for Year Day 172.
1 Envelope containing a raw field data (echograms, sonargrams, and printouts) for Year Day 178.
1 Envelope containing a raw field data (echograms and printouts) for Year Day 191.
1 Envelope containing a raw field data (echograms, dive information, and printouts) for Year Day 201.
1 Envelope containing a raw field data (echograms, sonargrams, and printouts) for Year Day 206.
1 Envelope containing a raw field data (echograms, sonargrams, and printouts) for Year Day 213.

FROM: *(Signature)* Maurice B. Hickson III

Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Atlantic Hydrographic Section,
N/CG244
Atlantic Marine Center
439 West York Street
Norfolk, VA 23510-1114

(12-71) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REFERENCE NO.
N/CG244-7-93

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY *(Check)*:

☐ ORDINARY MAIL ☐ AIR MAIL

☐ REGISTERED MAIL ☐ EXPRESS

☐ GBL *(Give number)* _____

TO:

NOAA/NATIONAL OCEAN SERVICE
Chief, Data Control Section, N/CG243
Bldg. WSC-2, Room 151
6015 Executive Blvd.
Rockville, MD 20852

DATE FORWARDED
29 January 1993

NUMBER OF PACKAGES
Five (5)

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FE-347SS (RU-20-2-90)
(continued)

Pkg. 3: (Box)
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 221, 222, 225, 226, and 227.
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 233, 234, 235, 239 (no sonargram), and 240.

Pkg. 4: (Box)
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 178, 179, 192 (no sonargram), 193, 200, 207, and 208.
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 213, 214, 241, and 242.
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 197, and 198.
1 Accordian Folder containing the raw field data (echograms, sonargrams, and printouts) for Year Days 206, 207, 208, 211, and 212.

FROM: *(Signature)* Maurice B. Hickson III
Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Atlantic Hydrographic Section,
N/CG244
Atlantic Marine Center
439 West York Street
Norfolk, VA 23510-1114

NOAA FORM 61-29 SUPERSEDES FORM C&GS 413 WHICH MAY BE USED.

☆U.S.GPO:1978-0-765-092/1248

(12-71) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REFERENCE NO.
N/CG244-7-93

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY *(Check)*:

☐ ORDINARY MAIL ☐ AIR MAIL

☐ REGISTERED MAIL ☐ EXPRESS

☐ GBL *(Give number)* _____

TO:

NOAA/NATIONAL OCEAN SERVICE
Chief, Data Control Section, N/CG243
Bldg. WSC-2, Room 151
6015 Executive Blvd.
Rockville, MD 20852

DATE FORWARDED
29 January 1993

NUMBER OF PACKAGES
Five (5)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

FE-347SS (RU-20-2-90)
(continued)

Pkg. 5: (Box)
1 Envelope containing twenty (20) smooth Excess Sounding Overlays and nine (9) Smooth Position Overlays (for sheets 1 of 9 through 9 of 9).
1 Envelope containing data removed from the Descriptive Report.
1 Binder containing the "Separates" to accompany the Descriptive Report.
1 Envelope containing Sounding Corrector Data (Smooth Tide data, Velocity Data, and TRA Data).
1 Cahier containing Final Printouts.
1 Envelope containing Horizontal Control Data.

FROM: *(Signature)* Maurice B. Hickson, III

Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Atlantic Hydrographic Section,
N/CG244
Atlantic Marine Center
439 West York Street
Norfolk, VA 23510-1114

NOAA FORM 61-29 SUPERSEDES FORM C&GS 413 WHICH MAY BE USED.

☆U.S.GPO:1978-0-765-092/1248

01/29/93

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: FE-347SS

NUMBER OF CONTROL STATIONS	4
NUMBER OF POSITIONS	6380
NUMBER OF SOUNDINGS	23508

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	97	03/15/91
VERIFICATION OF FIELD DATA	312	02/11/92
ELECTRONIC DATA PROCESSING	163	
QUALITY CONTROL CHECKS	56	
EVALUATION AND ANALYSIS	47	01/27/93
FINAL INSPECTION	23	01/27/93
TOTAL TIME	698	

ATLANTIC HYDROGRAPHIC SECTION APPROVAL 01/27/93

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: Oct 18, 1990

MARINE CENTER: Atlantic

OPR: K454

HYDROGRAPHIC SHEET: FE-347

LOCALITY: Offshore Approaches to Cameron, Texas

TIME PERIOD: June 11 - August 30, 1990

TIDE STATION USED: 877-0570 Sabine Pass North, TX

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 3.11 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.5 feet

REMARKS: RECOMMENDED ZONING
Apply a x1.20 range ratio to all heights and a -0 hr 30 min time correction.

CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

FE-347 SS

Name on Survey	A ON CHART NO. 11340	B ON PREVIOUS SURVEY NO. 11344	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	
CAMERON (title)	X									1
LOUISIANA (title)	X									2
MEXICO, GULF OF (title)	X									3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
				Approved:						16
										17
				Charles L. Harrington						18
				Chief Geographer - N/CG2x5						19
				JUL 17 1992						20
										21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

COAST AND GEODETIC SURVEY
ATLANTIC HYDROGRAPHIC SECTION
EVALUATION REPORT

SURVEY NO.: FE-347SS FIELD NO.: RU-20-2-90

Louisiana, Gulf of Mexico, Offshore Approaches to Cameron

SURVEYED: 11 June through 30 August 1990

SCALE: 1:20,000 PROJECT NO.: OPR-454-RU-90

SOUNDINGS: RAYTHEON DSF-6000N Fathometer, Pneumatic Depth Gauge (PDG)

CONTROL: CUBIC WESTERN DATA DM54 ARGO (Range/Range) and MOTOROLA Falcon 484 Mini-Ranger (Range/Range)

Chief of Party.....G. H. Tuell

Surveyed by.....J. E. Rix
.....R. R. Rogers
.....P. A. Gruccio
.....M. A. Sramek
Automated Plot by.....XYNETICS 1201 Plotter (AHS)

1. INTRODUCTION

a. No unusual problems were encountered during office processing.

b. One 1:5,000 scale, three 1:10,000 scale, and one 1:20,000 and four 1:30,000 scale page size smooth sheets were generated during office processing and are attached to this report. These plots are considered the smooth plots for this survey.

c. Notes in the Descriptive Report were made in red during office processing.

2. CONTROL AND SHORELINE

a. Control is adequately discussed in sections H., I., and T. of the Descriptive Report.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83). Office processing of this survey is based on these values. The smooth sheet has been annotated with ticks showing the computed mean shift between the survey datum and the North American Datum of 1927 (NAD27).

To place the 1:5,000 scale plots 6 of 9 on the NAD27 move

the projection lines 0.856 seconds (26.361 meters or 5.28 mm at the scale of the survey) north in latitude, and 0.557 seconds (15.021 meters or 3.00 mm at the scale of the survey) west in longitude.

To place the 1:10,000 scale plots 4, 7 and 9 of 9 on the NAD27 move the projection lines 0.856 seconds (26.361 meters or 2.64 mm at the scale of the survey) north in latitude, and 0.557 seconds (15.021 meters or 1.50 mm at the scale of the survey) west in longitude.

To place the 1:20,000 scale plot 8 of 9 on the NAD27 move the projection lines 0.856 seconds (26.361 meters or 1.32 mm at the scale of the survey) north in latitude, and 0.557 seconds (15.021 meters or 0.75 mm at the scale of the survey) west in longitude.

To place the 1:30,000 scale plot 1, 2, 3, and 5 of 9 on the NAD27 move the projection lines 0.856 seconds (26.361 meters or 0.88 mm at the scale of the survey) north in latitude, and 0.557 seconds (15.021 meters or 0.50 mm at the scale of the survey) west in longitude.

b. There is no shoreline shown on the page size plots of this survey.

3. HYDROGRAPHY

a. Soundings at crossings are in agreement and comply with the criteria found in sections 4.6.1 and 6.3.4.3. of the HYDROGRAPHIC MANUAL.

b. The standard depth curves could be drawn in their entirety. Some brown curves were also drawn to delineate bottom relief.

c. The 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 requirements of the HYDROGRAPHIC MANUAL. The following should be noted:

The field unit mentions an active oil platform in the "Summary and Recommendations" for AWOIS Item #6976, Section N, page 57, of the Descriptive Report. The field unit did not locate or identify the oil platform at any time while operating in the immediate vicinity.

5. JUNCTIONS

There are no junctions with contemporary surveys for the data acquired during survey operations.

6. COMPARISON WITH PRIOR SURVEYS

H-5315 (1933)	1:40,000
H-5418 (1933)	1:40,000
H-8738 (1962-63)	1:40,000
H-8739 (1962-63)	1:80,000

The prior surveys listed above cover the present survey areas in their entirety.

Sheet 1 of 9 includes the investigation for AWOIS Item #344. Prior surveys H-8738 (1962-63) and H-8739 (1962-63) cover the entire area investigated. Present survey soundings are generally 1 to 2 feet (0^3 to 0^6 meter) deeper than the prior survey soundings.

Sheet 2 of 9 includes the investigation for AWOIS Items #396, #401, and #6979. Prior survey H-5315 (1933) covers the entire area investigated. Present survey soundings are generally 1-foot (0^3 meter) deeper than the prior survey soundings.

Sheet 3 of 9 is a single sounding on a sunken wreck with a least depth 10^5 meters. No meaningful comparison could be made with prior surveys.

Sheet 4 of 9 includes the investigation for AWOIS Items #6971, and #6972. Prior survey H-5418 (1933) covers the areas investigated. Present survey soundings are generally 1 to 2 feet shoaler in the vicinity of AWOIS Item #6971, and 1-foot (0^3 meter) deeper than the prior survey soundings in the vicinity of AWOIS Item #6972.

Sheet 5 of 9 includes the investigation for AWOIS Item #6973. Prior survey H-8738 (1962-63) covers the area investigated. Present survey soundings vary ±1-foot (0^3 meter) with prior survey soundings.

Sheet 6 of 9 includes the investigation for AWOIS Item #6973. Prior surveys H-5418 (1933) and H-8738 (1962-63) cover the area investigated. Prior survey H-5418 (1933) has been superseded by H-8738 (1962-63) within the common area of this item investigation.

Present survey soundings are generally 1 to 2 feet (0^3 to 0^6 meter) deeper than prior survey H-8738 (1962-63) soundings.

Sheet 7 of 9 includes the investigation for AWOIS Item #6975. Prior survey H-5418 (1933) covers the area investigated. Present survey soundings are generally 2 feet (0^6 meter) deeper than prior survey soundings.

Sheet 8 of 9 includes the investigation for AWOIS Item #6976. Prior surveys H-5418 (1933) and H-8738 (1962-63) cover the area investigated. Present survey soundings are generally 1 to 3 feet (0^3 to 1 meter) deeper than prior survey soundings. Prior survey H-8738 (1962-63) shows an oil well tower (TENNECO 180 A, 1963) within the area common to this item investigation. The hydrographer did not position or address this structure. The scaled position of this structure from the prior survey (adjusted to NAD 83) is latitude 29°21'58.3"N, longitude 93°10'57.7"W. The 1991 edition of the U.S. Coast Guard LISTING OF OFFSHORE OIL, GAS, MINERAL, AND RELATED STRUCTURES identifies the structure in the noted position as CH-WC-180-A and owned by Chevron.

Sheet 9 of 9 includes the investigation for AWOIS Item #6978. Prior survey H-5315 (1933) covers the area investigated. Present survey soundings are generally 1-foot (0^3 meter) deeper than the prior survey soundings.

The present survey is adequate to supplement the above prior surveys.

7. COMPARISON WITH CHART 11330 (5th Edition, July 30/88)
11344 (26th Edition, Mar. 5/88)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys, and miscellaneous sources. Discussion of and recommendations for the AWOIS items investigated are in Section N. of the Descriptive Report.

The present survey is adequate to supplement the charted hydrography.

b. Aids to Navigation

There are no fixed or floating aids to navigation in the areas investigated during present survey operations. An oil well tower is common to the area of AWOIS Item #6976. See sections 4. and 6. of this report.

8. COMPLIANCE WITH INSTRUCTIONS

This survey complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is a good side scan sonar survey. Additional field work is not recommended.

Deborah A. Bland
Cartographic Technician
Verification of Field Data

Robert G. Roberson
Supervisory Cartographer
Evaluation and Analysis

Robert R. Hill, Jr.
Cartographic Technician
Verification Check

APPROVAL SHEET
FE-347SS

Initial Approvals:

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 sheets 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 records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Maurice B. Hickson, III Date: January 26, 1993
Maurice B. Hickson, III
Cartographer
Atlantic Hydrographic Section

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Christopher B. Lawrence Date: January 27, 1993
Christopher B. Lawrence, CDR, NOAA
Chief, Atlantic Hydrographic Section

****

Final Approval:

Approved: J. Austin Yeager Date: 3/25/94
J. Austin Yeager
Rear Admiral, NOAA
Director, Coast and Geodetic

93° 18' 00"

93° 17' 00"

93° 16' 00"

93° 15' 00"

93° 14' 00"

93° 13' 00"

29° 12' 00"

29° 11' 00"

29° 10' 00"

29° 09' 00"

17⁷Obstr(steel ladder)

17⁸Obstr(tractor tire)

17⁷Obstr(steel cylinders)

17²Obstr(A)

17⁴Obstr(steel tank)

17⁹Obstr(wire rope)

FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
AUG 9 - AUG 28, 1990
SCALE: 1 : 30,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 1 OF 9
AWOIS ITEM# 344

(A) Depths on these obstructions were estimated by scaling heights off the bottom from side scan sonar records. Positions were determined by computing offsets from the vessel's track.

93° 13' 00"

29° 10' 00"

NAD 27

XYNETICS 1201

✓DAB 11-8-91

93° 06' 00"

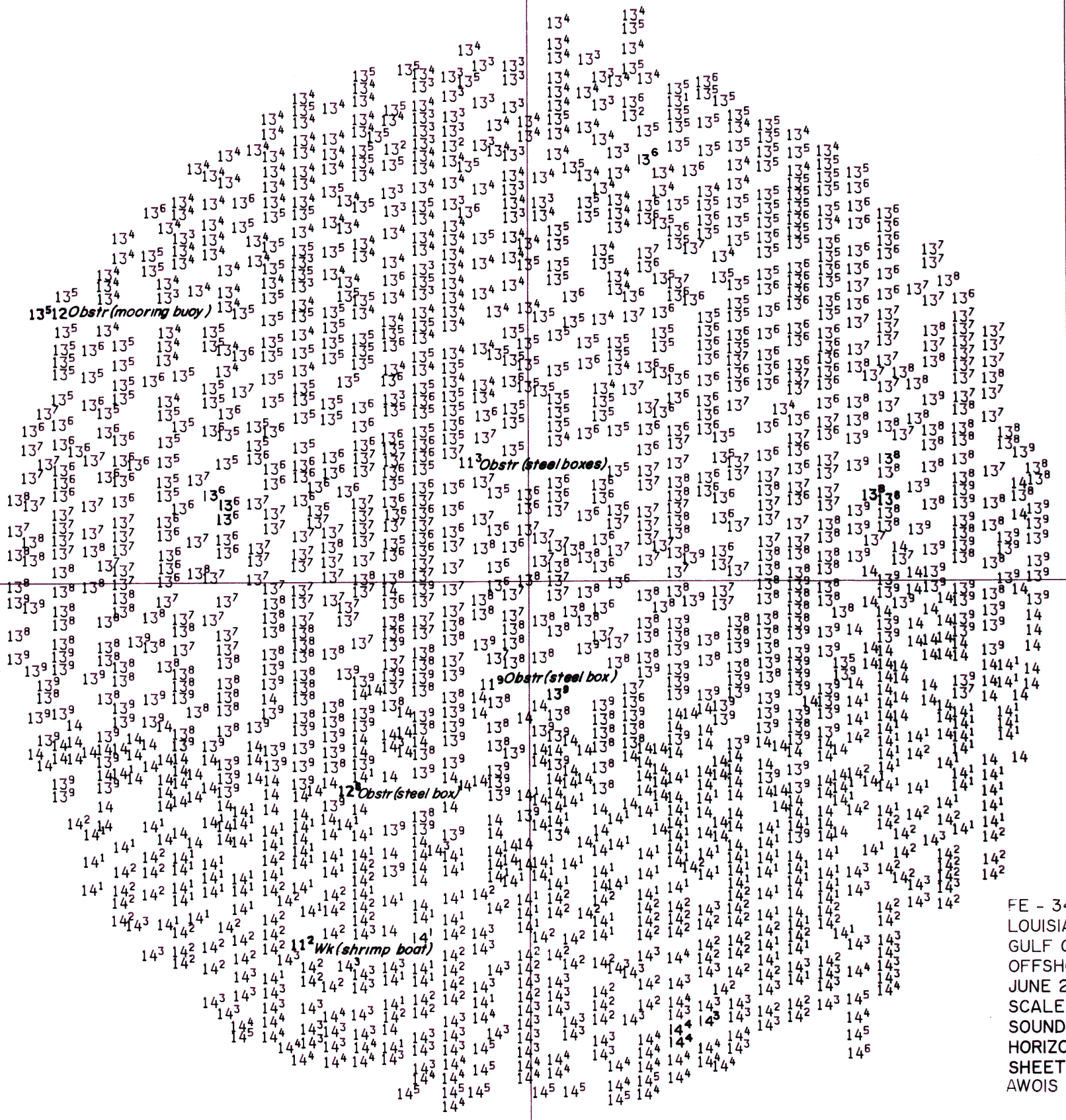
93° 04' 00"

93° 02' 00"

29° 30' 00"

29° 28' 00"

29° 26' 00"



FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JUNE 26 - AUG 29, 1990
SCALE: 1 : 30,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 2 OF 9
AWOIS ITEMS# 396, 401, AND 6979

93° 00' 00"

29° 26' 00"

NAD 27

XYNETICS 1201

DAB 11-18-91

93° 06' 00"

93° 04' 00"

29° 26' 00".

10^5 *Wk (20m steel-hulled vessel)*

FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JULY 20, 1990
SCALE: 1 : 30,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 3 OF 9

93° 04' 00"

NAD 27

29° 24' 00"

29° 24' 00"

XYNETICS 1201
✓DAB 11-19-91

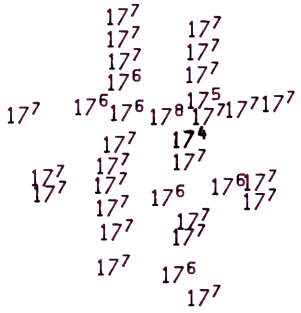
93° 07' 30"

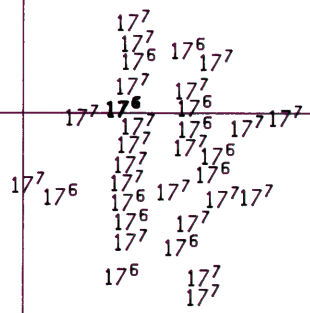
93° 07' 00"

29° 16' 30"

29° 16' 00"

29° 15' 30"





FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JUNE 20, 1990
SCALE: 1 : 10,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 4 OF 9
AWOIS ITEMS# 6971 AND 6972

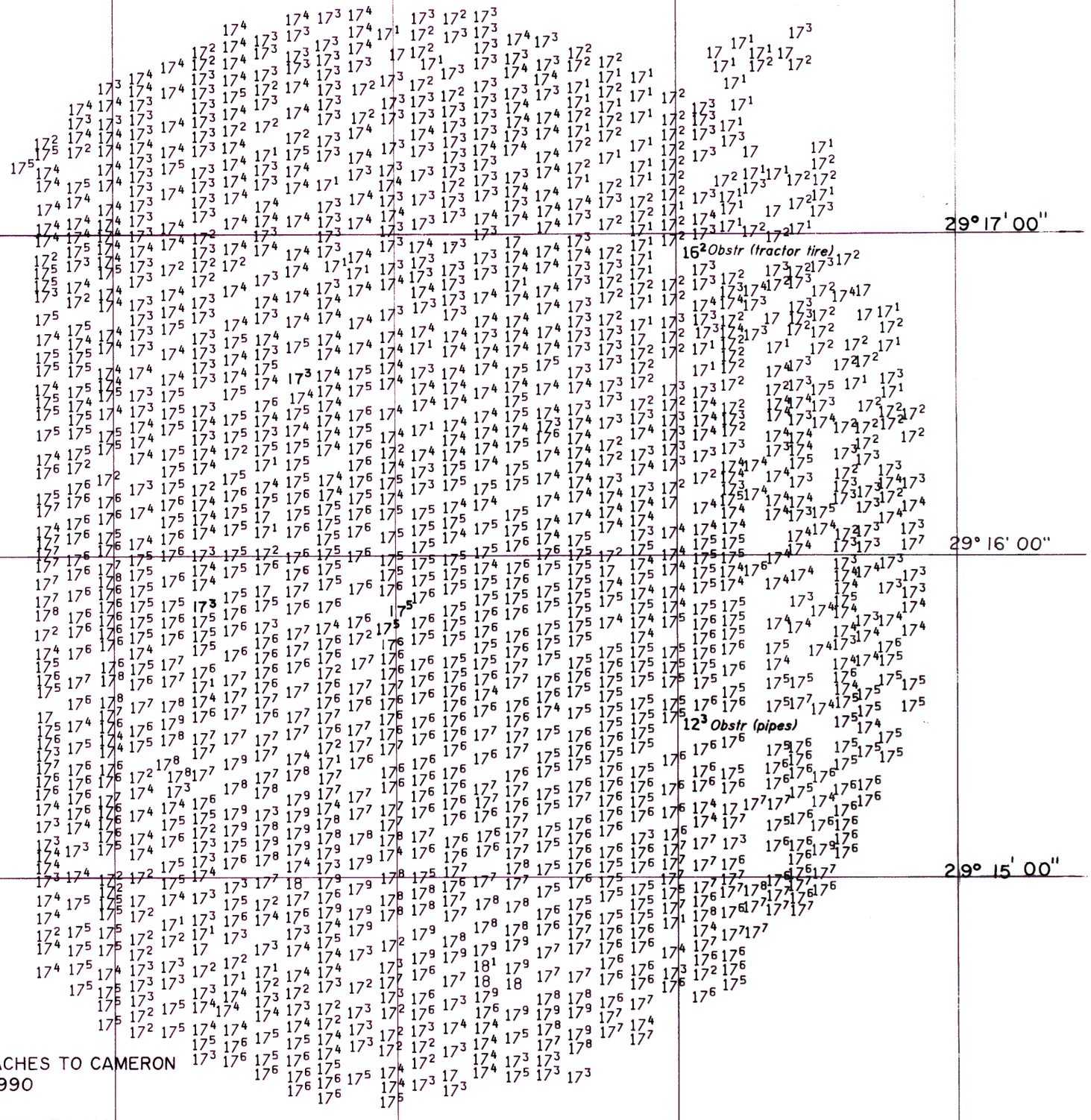
93° 07' 00"

NAD 27 29° 15' 30"

XYNETICS 1201

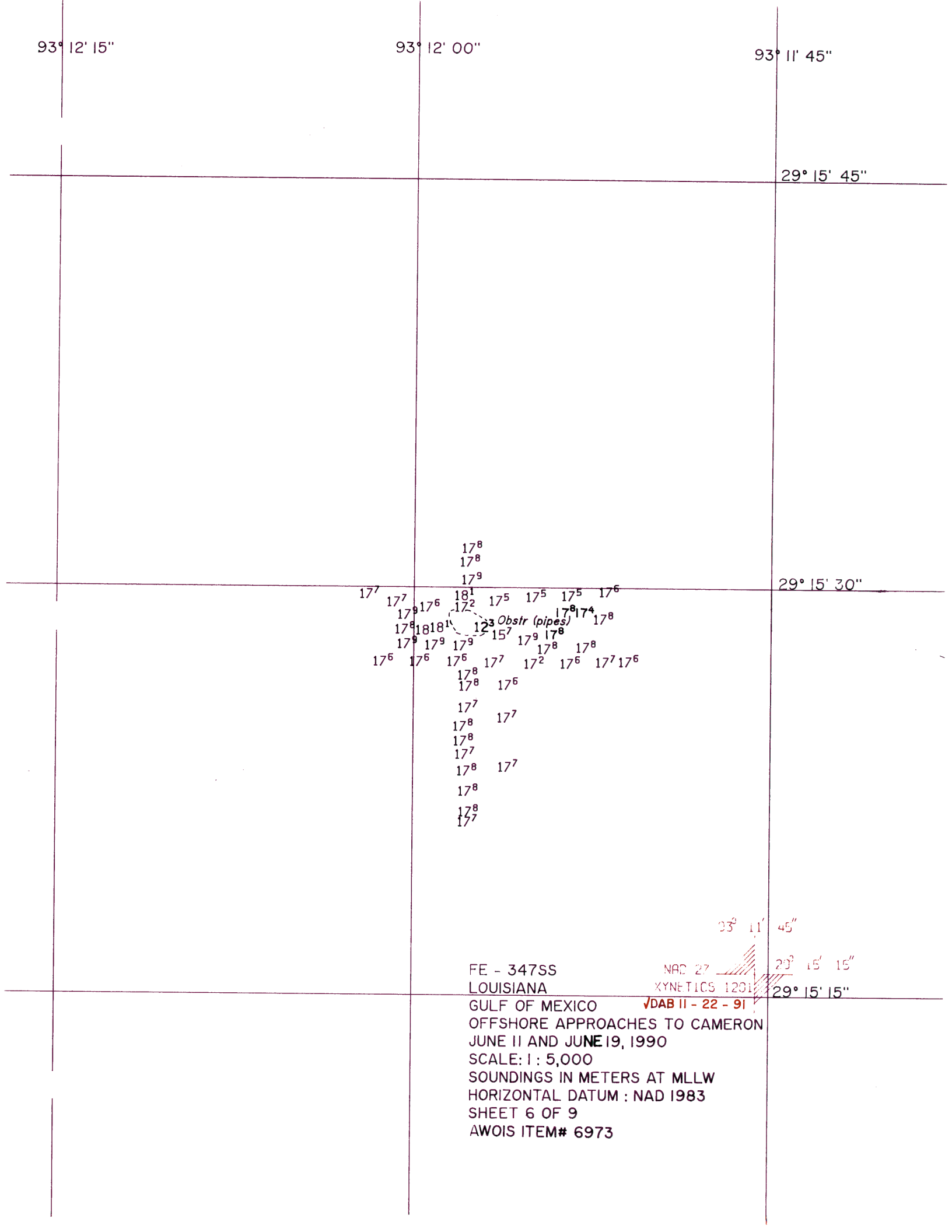
√DAB 11-20-91

93° 15' 00"
93° 14' 00"
93° 13' 00"
93° 12' 00"
93° 11' 00"
29° 18' 00"
29° 17' 00"
29° 16' 00"
29° 15' 00"
29° 14' 00"



FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JUNE 11 - JULY 17, 1990
SCALE: 1 : 30,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 5 OF 9
AWOIS ITEM# 6973

93° 11' 00"
29° 14' 00"
NAD 27
KYNETICS 1201
√DAB 11 - 21 - 91



FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JUNE 11 AND JUNE 19, 1990
SCALE: 1 : 5,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 6 OF 9
AWOIS ITEM# 6973

93° 03' 30"

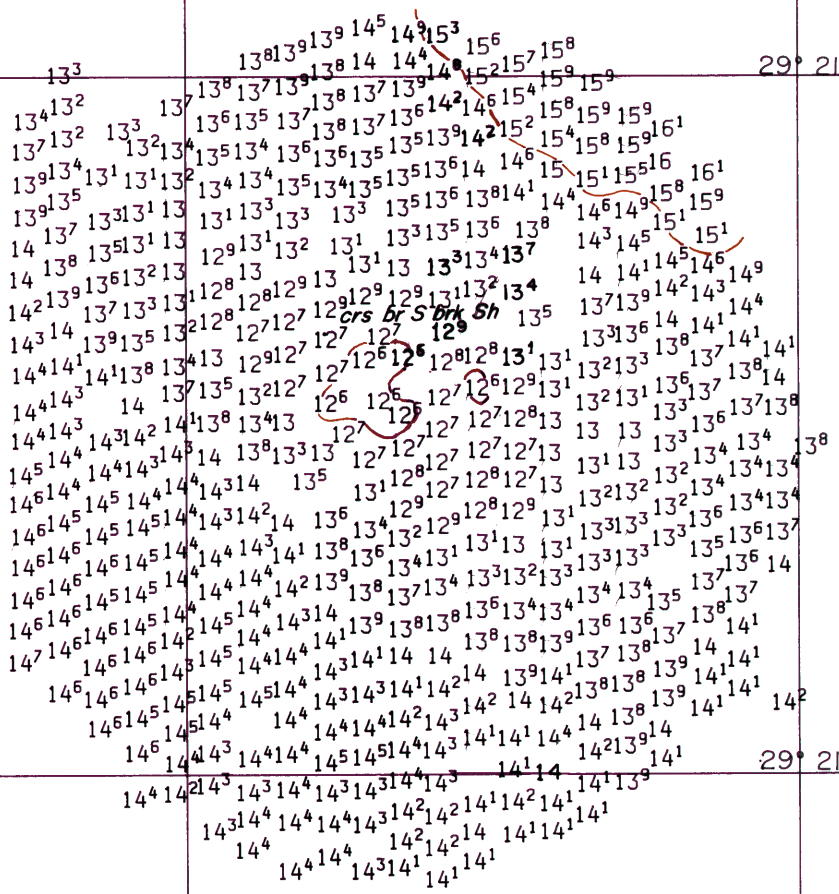
93° 03' 00"

93° 02' 30"

29° 21' 30"

29° 21' 00"

29° 20' 30"



FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JUNE 21, 1990
SCALE: 1 : 10,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 7 OF 9
AWOIS ITEM# 6975

93° 02' 30"

NAD 27 29° 20' 30"

XYNETICS 1201

✓DAB 12 - 2 - 91

93° 12' 00"

93° 11' 30"

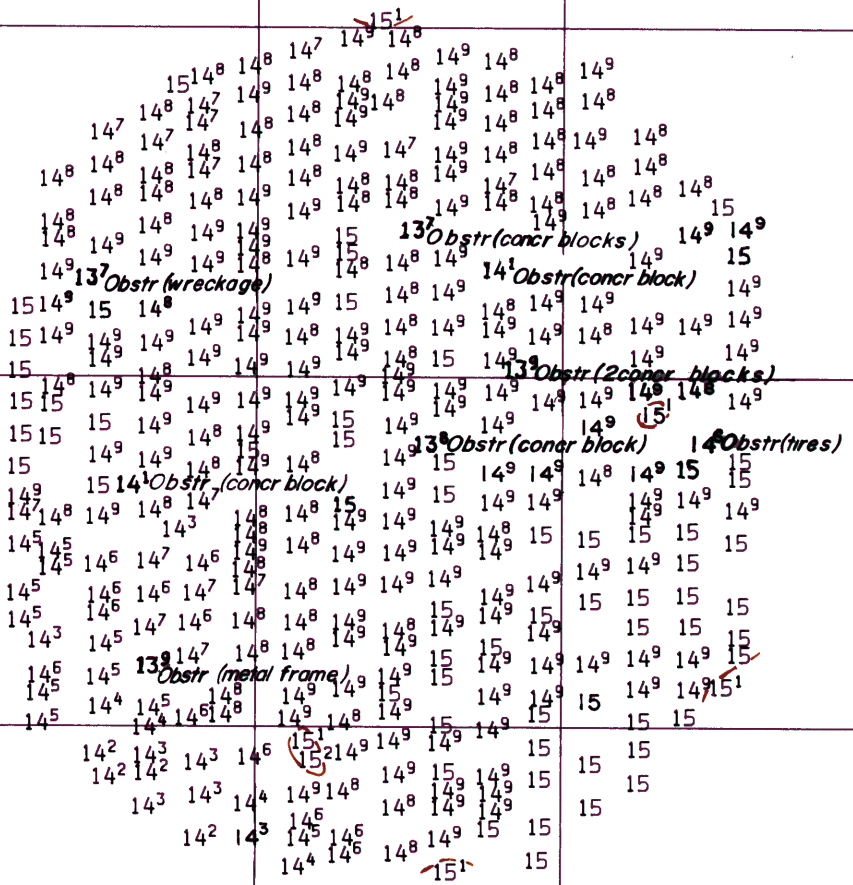
93° 11' 00"

93° 10' 30"

93° 10' 00"

29° 23' 30"

29° 23' 00"



29° 22' 30"

29° 22' 00"

29° 21' 30"

93° 10' 00"

23° 21' 30"

NAD 27

XYNETICS 1201
√DAB 12 - 6 - 91

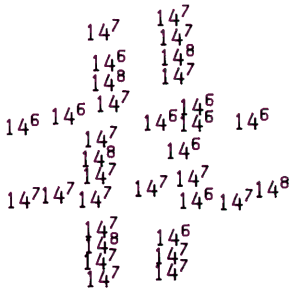
29° 21' 00"

FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JUNE 27 - AUG 1, 1990
SCALE: 1 : 20,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 8 OF 9
AWOIS ITEM# 6976

93° 07' 00"

93° 06' 30"

29° 25' 30"



29° 25' 00"

FE - 347SS
LOUISIANA
GULF OF MEXICO
OFFSHORE APPROACHES TO CAMERON
JUNE 27 AND JULY 25, 1990
SCALE: 1 : 10,000
SOUNDINGS IN METERS AT MLLW
HORIZONTAL DATUM : NAD 1983
SHEET 9 OF 9
AWOIS ITEM# 6978

93° 00' 30"

NAD 27 29° 24' 30"

XYNETICS 1201

DAB 12 - 6 - 91

29° 24' 30"

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

Hydrographic Index No. 88 E

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-347SS

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
11344	9/28/93	L. Ackerman	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. Appl in Full
11345	9/28/93	L. Ackerman	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. Applied in Full DWG #42
~ 11330	9/28/93	L. Ackerman	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. Appl in Full DWG # 9
11340	10/5/94	Mark D. Tiffin	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. DWG # 75
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED