

10383

10383

Diagram No. 1115-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Side Scan Sonar
Field No. HE-20-3-91
Registry No. H-10383

LOCALITY

State Florida
General Locality Gulf of Mexico
Sublocality Southwestern Approaches
to Pensacola Bay
1991
CHIEF OF PARTY
LCDR S.R. Iwamoto

LIBRARY & ARCHIVES

DATE May 6, 1993

☆U.S. GOV. PRINTING OFFICE: 1985-566-054

CP-5
11382
11360
11006
411

HYDROGRAPHIC TITLE SHEET

H-10383

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.

HE-20-3-91

State FLORIDA

General locality GULF OF MEXICO

Locality SOUTHWESTERN APPROACHES TO PENSACOLA BAY

Scale 1:20,000

Date of survey June 5 - July 29, 1991

Instructions dated March 4, 1991

Project No. OPR-J452-HE

Vessel NOAA Ship HECK (EDPN 9140)

Chief of party LCDR Stanley R. Iwamoto, NOAA, Commanding Officer, HECK

Surveyed by LCDR Iwamoto, LT Moeller, LT(jg) Harbison, ENS. Martin, ST Morris

Soundings taken by echo sounder, ~~PAROSOUND~~ HAND LEADLINE

Graphic record scaled by LCDR Iwamoto, LT Moeller, LT(jg) Harbison, ENS. Martin, ST Morris

Graphic record checked by LT(jg) Harbison

Protracted by _____

Automated plot by HDAPS (FIELD)

Verification by ATLANTIC HYDROGRAPHIC SECTION PERS

Soundings in meters ~~feet~~ at MLLW

REMARKS: All times UTC.

200% Side Scan coverage in depths less than 20 meters, 100% Side Scan coverage in depths greater than 20 meters.

Data submitted to Atlantic Hydrographic Section, N/CG244

NOTES IN RED WERE MADE DURING OFFICE PROCESSING.

SURF/AWOIS chk 6/21/93
MCR

SC JAN 29 1997

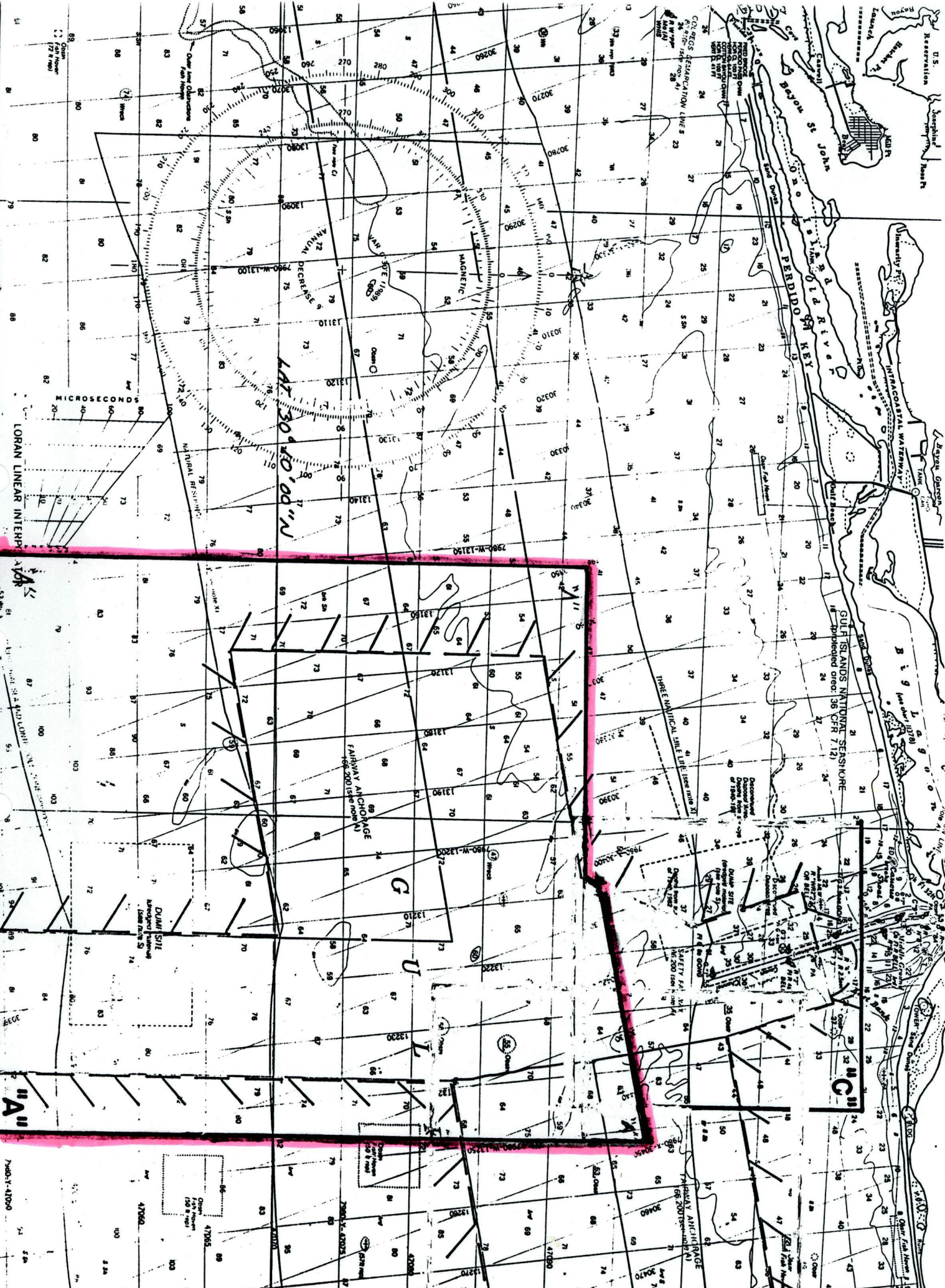
RWW RWW.

CHART 11502 8730

25

2081° 20' 00" W

7500-1-41000



U.S. Coast and Geodetic Survey

7500-1-41000

DESCRIPTIVE REPORT APPENDICES

- I. DANGER TO NAVIGATION REPORTS
- * II. NON-FLOATING AIDS AND LANDMARKS FOR CHARTS
- III. LIST OF HORIZONTAL CONTROL STATIONS
- * IV. GEOGRAPHIC NAMES (FIELD)
- * V. TIDES AND WATER LEVELS
- * VI. SUPPLEMENTAL CORRESPONDENCE
- VII. APPROVAL SHEET

SEPARATES TO BE INCLUDED WITH SURVEY DATA

- * I. HYDROGRAPHIC SHEETS AND PARAMETERS
- * II. BOTTOM SAMPLES
- * III. HORIZONTAL POSITION CONTROL AND CORRECTIONS TO POSITION DATA
- * IV. SOUNDING EQUIPMENT CALIBRATIONS AND CORRECTIONS
- * V. SIDE SCAN SONAR DATA
- VI. ITEM INVESTIGATION DATA

** filed with the original Survey Data.*

DESCRIPTIVE REPORT TO ACCOMPANY
SURVEY H-10383
FIELD NUMBER HE-20-3-91
FLORIDA
GULF OF MEXICO
SOUTHWESTERN APPROACHES TO PENSACOLA BAY
Scale 1:20,000
NOAA SHIP HECK S-591
LCDR Stanley R. Iwamoto, NOAA, CMDG

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-J452-HE, Approaches to Pensacola, Florida, dated March 4, 1991, and Change 1 dated 12 July 91.

The purpose of this project is to provide updated information in response to requests by the U.S. Navy for their Strategic Homeporting Plan and by the U.S. Coast Guard to investigate several dangers to navigation.

B. AREA SURVEYED

The survey area, designated Sheet A in the Project Instructions, lies in the Gulf of Mexico south and west of the entrance to Pensacola Bay. The actual survey was divided into two field sheets due to the size of the area. Sheet A-1 covers the northern end of the survey area while sheet A-2 covers the southern area. The total survey area is an "L" shaped irregular polygon formed by connecting, in order, the following points:

- | | |
|---------------------|-------------------|
| 1. LAT 30°13'46.8"N | LON 087°22'40.8"W |
| 2. LAT 30°14'48.0"N | LON 087°16'12.0"W |
| 3. LAT 30°12'37.2"N | LON 087°15'40.8"W |
| 4. LAT 30°06'00.0"N | LON 087°15'43.2"W |
| 5. LAT 30°06'00.0"N | LON 087°18'00.0"W |
| 6. LAT 30°10'06.0"N | LON 087°18'00.0"W |
| 7. LAT 30°09'19.2"N | LON 087°22'40.8"W |

Survey operations began on June 5, 1991 (DOY 156), and were completed on July 29, 1991 (DOY 210).

C. SURVEY VESSELS

All hydrographic data were collected by the NOAA Ship HECK (EDP 9140). No unusual vessel configurations were used.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

Survey data acquisition and processing were accomplished utilizing the HDAPS system hardware and the latest version of the NAVITRONIC NAVISOFT 300 software provided to the ship by N/CG24. A listing of actual programs and versions is appended in Section VI.

E. SONAR EQUIPMENT

HECK is equipped with an EG&G model 260 slant range corrected Side Scan Sonar (SSS) recorder and model 272 dual frequency towfish. Serial numbers and dates of usage are as follows:

Towfish	S/N 10823	DOY 156 - 191
Recorder	S/N 012106	DOY 156 - 191
Recorder	S/N 012104	DOY 210

The beam width and down angle are not adjustable on this unit. All SSS data was collected using the 50, 75, 100, and 150 meter range scale and 100 Khz frequency. Line spacing of 160 meters was used on the 100 meter scale and spacing of 260 meters was used on the 150 meter range scale to maintain the required 2mm of adjacent line overlap.

Confidence checks were obtained, and annotated on the sonargrams, by towing the side scan unit either past known items or linear bottom features. A minimum of two confidence checks were obtained on a daily basis as required.

Required proof of sonar coverage is demonstrated through the included sonar coverage plots. The hydrographer chose this method in lieu of the sonar coverage abstract. The choice of method is left to the hydrographer per Side Scan Sonar Manual section 3.1.3.

The sonar contact list (Side Scan Sonar Manual 3.1.1.1.) is provided through the HECK's modified contact abstract table and the automated HDAPS contact printout that is produced during the computation and logging of contacts. Both are located in the separates.

Thirteen contact tables were used during this survey. In order to prevent confusion all items were assigned a unique target number (1 - 296) which was logged in the remarks column on the contact table, in the target number column of the side scan sonar abstracts, and on the contact plot. Some contacts have more than one target number from successive hits during 200% coverage, developments, and detached positions. In this case the targets plotted on top of each other, however, the recommended charting positions were derived from their DP's.

During side scan operations on DOY 176 the side scan range was accidentally started on the 100 meter setting. This error was almost immediately caught and corrected. During post processing it was discovered that this error left a 20 x 20 meter hole in the 200% coverage of that particular area. The HECK feels that this holiday does not detract from the over all quality of the survey.

The northern most swath of sheet (A-1) was run so that half of the swath would lay outside of the survey area (specifically to the North). This was done so that the swath of the second 100% for that line would lay entirely within the survey boundaries. Therefore, 200% coverage was attained up to the northern edge of sheet (A-1).

F. SOUNDING EQUIPMENT

The following Raytheon DSF-6000N echosounders were used during this survey:

S/N A107	DOY 156 - 157
S/N A110N	DOY 157 - 210

Both low and high frequency depths were digitized, but only high frequency depths were plotted. During data collection on DOY 157 (pos. 120+1-122) the high frequency trace on the echosounder stopped recording. The initial response was to replace the existing echo sounder (A107) with the back-up unit (A110N). The swapping of echosounders did not correct the problem so data collection shifted to the low frequency signal for positions 123 - 182. The high frequency problem was found to have been caused by the accidental switching on of the DSF testing unit. The situation was corrected after arrival in port. The test set was then modified to prevent recurrence.

A leadline was used to measure all diver least depths. Good diving visibility (>80 ft) allowed scope to be eliminated. Comparison sheet is appended.

G. CORRECTIONS TO ECHOSOUNDINGS

The following table shows dates and locations of velocity casts conducted using the ODOM Digibar sound velocimeter (S/N 168):

VELOCITY TABLE	DATE	LOCATION	
1	05/06/91 (DOY 156)	30°12'30"N	087°17'54"W
4	21/06/91 (DOY 172)	30°07'00"N	087°17'00"W

The velocity cast data were reduced and velocity corrections calculated using program VELOCITY. The computed velocity correctors were then applied on line to echosounder depths (both

high and low frequency) by entering the correction data into the HDAPS sound velocity table.

On DOY 108 a dual leadline comparison was conducted and resulted in a mean difference of 0.040 meter or a corrector of 0.0 meter.

The static draft of 2.10 meters was applied on line to all echosoundings via the HDAPS offset table.

Settlement and squat correctors for the HECK were determined on March 13, 1991 (DOY 72), in the vicinity of Craney Island fuel pier in Norfolk, Virginia using the level rod method.

Settlement and squat values were applied on line to hydrographic soundings via the HDAPS offset table.

Heave is measured by a Datawell B.V. (S/N 19110-C) heave, roll, and pitch sensor (HIPPY) located midships near the transducer. The sensor gathers on line data which is applied to the soundings in near real time. All data, except for the following, acquired in the echosounder mode have been corrected by applying HIPPY correctors. The HIPPY was not functioning properly during eight days of surveying resulting in uncorrected data. These days were:

DOY 156 (pos. 34-117)
DOY 157 (pos. 118-182)
DOY 162 (pos. 183-~~197~~)²⁹¹
DOY 163 (pos. 292-553)
DOY 164 (pos. 554-732)
DOY 169 (pos. 733-811)
DOY 170 (pos. 812-1060)
DOY 171 (pos. 1061-1262)

All of the above positions were manually scanned during post survey processing. A solution to the problem was found after position #1262 and all data recorded after that point contains heave correctors.

The tidal datum for this survey was mean lower low water (MLLW). The tide station at Municipal Pier, Pensacola, Florida was the reference station for this survey. The station was maintained under contract by Chapin and Assoc. and observed by Eilene Beard (904) 433-4319. Contact with the observer was made and the station inspected by HECK's crew member. No tide stations were established by the HECK in support of this survey.

All hydrographic depths have been corrected for predicted tides using the zone correctors specified in the project instructions. Tidal correctors were applied on line via the HDAPS predicted tide table.

H. CONTROL STATIONS

The horizontal datum for this project is the North American Datum of 1983 (NAD 83). Three temporary stations were established by HECK personnel using standard geodetic methods and instruments. Those stations were:

Number	Station	Method
102	- PECOLA LIGHT (temp) <i>1991</i>	Tape Dist/Measured Azimuth
105	- SANS SOUCI (temp) <i>1991</i>	T2 Resection
101	- VISTA DEL MAR (temp) <i>1991</i>	Direct T2 Azimuth/EDM Dist.
115	- SANS SOUCI (temp) <i>1991</i>	T2/EDM Traverse

The records and Horizontal Control Report for these stations were submitted to N/CG23322, Coastal Surveys Unit. Computations by Coastal Surveys found that SANS SOUCI (temp) did not close so a traverse was conducted and a correct position determined. The position from the traverse was significantly different from the position previously used. The signal list was updated to the new position and a new station number (115) assigned to SANS SOUCI (temp). Field records for this traverse have been forwarded to N/CG23322.

One existing published station, H-73-FL-80, was used.

A list of the horizontal control stations appears in ~~appendix III~~, LIST OF HORIZONTAL CONTROL STATIONS submitted with this survey. *Appended to this report.*

I. HYDROGRAPHIC POSITION CONTROL *See also section 2.2. of the Evaluation Report.*

Position control was multiple LOP, utilizing Motorola Mini-Ranger shore stations. Control station positions were entered into the HDAPS Control Station Tables. (See APPENDIX III, LIST OF HORIZONTAL CONTROL STATIONS). The appropriate Mini-Ranger codes were attached to the station number on this table. On DOY 171 M/R code "5" s/n E-2922 was moved from station 103 to station 105 in order to fix a high residual problem that was appearing on the project. On DOY 175 a new code 8 s/n F-3292 was baselined with R/T 2914 and RPU D-0018. Code 8 was then placed on station 103. The first use of this configuration occurred on DOY 176. This did not correct the problem. The problem turned out to be the geographic position used for station 105. The geographic position was later corrected and appears as station 115 from DOY 189 to the end of the survey. The old code 8 s/n E-2909 was returned to AMC for repair. The ship received an additional remote for baselining on DOY 175. This code turned out to be inoperable and had to be sent back. Each time the survey navigation configuration was altered, the control station and C-0 tables were modified to reflect the correct Mini-Ranger code placement/Baseline Corrector values.

Equipment serial numbers appear as part of the header information on each days data print out. The Falcon remote units are identified by their position and code numbers.

System checks were conducted in accordance with the Field Procedures Manual and appear as HDAPS screen dumps on the data printouts.

All survey offsets were applied on-line using the HDAPS Offset Table number 1.

At no time during this project did the maximum residual consistently exceed 0.5 mm at the survey scale (10 meters) nor did the 95% confidence ECR consistently exceeded 1.5 mm at the survey scale (30 meters). Data not meeting these requirements were examined and high residuals either accepted or smoothed and high ECR's smoothed or rejected.

J. SHORELINE *See also section 2.b. of the Evaluation Report*

Not applicable as per project instructions.

K. CROSSLINES *See also section 3. of the Evaluation Report*

23.1 miles of crosslines were run on this survey and they represent 4.0% of all hydrography. Comparison to mainscheme soundings showed good agreement with random differences of ± 0.2 meters.

L. JUNCTIONS *See also section 5. of the Evaluation*

Two sounding overlap was maintained with H-10375^{AND H-10387} and between sheets A-1 and A-2. All soundings agreed within ± 0.3 meters.

M. COMPARISON WITH PRIOR SURVEYS *See section 6. of the Evaluation Report*

Comparisons were made to prior survey H-9971, 1981-82, 1:20,000.

Comparisons showed excellent agreement with the majority of survey soundings 0 to 2 feet shoaler than the prior survey. Several new areas of shoaling have developed within the boundaries of the dredge spoil located on sheet (A-2). One shoal on the western edge of the sheet was further developed and a least depth determined. This shoal was developed on DOY 191 by running line splits between fixes 1674 and 1683. The shoal rises to 58 feet at fix 1361+75, in an area of 71 to 75 foot charted depths.* A danger to navigation report for this shoal was submitted on 1 July. All of the above shoals are most likely due to dredge spoil dumping that has occurred over the last two years.

* Vicinity of Lat: $30^{\circ}08'30''N$, Long: $87^{\circ}18'00''W$

N. COMPARISON WITH THE CHART

Comparison of surveyed soundings were made to NOS chart 11382, 32nd edition, Nov/90. The soundings agreed well with the charted soundings ~~✓~~ consistently 0 to 3 feet shoaler than the survey.

WHICH ARE

Two danger to navigation reports were submitted as a result of this survey. Copies appended. ✓

Two hundred ninety six (296) contacts were identified during this survey. Thirty two (32) targets were identified as warranting additional investigation based on either their height off the bottom ($\geq .5$ meters in < 20 meters of water or $\geq .7$ meters in > 20 meters of water) or their appearance. All such contacts were investigated with additional side scan coverage and/or divers. The following is the list of targets with associated investigation results and recommendations:

TARGET

NARRATIVE

7

Target 7 is identified on contact table 1 as position number 55.25/item number 7, with a computed height off the bottom of 2.1 meters (6.9ft) in 18.7 meters (61.4ft) of water. The HECK did not do any further side scan development because of the size of the target. The target was investigated on DOY 189 at position number (1588) utilizing divers from the NOAA ship MT MITCHELL. The divers found several household type washing machines. These and other items are used to construct the private artificial fishing reefs that litter the bottom in this area. A least depth of ~~18.0~~ ^{17.7} meters (~~58~~ ⁵⁸ ft) and height off the bottom of .6 meters (1.9ft) was obtained at the following position:

LAT $30^{\circ}14'01.²¹8''N$ LON $087^{\circ}20'40.⁶⁹4''W$
E 50890.3 N 25906.7
LORAN w:13170.5 x:470770.4y:30364.6 z:64063.9

Recommendation: This item is non-dangerous and should not be charted. *Do NOT CONCUR. Chart as shown on the present survey*

21

Target 21 is identified on contact table 1 as position number 98.58/item number 21, with a computed height off the bottom of 0.5 meters (1.6ft) in 19.0 meters (62.4ft) of water. This target was further investigated with side scan sonar on DOY 190 between positions 1621 and 1623 on the 75 meter range scale. The target was determined to be insignificant and further investigation was not needed. The target is located at the following position:

LAT $30^{\circ}14'22.4''N$ LON $087^{\circ}16'35.7''W$
E 57441.3 N 26555.9

Recommendation: This item is insignificant and should not be charted. *Concur.*

25

Target 25 is identified on contact table 1 as position number 106.48/item number 25, with a computed height off the bottom of 0.7 meters (2.3ft) in 19.8 meters (65ft) of water. This target was further investigated with side scan sonar on DOY 190 between positions 1623 and 1626 using the 75 meter range scale. The target was found to be insignificant and further investigation was not needed. The target is located at the following position:

LAT 30°13'57.2"N LON 087°18'47.7"W
E 53911.6 N 25782.2

Recommendation: This item is insignificant and should not be charted. *Concur*

27

Target 27 is identified on contact table 1 as position 111.25/item number 27, with a computed least depth of 0.7 meters (2.3ft) in 20.1 meters (66.0ft) of water. This target was further investigated with side scan sonar on DOY 190 between positions 1631 and 1632 using the 75 meter range scale. The target was found to be insignificant and further investigation was not needed. The target is located at the following position:

LAT 30°13'43.7"N LON 087°20'08.9"W
E 51740.4 N 25367.6

Recommendation: This item is insignificant and should not be charted. *Concur*

28

Target 28 is identified on contact table 1 as position number 114.56/item number 28, with a computed height off the bottom of 1.4 meters (4.6ft) in 18.1 meters (59.4ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1593 and 1594 using 75 meter range scale. A hydro least depth of ~~16.8~~^{17.4} meters (~~55.2~~^{57.3}ft) was obtained at position 1593 + 2. Further investigation beyond this point was not needed. The target is located at the following position:

LAT 30°13'~~29.6~~^{30.20}"N LON 087°21'~~51.7~~^{50.40}"W
E 48991.3 N 24934.7

Recommendation: This item is non-dangerous and should only be plotted as a point sounding of ~~55~~⁵⁷ feet. *Concur*
(17.4 METERS)

38

Target 38 is identified on contact table 2 as position number 140.47/item number 9, with a computed height off the bottom of 0.5 meters (1.6ft) in 19.4 meters (63.7ft) of water. This target was further investigated with side scan sonar on DOY 190 between positions 1627 and 1630 using 75 meter range scale. A hydro least depth of ~~18.9~~^{19.8} meters (62.3ft) was obtained. Further investigation beyond this point was not needed. The target is located at the following position:

LAT 30°13'42.⁵⁸8"N LON 087°19'11.^{09.89}8"W
E 53266.4 N 25344.0

Recommendation: This item is insignificant and should not be charted. *Concur. Shown on the present survey as a 19M SONOING*

53

Target 53 is identified on contact table 3 as position number 195.22/item number 9, with a computed height off the bottom of 1.0 meters (3.28ft) in 18.7 meters (61.4ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1604 and 1609 using 75 meter range scale. This target was found to be insignificant and investigation beyond this point was not needed. The target is located at the following position:

AWOIS
8595

Pos #90003
LAT 30°12'56.²⁶8"N LON 087°21'58.⁶⁶8"W
E 48804.0 N 23908.4

Recommendation: This item is insignificant and should not be charted. *Do NOT Concur. Chart as a 17.6M Obstr (A) as shown on the present survey should the scale of the chart allow.*

64

AWOIS
#1772

Target 64 is identified on contact table 3 as position number 236.25/item number 20, with a computed height off the bottom of 3.1 meters (10.2ft) in 19.2 meters (62.9ft) of water. This target is definitely AWOIS 1772. This target was further investigated by ship's divers on DOY 164 and 178 and was found to be the remains of a sunken barge. A least depth of 16.1 meters (52.8ft) was found using lead line. The divers were able to see the surface from the top of the barge, therefore, the lead line was used to measure the least depth. The target is located at the following position:

Pos #91C
LAT 30°13'09.^{08.00}1"N LON 087°19'23.³⁴8"W
E 52957.8 N 24266.4
LORAN w:13202.1 x:47086.0 y:30393.3 z:64084.4

Recommendation: This item is AWOIS 1772 and is significant. The chart should be revised to reflect the above corrected position and least depth of the AWOIS item. *Concur.*

65

Target 65 is identified on contact table 3 as position 211.3/item number 21, with a computed height off bottom of 1.8 meters (5.9ft) in 21.4 meters (70.3ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1559 and 1566 using 50 meter range scale. This target was found to be insignificant and investigation beyond this point was not needed. The target is located at the following position:

LAT 30°13'56.⁸⁰"N LON 087°16'04.^{3.43}"W
E 58263.2 N 25761.3

Recommendation: This item is insignificant and should not be charted. *Concur. Show on the present survey as 21.24 sounding.*

74

Target 74 is identified on contact table 4 as position number 306.38/item number 7, with a computed height off the bottom of 0.1 meters (.33ft) in 19.9 meters (65.3ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1546 and 1549 using 50 meter range scale. This target is located at the center of the circle for awois 7080. Ship's divers dove on the target to identify it as directed in the project instructions. This was the only significant target within the search area. 200% side scan coverage was accomplished. The item was identified as the wing section and landing gear of a WW II vintage aircraft. The wing was lying flat with the landing struts sticking straight up. The divers obtained a least depth over the landing gear of ~~19.0~~^{18.4} meters (62.⁸ ft) with a height off the bottom of 1.0 meters (3.28ft). The original AWOIS item was an uninvestigated hang, therefore it is believed that the target found is the AWOIS item. This item is located at the following position:

Pos. #1550
LAT 30°13'19.7⁶"N LON 087°16'19.⁰²"W
E 57886.8 N 24626.7
LORAN w: 13233.6 x: 47087.1 y: 30424.9 z: 64084.7

Recommendation: Revise the charted *Obst with a wire drag clearance depth of 53 ft (16.8 m)* symbol to a Non-dangerous obstruction, least depth 18.⁸⁴ meters (62ft) at the surveyed position. *Concur.*

84

Target 84 can be identified on contact table 4 as position number 440.³/item number 16, with a computed height off the bottom of 1.5 meters (4.9ft) in 20.9 meters (68.6ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1585 and 1586 using 75 meter range scale. This target was found to be insignificant and investigation beyond this point was not needed. The target is located at the following position:

LAT 30°12'20.⁴³8"N LON 087°17'10.³¹23"W
E 56516.8 N 22795.2

Recommendation: This item is insignificant and should not be charted. *Concur, shown as a 20.9m sounding on the present survey*

119

*AWOIS
#7081*

Target 119 can be identified on contact table 6 as position number 698.34 item number 1, with a computed height off the bottom of 0.1 meters (0.3ft) in 20.6 meters (67.6ft) of water. This target fell on the very outer edges of AWOIS 7081 and was further investigated with side scan sonar on DOY 210 using the 75 meter range scale. No other targets were found in this area and target 119 was only seen one time. The investigation of target consisted of a side scan pass without the ship's positioning system recording to the side scan. Nothing was found and the target was determined not to exist. The target's computed position is:

LAT 30°13'17.1"N LON 087°18'35.4"W
E 54240.6 N 24545.8

Recommendation: Complete 200% side scan coverage was accomplished of AWOIS 7081 and nothing was found. AWOIS 7081, charted as a "Submerged Dangerous Wreck", is considered disproved and should be removed from the chart. *Do not concur. See section 6.b.1) of the Evaluation Report.*

133

*AWOIS
#7079*

Target 133 can be identified on contact table 6 as position number 730.78/item number 15, with a computed height off the bottom of 0.0 meters (0.0ft) in 19.5 meters (64.0ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1551 and 1554 using 50 meter range scale. This target is located close to the center of the circle for awois 7079. This was the only significant target within the search area. 200% side scan coverage was accomplished. Ship's divers dove on the target to identify it as directed in the project instructions. The item was identified as a cowling and engine from a WW II era plane. The item has least depth of 19.¹ meters (6².7ft) and a height of the bottom of .33 meters (1.1ft). The item is located in the following position:

Pos. #1554 ⁶⁷
LAT 30°13'39.⁶⁷8"N LON 087°17'20.⁵⁵8"W
E 56241.7 N 25240.0
LORAN w:13223.6 x:47088.7 y:30416.0 z:64084.5

Recommendation: This item is believed to be AWOIS 7079. It is non-dangerous and has insignificant height, therefore, the charted symbol should be removed from the chart. *Concur, shown as a 19.1m Obsta (AIRCRAFT DEBRIS) on the present survey.*

147

Target 147 can be identified on contact table 6 as position number 607.08/item number 29, with a computed height off the bottom of 2.3 meters (7.5ft) in 17.8 meters (58.4ft) of water. This target was further investigated with side scan sonar on DOY 176 between positions 1309 and 1311 using 75 meter range scale. Ship's divers investigated the item on DOY 179 and found it to be a barge with a least depth of ~~15.23~~ ^{14.9} meters (~~50~~ ⁴⁹ft) with a height off the bottom of 2.7 meters (9ft). The item is located in the following position:

AWOIS
8596

Pos. # 1587 47.13 40.73
LAT 30° 10' 48" N LON 087° 17' 39" W
E 55612.3 N 19928.25
LORAN w:13216.0 x:47074.3 y:30399.6 z:64085.6

Recommendation: A danger to navigation report was forwarded to the Commander Eighth Coast Guard District on 1 July 91 requesting that the wreck be added to the chart as a "Dangerous sunken wreck". least depth of ~~15.23~~ ^{14.9} meters (~~50~~ ⁴⁹ft) at MLLW. *Concur.*

159

Target 159 can be identified on contact table 8 as position number 733.43/item number 2, with a computed height off the bottom of .2 meters (.7ft) in 21.2 meters (69.5ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1569 and 1572 using 75 meter range scale. This target was found to be insignificant and investigation beyond this point was not needed. The target is located at the following position:

LAT 30° 13' 30.5" N LON 087° 17' 53.4" W
E 55364.6 N 24958.1

Recommendation: This item is insignificant and should not be charted. *Concur.*

160

Target 160 can be identified on contact table 8 as position number 734.08/item number 3, with a computed height off the bottom of 1.5 meters (4.9ft) in 20.4 meters (66.9ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1567 and 1568 using 75 meter range scale. Nothing was found in the target area, investigation beyond this point was not needed. The target is located at the following position:

LAT 30° 13' 28.7" N LON 087° 18' 08.04" W
E 54971.7 N 24904.2

Recommendation: This item is insignificant and should not be charted. *Concur*

162

Target 162 can be identified on contact table 8 as position number 741.23/item number 5, with a computed height off the bottom of 0.6 meters (2.0ft) in 22.3 meters (73.1ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1599 and 1600 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°13'03.09"N LON 087°21'01.8"W
E 50325.7 N 24117.5

Recommendation: This item is insignificant and should not be charted. *Concur.*

166

Target 166 can be identified on contact table 8 as position number 746.13/item number 9, with a computed height off the bottom of 0.4 meters (1.3ft) in 18.3 meters (60.0ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1595 and 1598 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°12'58.6"N LON 087°22'10.3"W
E 48492.4 N 23981.8

Recommendation: This item is insignificant and should not be charted. *Concur.*

169

Target 169 can be identified on contact table 8 as position number 748.02/item number 12 with a computed height off the bottom of 0.7 meters (2.3ft) in 21.3 meters (69.9ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1601 and 1602 using 75 meter range scale. Nothing was found in the target area, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°13'08.95"N LON 087°21'13.01"W
E 50024.9 N 24298.1

Recommendation: This item is insignificant and should not be charted. *Concur.*

190

Target 190 is identified on contact table 9 as position number 863.33/item number 10, with a computed height off the bottom of 0.5 meters (1.6ft) in 16.8 meters (55.1ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1589 and 1592 using 75 meter range scale. The

target was further investigated on DOY 189 at position number (1603) utilizing divers from the NOAA ship MT MITCHELL. The divers found an old automobile and a wire spool. These items, again, are similar to many other man made objects that litter the bottom in this area. A least depth of 15.6⁵ meters (51.2²ft) and height off the bottom of 1.2 meters (3.9ft) was obtained at the following position:

Pos. # 1603
LAT 30°13'37.⁵¹~~34~~"N LON 087°22'33.⁴¹~~12~~"W
E 47883.7 N 25174.5
LORAN w:13150.6 x:47068.2 y:30344.0 z:64063.8

Recommendation: This item is non-dangerous however it should be charted as an obstruction with a depth of 15.6⁵ meters (51.2²ft). *Concur*
50.85

194

This target is identified on contact table 9 as position 885.3/item number 14, with a computed height off the bottom of .2 meters (.7ft) in 18.7 meters (61.4ft) of water. This target the same as target number 7. *Concur*

203

Target 203 is identified on contact table 9 as position number 939.48/item number 23, with a computed height off the bottom of 1.7 meters (5.6ft) in 20.8 meters (68.2ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1555 and 1558 using 75 meter range scale. A hydro least depth of 20.0 meters (65.7ft) and height off the bottom of .8 meters (2.63ft) was obtained at position 1555.12. Further investigation beyond this point was not needed. The target is located at the following position:

Pos. # 90004
LAT 30°13'09.5"N LON 087°17'26.4"W
E 56097.7 N 24308.2

Recommendation: This item is insignificant and should not be charted. *Do not Concur. Chart as 18.9M Obstr (A) as shown on the present survey.*

204

Target 204 can be identified on contact table 9 as position number 946.08/item number 24, with a computed height off the bottom of 0.8 meters (2.6ft) in 19.5 meters (64.0ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1581 and 1582 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

*AWIS #
8597*

LAT 30°12'55.0"N LON 087°18'57.7"W
E 53643.0 N 23865.9

Recommendation: This item is insignificant and should not be charted. *Concur.*

218

Target 218 can be identified on contact table 10 as position number 1041.29/item number 10, with a computed height off the bottom of 0.1 meters (.33ft) in 22.1 meters (72.5ft) of water. This target was further investigated with side scan sonar on DOY 178 between positions 1583 and 1584 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°12'29.9"N LON 087°18'15.12"W
E 54781.6 N 23093.6

Recommendation: This item is insignificant and should not be charted. *Concur*

231

Target 231 can be identified on contact table 11 as position number 1076.75/item number 6, with a computed height off the bottom of 0.6 meters (1.9ft) in 21.7 meters (71.2ft) of water. This target was further investigated with side scan sonar on DOY 190 between positions 1635 and 1636 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°12'13.05"N LON 087°18'54.4"W
E 53730.3 N 22574.1

Recommendation: This item is insignificant and should not be charted. *Concur*

235

Target 235 can be identified on contact table 11 as position number 1082.01/item number 10, with a computed height off the bottom of 1.1 meters (3.6ft) in 23.1 meters (75.8ft) of water. This target was further investigated with side scan sonar on DOY 190 between positions 1633 and 1634 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°11'54.4"N LON 087°20'56.2"W
E 50473.2 N 22002.1

Recommendation: This item is insignificant and should not be charted. *Concur*

243

Target 243 can be identified on contact table 11 as position number 1119.76/item number 18, with a computed

height off the bottom of 1.2 meters (3.94ft) in 21.7 meters (71.2ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1610 and 1611 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°11'31.95"N LON 087°21'52.87"W
E 48955.9 N 21312.2

Recommendation: This item is insignificant and should not be charted. *Concur*

249

Target 249 is identified on contact table 11 as position number 1150.75/item number 24, with a computed height off the bottom of 1.0 meters (3.28ft) in 23.0 meters (75.4ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1616 and 1617 using 75 meter range scale. A hydro least depth of 21.1⁷ meters (69.3ft) and height off the bottom of 1.1 meters (3.6ft) was obtained at position 1616.1². Further investigation beyond this point was not needed. The target is located at the following position:

LAT 30°11'36.8⁰⁰"N LON 087°19'32.8⁷³"W
E 52716.4 N 21438.6

Recommendation: This item is insignificant and should not be charted. *Concur. Shown as a 21.7M sounding on the present survey*

257

Target 257 can be identified on contact table 12 as position number 1191.14/item number 2, with a computed height off the bottom of 0.8 meters (2.63ft) in 20.8 meters (68.3ft) of water. This target was further investigated with side scan sonar on DOY 189 between positions 1612 and 1613 using 75 meter range scale. This target was found to be insignificant, investigation beyond this point was not needed. The target is located at the following position:

LAT 30°10'55.24"N LON 087°22'06.8"W
E 48581.0 N 20182.7

Recommendation: This item is insignificant and should not be charted. *Concur.*

280

Target 280 is identified on contact table 13 as position number 1421.00/item number 8, with a computed height off the bottom of 1.5 meters (4.9ft) in 24.5 meters (80.4ft) of water. This target is located on sheet (A-2). This target was further investigated with side scan sonar on DOY 191 between positions 1696 and

1703 using 75 meter range scale. Ship's divers dove on the target to identify it. The item was identified as clumps of soft clay, apparently dredge spoil. The divers did not obtain a least depth over the item because it was determined not to be a hazard. This item is located at the following position:

Post # 1409+3
LAT 30°07'^{52.08}~~51.2~~"N LON 087°17'^{16.17}~~07.8~~"W
E 56578.2 N 14508.1

Recommendation: This item is insignificant and should not be charted. *DONOT CONCUR. CHART AS A 20.24 SOUNDING AS SHOWN ON THE PRESENT SURVEY.*

281

Target 281 is identified on contact table 13 as position number 1442.51/item number 9, with a computed height off the bottom of 0.8 meters (2.63ft) in 26.0 meters (85.3ft) of water. This target is located on sheet (A-2). This target was further investigated on DOY 191. A charter fishing/dive boat "WENDY II" was operating directly over the target while the ship was attempting to make a side scan run. The captain of the WENDY II informed us that the target was a Volkswagen Beetle. The item was determined to be insignificant and further investigation was not needed. This item is located at the following position:

LAT 30°06'44.6"N LON 087°16'48.96"W
E 57083.0 N 12459.1

Recommendation: This item is insignificant and should not be charted. *Concur*

287

Target 287 is identified on contact table 13 as position number 1525.48/item number 15, with a computed height off the bottom of 0.4 meters (1.3ft) in 22.6 meters (74.2ft) of water. This target is located on sheet (A-2). This target was further investigated with side scan sonar on DOY 191 between positions 1711 and 1713 using 75 meter range scale. The item was determined to be insignificant and no further development was accomplished. This item is located at the following position:

LAT 30°09'10.5"N LON 087°17'12.2"W
E 56463.7 N 16951.3

Recommendation: This item is insignificant and should not be charted. *Concur.*

288

Target 2887 is identified on contact table 13 as position number 1526.22/item number 16, with a computed height off the bottom of 0.2 meters (0.7ft) in 22.6 meters (74.2ft) of water. This target is located on sheet (A-2). This target was further investigated with

side scan sonar on DOY 191 between positions 1711 and 1713 using 75 meter range scale. The item was determined to be insignificant and no further development was accomplished. This item is located at the following position:

Pos 1713+6 57.19
LAT 30°08'~~52.53~~^{57.19}"N LON 087°17'~~08.5~~^{10.57}"W
E 56562.2 N 16398.2

Recommendation: This item is insignificant and should not be charted. *Concor - use hydro depths in this area*

~~AWOIS 7081:~~

This item is listed as a wire drag hang on a burned out wreck that extended off the bottom 5ft. The HECK was required to complete 200% side scan coverage of this item in order to disprove it. In addition if anything was found within the awois circle divers were required to investigate in order to verify or disprove this item. 200% side scan coverage was accomplished during the running of normal mainscheme hydrography. Only one contact was found on the very edge of the AWOIS circle. Further investigation showed this target did not exist. The center of the awois circle is located at the following position:

LAT 30°13'15.72"N LON 087°18'41.9"W

Recommendation: Complete 200% side scan coverage was accomplished of AWOIS 7081 and nothing was found. AWOIS 7081, charted as a "Submerged Dangerous Wreck", is considered disproved and should be removed from the chart. *Do NOT Concor See section 6.b.1) of the Evaluation Report*

~~AWOIS 7092~~

This item is listed as a wire drag hang on a hunk of metal that extended off the bottom 3ft. The HECK was required to complete 200% side scan coverage of this item in order to disprove it. In addition if anything was found within the AWOIS circle divers were required to investigate in order to verify or disprove this item. 200% side scan coverage was accomplished during the running of normal mainscheme hydrography. No contacts were found anywhere within the boundaries of the AWOIS circle. The center of the AWOIS circle is located at the following position:

LAT 30°12'20.72"N LON 087°16'34.89"W

Recommendation: AWOIS 7092, charted as "Obstruction Wire Cleared to 58ft", is to be considered disproved and should be removed from the chart. *Do NOT Concor. A small contact is seen at pos. 1107.38P on the side scan sonargram. See section 6.b.2) of the Evaluation Report.*

O. ADEQUACY OF SURVEY

This survey has met or exceeded 1:20000 specifications, and is adequate to supersede all prior surveys for the purposes of charting the depths and hazards to navigation within the survey area.

P. AIDS TO NAVIGATION *See also section 7, c. of the Evaluation Report.*

No aids to navigation were found in the area of this survey.

Q. STATISTICS

ITEM	for... NOAA Ship HECK	AMOUNT
1. Total No. of Positions		1717 Fixes
2. Lineal NM of Soundings		600.5 NMI
3. Square NM Hydrography		63.5 NMI ²
4. Days of Production		14 Days
5. Bottom Samples		11
6. Tide Stations Established		None
7. Current Stations Established		None
8. Velocity Casts Performed		2 Casts
9. Magnetic Stations Established		None
10. Detached Positions		8

R. MISCELLANEOUS

No anomalies in either tide or current were noted.

Eleven bottom samples were taken, Log Sheet M appended, and submitted to the Smithsonian Institution. A copy will be included in section II of the separates. No actual samples were sent as per project instruction.

S. RECOMMENDATIONS

The existence of the active dredge spoil site within the southern safety fairway is not prudent. A significant shoal was located during this survey and a danger to navigation letter was issued. The shoal rises to 58 feet in an area of 71 to 75 foot charted depths. Through information gained from the Corps of Engineers we have found that the dump site has been inactive at least two years, therefore, it is very likely that it was originally shoaler. The HECK recommends that contacts be made with the Coast Guard and Corps of Engineers to discontinue the use of this spoil area within the safety fairway. The soundings from this survey could then be considered as sufficient to remove the discontinued spoil area that would lie within the fairway.

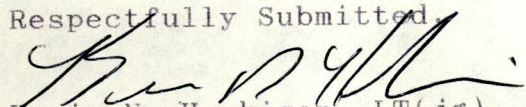
The complete insonification of the survey area via echosounder (80 and 130 meter line spacing) and side scan sonar (200% coverage) is such that the data from this survey should supersede all charted depths and features presently charted within the survey area.

Recommendations concerning specific AWOIS items and depths are located in sections M and N of this report.

T. REFERRAL TO REPORTS

Horizontal Control report for OPR-J452-HE-91 was submitted to N/CG243 on June 7, 1991.

Respectfully Submitted,


Kevin N. Harbison, LT(jg), NOAA
Field Operations Officer
NOAA Ship HECK

CONTROL STATIONS

No	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY
102	F	030:20:46.001	087:18:29.132	56	250	0.0	0.0	2	03/29/91
103	F	030:19:19.186	087:17:06.099	12	250	0.0	0.0	5	05/18/91
104	F	030:19:07.893	087:15:18.615	5	250	0.0	0.0	6	06/08/91
105	F	030:19:37.484	087:09:49.258	36	250	0.0	0.0		03/29/91
101	F	030:17:53.043	087:25:11.984	30	250	0.0	0.0	7	05/22/91
115	F	030:19:38.644	087:09:49.572	36	250	0.0	0.0	8	07/01/91
106	F	030:19:31.624	087:18:46.679	10	250	0.0	0.0	8	07/01/91

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 13 June 1991

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # 1772
CONTACT # 64

LOCATION: GULF OF MEXICO

DIVE MASTER: LT. MOELLER
TENDERS: SS LEWIS

DIVERS: LT MOELLER
LTJG HARBISON
ENS MARTIN

DIVE PLAN: _____

MAX DEPTH: 70 FT
MAX TIME: 23 MIN

DEPTH: (1) 52.8 PNEUMO LEAD LINE

AVERAGE LEAST DEPTH: 52.8 FT
LEAST DEPTH TIME: 16 18

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

CONDITIONS:

S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE

WIND: DIR SW KTS 5-10

DIVE VISIBILITY: 60'

SEAS: DIR SW FT 1'

AIR TEMP: 85

CURRENT: KTS < 1 KT

WATER TEMP: 82

ALL TIMES GMT

DIVERS	SI	GROUP	RNT	TNK PRESURE	PRES.	DIVE TIMES	BOTTOM		
NAME				IN / OUT	CHANGE	DOWN/UP	TIME	DEPTH	GROUP
1				2750 / 800	700	D 1602	23	70	
1	F00			2906 / 200	500	U 1623			
	TO			2980 / 800	950				
2				___ / ___		D _____			
2				___ / ___		U _____			

POST DIVE COMMENTS

LRC 9105 30 39 3.3

15 47086.0

David Moeller
DIVE MASTER SIGNATURE

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 27 JUNE 1991

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # 1772
CONTACT #

LOCATION: GULF OF MEXICO

DIVE MASTER: LT. MOELLER

DIVERS : LT MOELLER
LTJG HARRISON

TENDERS: SS LEWIS

DIVE PLAN: RE-VISIT AWOIS 1772 TO CONFIRM L/O

MAX DEPTH: _____ FT

MAX TIME : _____ MIN

AVERAGE LEAST DEPTH: _____ FT

LEAST DEPTH TIME : _____ :

DEPTH: (1) _____ PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

S/N 8607004N (SHALLOW) GAGE

S/N 8704986 (DEEP) GAGE

DIVE VISIBILITY: 50'

AIR TEMP: 88°

WATER TEMP: 78°

CONDITIONS:

WIND : DIR SW KTS 10

SEAS : DIR SW FT 1-2

CURRENT : KTS .3

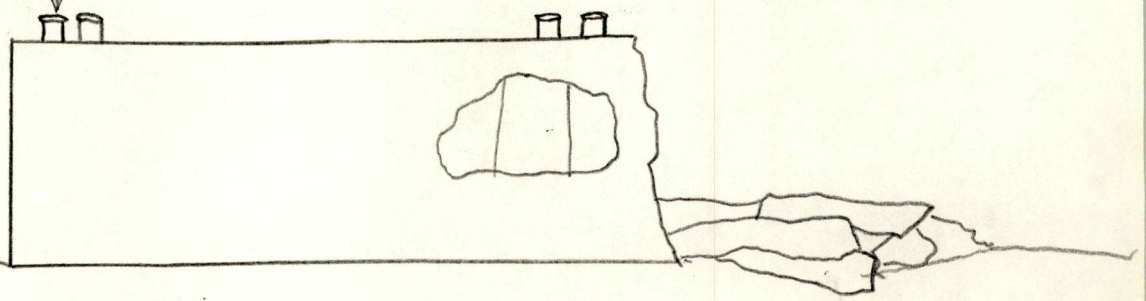
ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
1	102	D	20	2800 / 1000	1800	D 1613	20	70	H
1	111	D	20	2700 / 1000	1700	U 1633	20	70	H
				____ / ____					
2				____ / ____		D _____			
2				____ / ____		U _____			
				____ / ____					

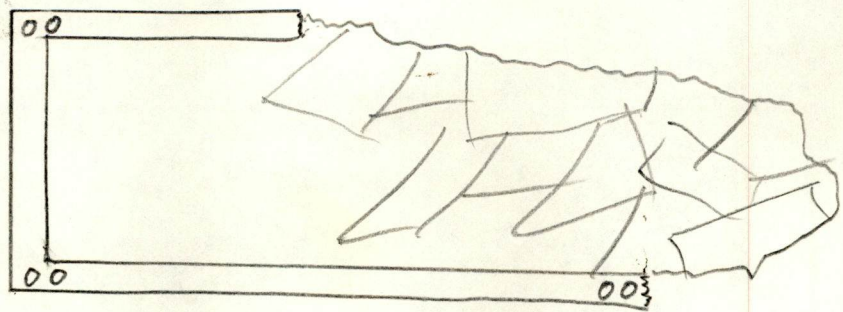
POST DIVE COMMENTS: TOOK LEAST DEPTH ON BARRE

DIVE MASTER SIGNATURE

52.8'



SIDE
TOP



DIVING OPERATIONS
OPR-J452-HE-91

DATE: 27 JUNE 1991

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # 7080/7079
CONTACT #

LOCATION: GULF OF MEXICO

DIVE MASTER: LT. MOELLER
TENDERS: SS LEWIS

DIVERS : LT MOELLER
LT JL HARRISON

DIVE PLAN: SEARCH FOR AND IDENTIFY AWOIS ITEM

MAX DEPTH: _____ FT
MAX TIME : _____ MIN

DEPTH: (1) _____ PNEUMO/LEAD LINE

AVERAGE LEAST DEPTH: _____ FT
LEAST DEPTH TIME : _____

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

CONDITIONS:

S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE

WIND : DIR SW KTS 10

DIVE VISIBILITY: 50'

SEAS : DIR SW FT 1-2

AIR TEMP: 88°F

CURRENT : KTS .3

WATER TEMP: 78°F

ALL TIMES GMT

7080

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
M				3000 / 1900	1100	D 1441	10	70	C
SH				2700 / 1400	1300	U 1451	10	70	C
				/					

7079

DM	:15	C	10	1900 / 1000	900	D 1511	8	70	E
SH	:15	C	10	1400 / 700	700	U 1521	8	70	E
				/					

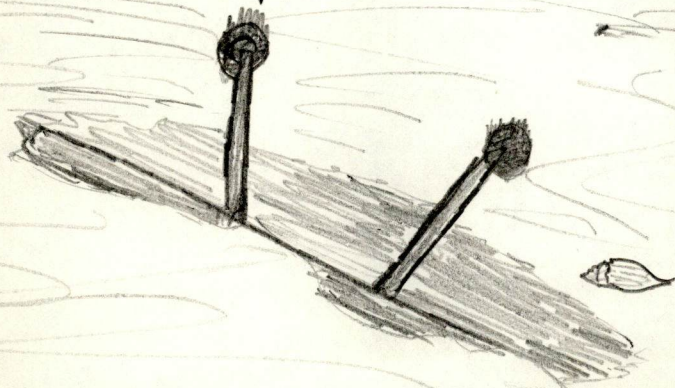
POST DIVE COMMENTS 7080- FOUND AIRPLANE WING WITH LANDING GEAR

EXTENDED.

7079- FOUND COUPLER FOR AIRCRAFT ENGINE.

DIVE MASTER SIGNATURE

62.5'



AIRPLANE
WING +
GEAR



1'

ENGINE
COWL

INSIGNIFICANT
ITEM

DIVING OPERATIONS
OPR-J452-HE-91

001 179

DATE: 6/28 1991

UNIT: NOAA SHIP HECK S591

LOCATION: GULF OF MEXICO

AWOIS ITEM #

CONTACT # 147

DIVE MASTER: LT. MOELLER

DIVERS: LCDR S.R. DWAMOTO

TENDERS: S.S. LEWIS

ENS J. MARTIN

DIVE PLAN: INVESTIGATION OF SS TABLET

MAX DEPTH: 60 FT

MAX TIME: 23 MIN

AVERAGE LEAST DEPTH: 51 FT

LEAST DEPTH TIME: 14:30

DEPTH: (1) 51 FT PNEUMO (LEAD LINE)

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

S/N 8607004N (SHALLOW) GAGE

S/N 8704986 (DEEP) GAGE

DIVE VISIBILITY: 25 FT

AIR TEMP: 98°F

WATER TEMP: 82°F

CONDITIONS:

WIND: DIR CALM KTS

SEAS: DIR CALM FT

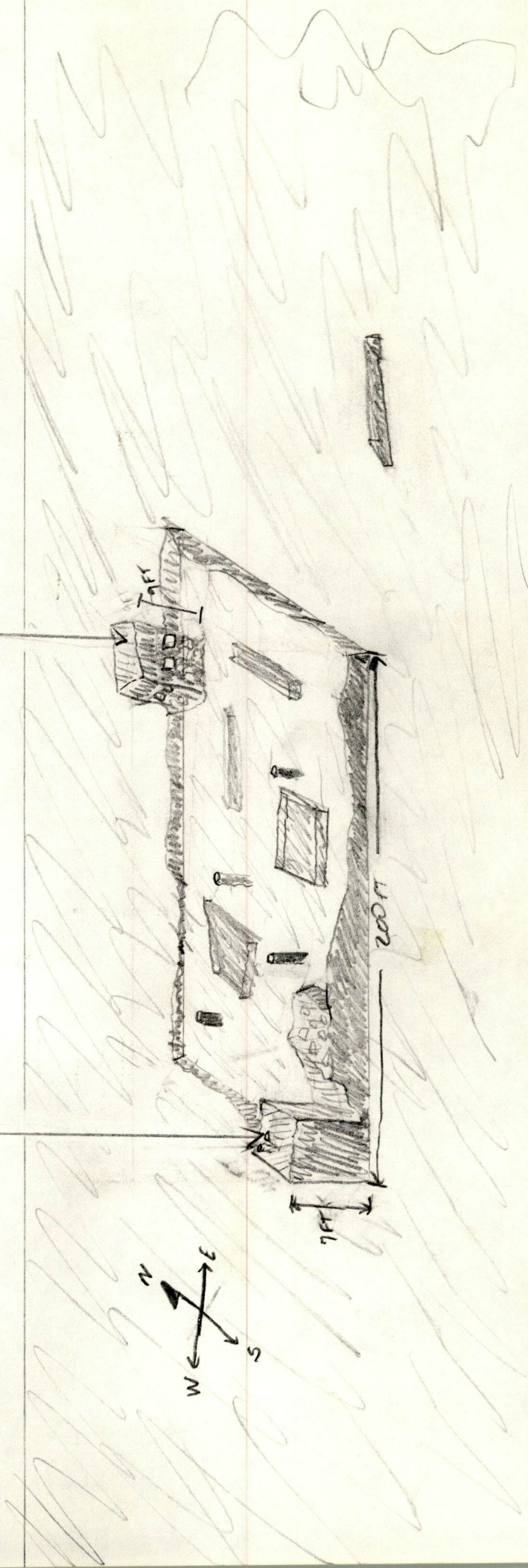
CURRENT: KTS 0

ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
1	0			3100 / 1400	1700	D 1425	23	60	E
1	20			3600 / 1300	1700	U 1448	23	60	E
				_____ / _____					
2				_____ / _____		D _____			
2				_____ / _____		U _____			
				_____ / _____					

POST DIVE COMMENTS: FIRE DANGER TO NAVIGATION LETTER

DIVE MASTER SIGNATURE



51 FT

51 FT

N
E
S
W

200 FT

7 FT

7 FT

DIVING OPERATIONS
OPR-J452-HE-91

DATE: July 8 1991

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # _____
CONTACT # 7/194

LOCATION: GULF OF MEXICO

DIVE MASTER: LT. MOELLER
TENDERS: _____

DIVERS : MADSEN
HICKEY

DIVE PLAN: _____

MAX DEPTH: 70 FT
MAX TIME : ~~22~~ 22 MIN

DEPTH: (1) _____ PNEUMO/ LEAD LINE

AVERAGE LEAST DEPTH: 18.0 M
LEAST DEPTH TIME : 15:23

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

CONDITIONS:

S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE
DIVE VISIBILITY: 30'

WIND : DIR SW KTS 10

SEAS : DIR SW FT 1-2

CURRENT : KTS 0.5

AIR TEMP: _____
WATER TEMP: 84

ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
<u>MADSEN</u>				<u>2900 / 1600</u>		<u>D 1505</u>			
<u>HICKEY</u>				<u>2900 / 1400</u>		<u>U 1527</u>			
				<u>_____ / _____</u>					
				<u>_____ / _____</u>		<u>D _____</u>			
				<u>_____ / _____</u>		<u>U _____</u>			

POST DIVE COMMENTS _____

DIVE MASTER SIGNATURE _____

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 1991
LOCATION: GULF OF MEXICO
DIVE MASTER: LT. MOELLER
TENDERS:

UNIT: NOAA SHIP HECK S591
AWOIS ITEM #
CONTACT # 190
DIVERS : MADSEN
HICKEY

DIVE PLAN:

MAX DEPTH: 60 FT
MAX TIME : MIN
AVERAGE LEAST DEPTH: 15.6 M
LEAST DEPTH TIME : 18:11

DEPTH: (1) 15.6 m PNEUMO / LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

CONDITIONS:

S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE

WIND : DIR KTS

DIVE VISIBILITY:

SEAS : DIR FT

AIR TEMP:

CURRENT : KTS

WATER TEMP:

ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
Madsen	2:00	C D	24	3100 / 1700		D 1754	21	60	
Hickey	2:00	C D	24	3100 / 1600		U 1815	21	60	
				/					
				/		D			
				/		U			
				/					

POST DIVE COMMENTS

CABLE DRUM ~~SB~~

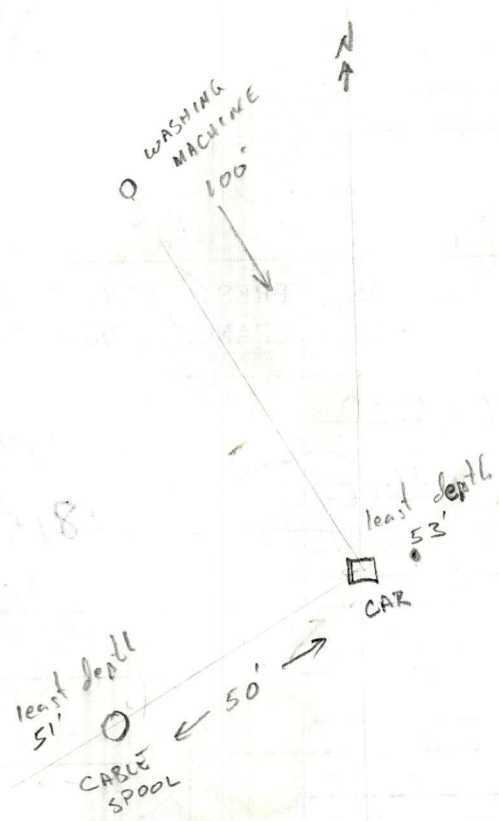
CAR

WASHING MAH.

DIVE MASTER SIGNATURE

11.8
12.2 M
18.11

15.8



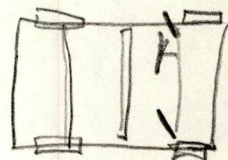
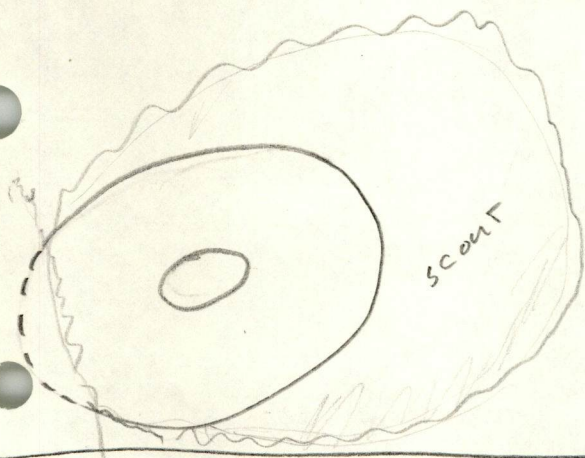
POST DIVE COMMENTS
CABLE SPOOL
CAR
WASHING MACHINE
DIVE MASTER SIGNATURE

CAR
least depth 53'

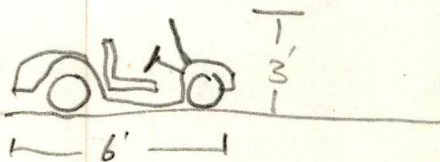
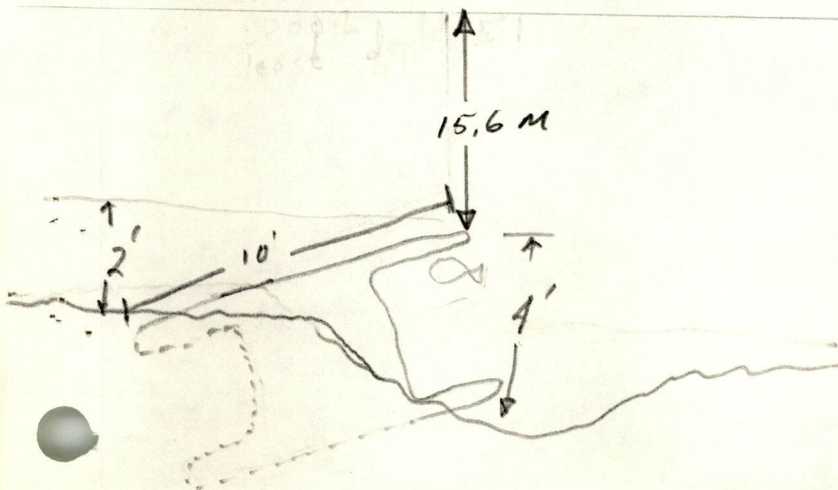
TOP

CABLE SPOOL Sift
least depth 15.6m

least depth
15.9 meters



SIDE



CAR

SIDE

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 10 July 1991

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # _____
CONTACT # 230

LOCATION: GULF OF MEXICO

DIVE MASTER: LT. MOELLER
TENDERS: SS LEVY

DIVERS: LCDR SIMON JUANICO
ENS JAMES MARTIN

DIVE PLAN: ITEM INVESTIGATION

MAX DEPTH: 80 FT
MAX TIME: 19:23 MIN
AVERAGE LEAST DEPTH: 74 FT
LEAST DEPTH TIME: 17:40

DEPTH: (1) 74 PNEUMO (LEAD LINE)

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

CONDITIONS:

S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE
DIVE VISIBILITY: 10 FT
AIR TEMP: 90°
WATER TEMP: 78°

WIND: DIR WSW KTS 10
SEAS: DIR WSW FT 2-3
CURRENT: KTS 1-2 ON SURFACE

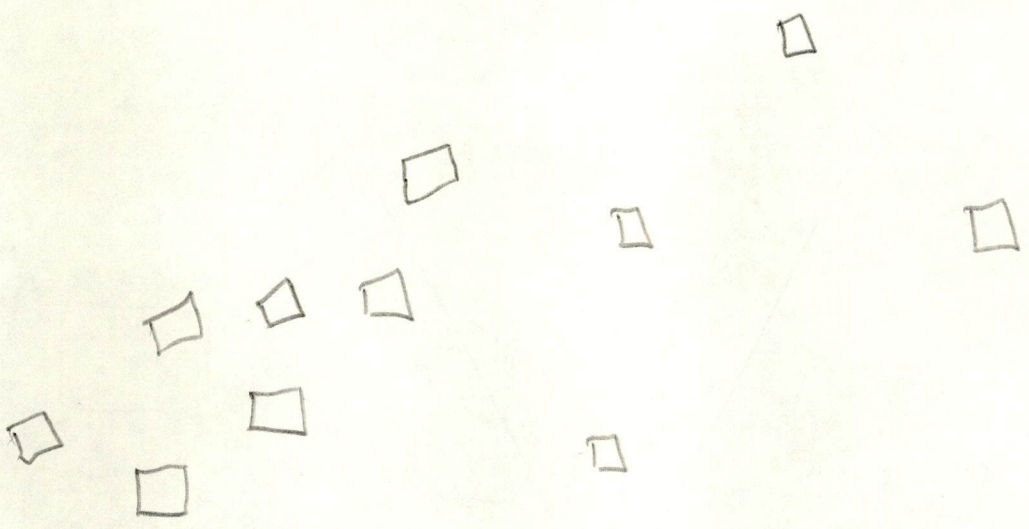
ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
1				3100 / 1300	1800	D 1736	19	80'	E
1	ENS			2800 / 800	2000	U 1755	19	80'	E
				___ / ___					
2				___ / ___		D			
2				___ / ___		U			
				___ / ___					

POST DIVE COMMENTS: SOFT MUD AND CLAY PILES FROM DRENCH SPOT DUMPING. These are not dangerous since they can easily be washed away.

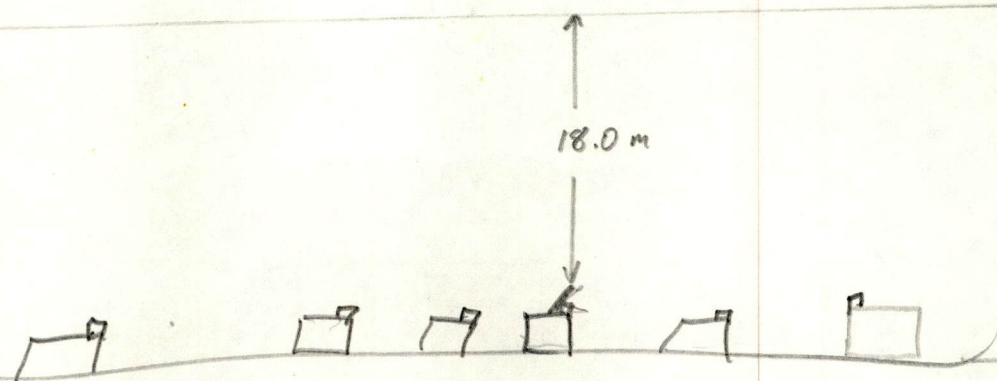
DIVE MASTER SIGNATURE

TOP



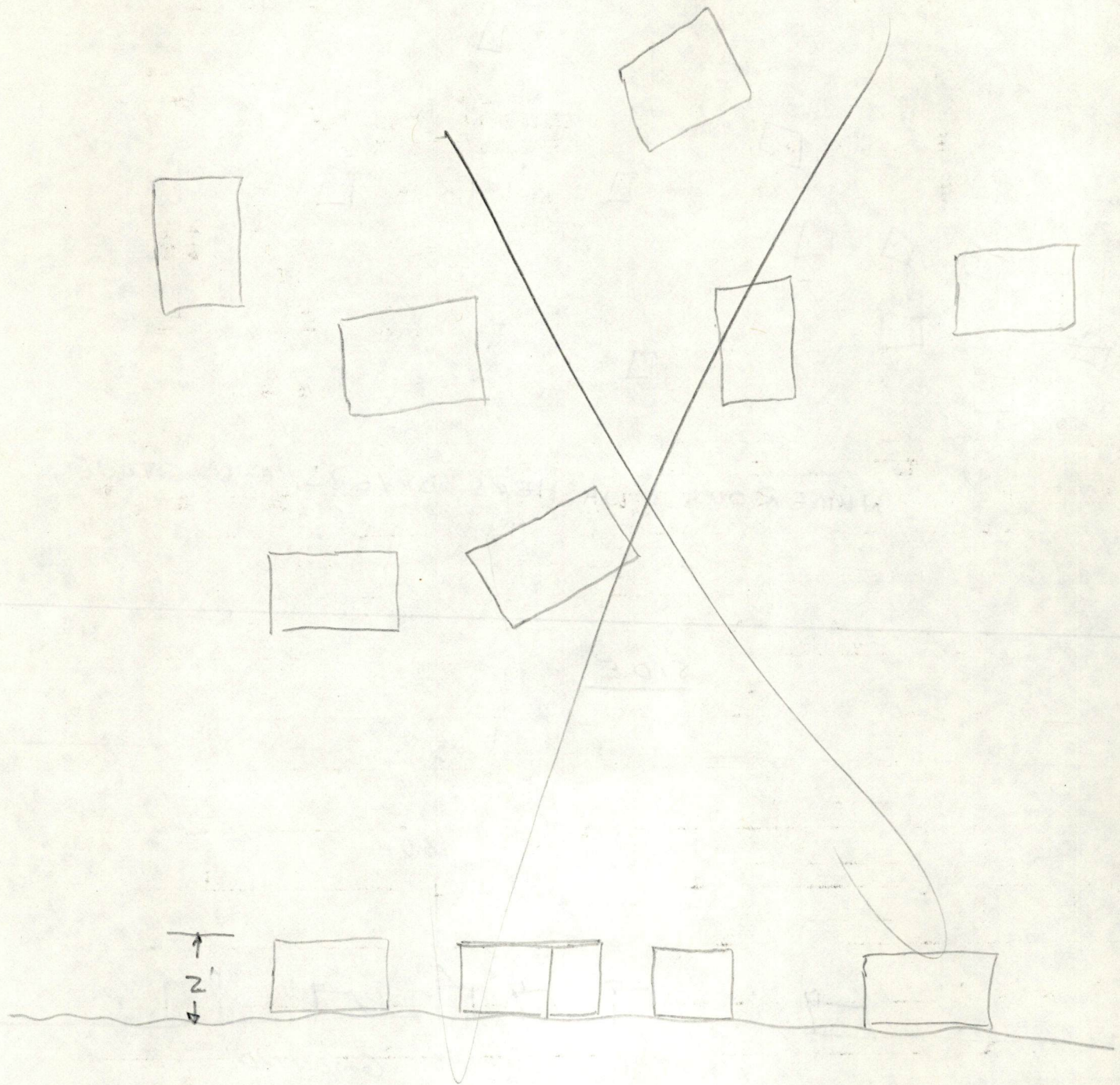
NUMEROUS WASHERS, DRYERS, AND STOVE

SIDE



MAYTAG BURIAL GROUND

WASHING MACHINES
least depth 18 meters





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship HECK S-591
439 W. York Street
Norfolk, VA 23510-1114

July 1, 1991

Commander, Eighth Coast Guard District
Aids to Navigation
Hale Boggs Federal Building
501 Magazine Street
New Orleans, LA 70130-3396

Subject: Report of Danger to Navigation

Registry Number: H-10383

Survey Title: Florida
Gulf of Mexico
Southwestern Approaches to Pensacola Bay

Project Number: OPR-J452-HE, NOAA Ship HECK

The following item was located during hydrographic survey operations.

Object: Barge, covered by 50 feet of water corrected to MLLW using predicted tides, surrounded by depths of 58 feet. Chart as "Dangerous Sunken Wreck" least depth 50ft.

Affected Nautical Charts:

Chart Number	Edition No.	Reported Date	Depth	Datum	LAT	LON
11382	32	10 NOV 90	50 ft	NAD 83	30°10.8'N	087°17.65'W
11360	31	14 JAN 89	8.3fm	NAD 83	30°10.8'N	087°17.65'W
11006	25	09 DEC 89	8.3fm	NAD 83	30°10.8'N	087°17.65'W
411	41	02 FEB 91	8.3fm	NAD 83	30°10.8'N	087°17.65'W

Questions concerning this report should be directed to LTJG Harbison on board NOAAS HECK at (904) 572-5052.

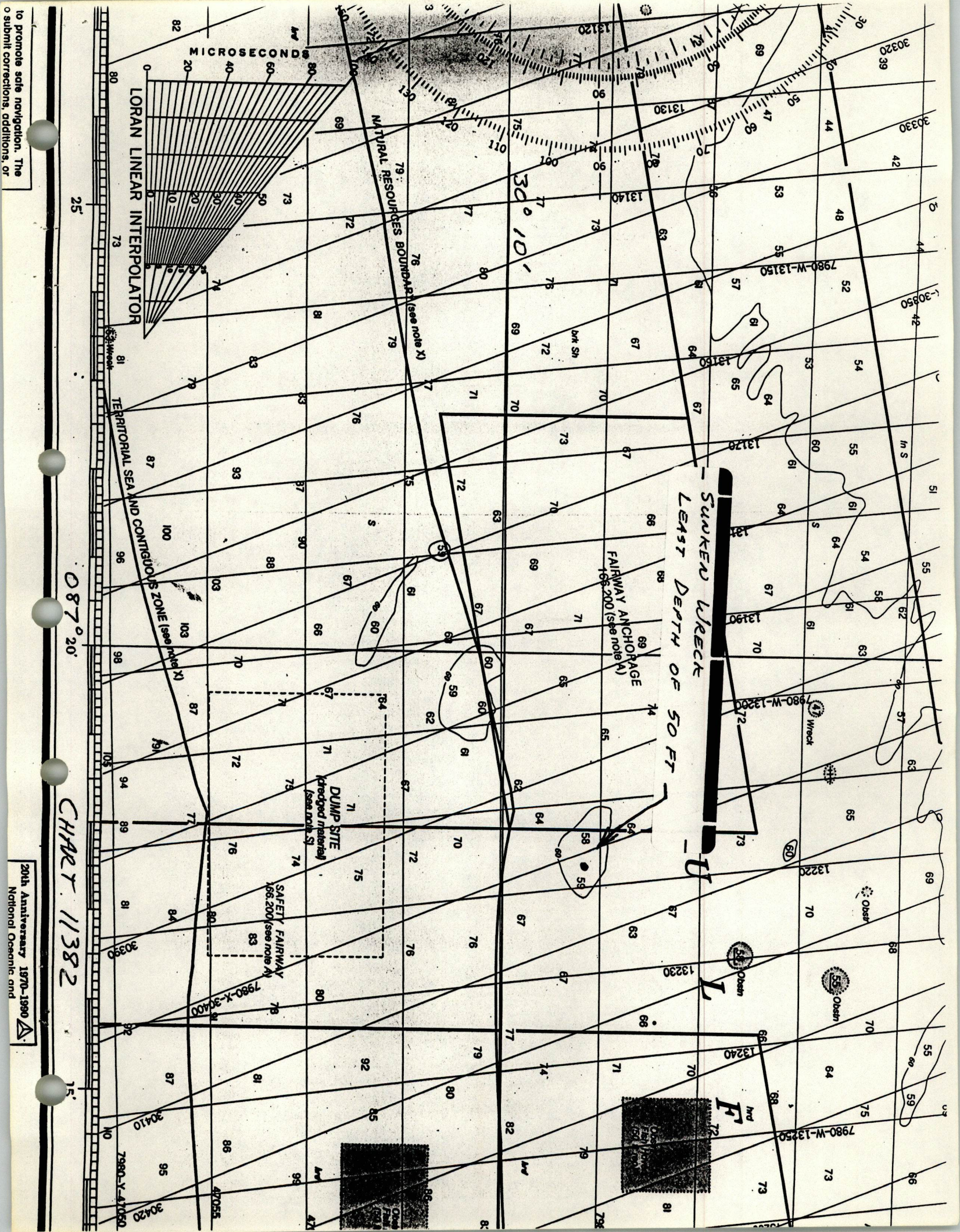
cc.
DMAHTC
N/CG221
N/CG2441

David Moller
for Stanley R. Iwamoto, LCDR, NOAA
Comanding Officer, NOAAS HECK



To promote safe navigation. The
o submit corrections, additions, or

20th Anniversary 1970-1990
National Oceanic and



25

087° 20'

CHART 11382

15'

LORAN LINEAR INTERPOLATOR

MICROSECONDS

NATURAL RESOURCES BOUNDARY (see note X)

TERRITORIAL SEA AND CONTIGUOUS ZONE (see note X)

DUMP SITE (drugged material) (see note S)

SAFETY FAIRWAY 166,200 (see note A)

FAIRWAY ANCHORAGE 166,200 (see note A)

SUNKEN WRECK
LEAST DEPTH OF 50 FT

U

L

F

30420

30410

30390

30380

30370

30360

30350

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30330

30320

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30300

30290

30280

30270

30260

30250

30240

30230

30220

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship HECK S-591
439 W. York Street
Norfolk, VA 23510-1114

July 17, 1991

Commander, Eighth Coast Guard District
Aids to Navigation
Hale Boggs Federal Building
501 Magazine Street
New Orleans, LA 70130-3396

Subject: Report of Danger to Navigation

Registry Number: H-10383

Survey Title: Florida
Gulf of Mexico
Southwestern Approaches to Pensacola Bay

Project Number: OPR-J452-HE, NOAA Ship HECK

The following item was located during hydrographic survey operations.

Object: Shoal, covered by 58 feet of water corrected to MLLW using predicted tides, surrounded by depths of 71 feet. Chart as "Shoal" least depth 58ft.

Affected Nautical Charts:

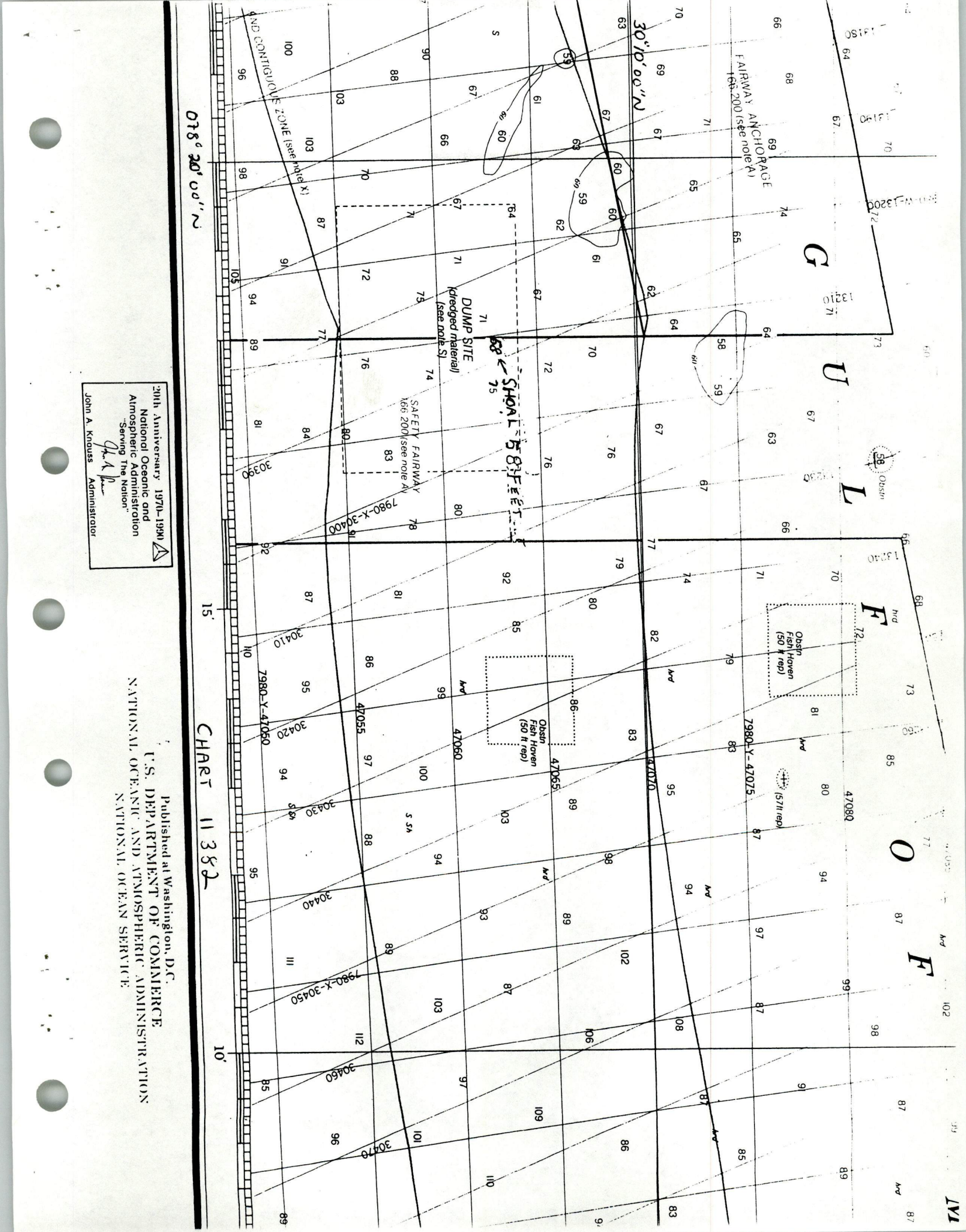
Chart Number	Edition No.	Date	Reported Depth	Datum	LAT	LON
11382	32	10 NOV 90	58 ft	NAD 83	30°08.48'N	087°17.92'W
11360	31	14 JAN 89	9.7fm	NAD 83	30°08.48'N	087°17.92'W
11006	25	09 DEC 89	9.7fm	NAD 83	30°08.48'N	087°17.92'W
111	41	02 FEB 91	9.7fm	NAD 83	30°08.48'N	087°17.92'W

Questions concerning this report should be directed to LTJG Harbison on board NOAAS HECK at (904) 572-5052.

cc.
DMAHTC
N/CG221
N/CG2441


Stanley R. Iwamoto, LCDR, NOAA
Commanding Officer, NOAAS HECK





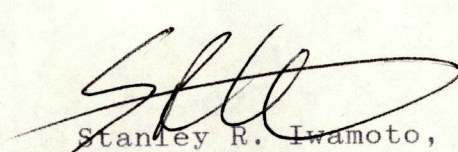
20th Anniversary 1970-1990
 National Oceanic and Atmospheric Administration
 Serving The Nation
John A. Knouss
 Administrator

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

CHART 11352

VII. LETTER OF APPROVAL

Field operations contributing to the accomplishment of this survey were conducted under my direct supervision with frequent personal checks of progress and data quality. This report, field sheets, and data records have been closely reviewed and are complete and adequate for charting.



Stanley R. Iwamoto, LCDR, NOAA
Commanding Officer
NOAA Ship HECK

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: September 4, 1991

MARINE CENTER: Atlantic

OPR: J452-HE-91

HYDROGRAPHIC SHEET: H-10383

LOCALITY: Gulf of Mexico, - Southwestern approaches to Pensacola
Bay, Florida

TIME PERIOD: June 5 - July 10, 1991

TIDE STATIONS USED: Pensacola, FL (872-9840)

Lat. $30^{\circ} 24.2'N$ Lon. $87^{\circ} 12.8'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): = 8.28 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: = 1.2 ft.

REMARKS: RECOMMENDED ZONING

Apply a X1.11 range ratio to all heights, and a -02hr 30min time
correction on 872-9840.

James R. Hubbard

CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

GEOGRAPHIC NAMES

H-10383

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST			
FLORIDA (title)											1
MEXICO, GULF OF (title)											2
PENSACOLA BAY (title)											3
											4
											5
											6
											7
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											23
											24
											25

Approved:

Charles E. Huntington
Chief Geographer - 11/6/93

MAR 10 1993

04/28/93

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10383

NUMBER OF CONTROL STATIONS

4

NUMBER OF POSITIONS

1707

NUMBER OF SOUNDINGS

11674

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	136	10/18/91
VERIFICATION OF FIELD DATA	161	03/09/92
ELECTRONIC DATA PROCESSING	64	
QUALITY CONTROL CHECKS	42	
EVALUATION AND ANALYSIS	62	04/10/93
FINAL INSPECTION	33	04/23/93
TOTAL TIME	498	
ATLANTIC HYDROGRAPHIC SECTION APPROVAL		04/23/93

REFERENCE NO.

N/CG244-60-93

LETTER TRANSMITTING DATA

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

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- GBL (Give number) _____

TO:

Chief, Data Control Section, N/CG243
 NOAA/National Ocean Service
 Room 151, WSC-1
 Rockville, MD 20852

DATE FORWARDED

27 April 1993

NUMBER OF PACKAGES

1 tube, 1 box

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.

H-10383

Florida, Gulf of Mexico, Southwestern Approaches to Pensacola Bay

1 Tube containing:

- 1 Original Descriptive Report for H-10383.
- 1 Original Smooth Sheet for H-10383
- 1 Original Position Overlay
- 2 Original Excess sounding Overlays
- 6 Smooth Field Sheets for H-10383

1 Box containing:

- 1 Envelope containing Appendices and Supplements removed from the original Descriptive Report
- 1 Envelope containing HDAPS notes
- 1 Cahier with Line File, Sounding Printout, Position Printout and Control File
- 19 Envelopes with fathograms, side scan sonargrams and field printouts for 1991 JD's: 156, 157, 162, 163 (two), 164, 169 (two), 170 (two), 171 (two), 176, 178, 189, 190, 191, and 210

FROM: (Signature)

R.H. Whitfield
 Richard H. Whitfield

RECEIVED THE ABOVE
(Name, Division, Date)

D. S. Clark
 5/6/93

Return receipted copy to:

Atlantic Hydrographic Section, N/CG244
 439 W. York Street
 Norfolk, VA 23510-1114

**COAST AND GEODETIC SURVEY
ATLANTIC HYDROGRAPHIC SECTION
EVALUATION REPORT**

SURVEY NO.: H-10383

FIELD NO.: HE-20-3-91

Florida, Gulf of Mexico, Southwestern Approaches to Pensacola Bay

SURVEYED: 5 June through 29 July 1991

SCALE: 1:20,000

PROJECT NO.: OPR-J452-HE-91

SOUNDINGS: RAYTHEON DSF-6000N Fathometer, EG&G Model 260
Side Scan Sonar, and Leadline

CONTROL: MOTOROLA Falcon 484 Mini-Ranger (Range/Range)

Chief of Party.....S. R. Iwamoto

Surveyed by.....D. W. Moeller
.....K. N. Harbison
.....J. E. Martin
.....W. R. Morris

Automated Plot by.....XYNETICS 1201 Plotter (AHS)

1. INTRODUCTION

a. This is primarily a basic hydrographic, side scan sonar survey. A RAYTHEON DSF-6000 fathometer was operated concurrently with the side scan sonar. In cases where the side scan sonar was used to determine the estimated depth of a feature, the item is shown on the present survey with the upper case letter 'A' in parenthesis. Depths on these items were estimated by scaling heights off the bottom from side scan sonar records. Positions were determined by computing offsets from the vessel's track. This note is shown on the present survey in proximity to the title block. See also memorandum titled "Showing Estimated Side Scan Sonar Depths on Smooth Sheets," dated 23 February 1989, for an explanation of the note shown on the survey smooth sheet.

b. During office processing of this survey, a problem with the geographic position of control station #105, "SAN SOUCI" was detected by personnel of the Coastal Survey Unit (CSU). It was determined that improper field surveying procedures used by the field unit caused an incorrect geographic position for this control station. All hydrographic data acquired using this control station was considered in error. Additional horizontal control work was performed later, and the data submitted by the field unit was

subsequently checked and approved by CSU personnel. The corrected geographic position for control station "SAN SOUCI" was used during office processing to recompute all positions for hydrographic data acquired using this control station. Correspondence concerning this situation are appended to the Descriptive Report.

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 (NAD 83). 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 (NAD 27).

To place this survey on the NAD 27 move the projection lines 0.733 seconds (22.567 meters or 1.13 mm at the scale of the survey) north in latitude, and 0.101 seconds (2.695 meters or 0.14 mm at the scale of the survey) east in longitude.

All geographic positions listed in this report are on NAD 83 unless otherwise specified. Geographic positions for items brought forward from prior sources to the present survey have been converted to NAD 83.

b. There is no shoreline within the limits 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 are drawn in their entirety. Brown and dashed curves have been added to better 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 conform to the requirements of the HYDROGRAPHIC MANUAL, SIDE SCAN SONAR MANUAL, and the FIELD PROCEDURES MANUAL.

5. JUNCTIONS

H-10375 (1991) to the east
H-10387 (1991) to the north

Adequate junctions were effected between the present survey and the surveys listed above. Present survey depths are in harmony with the charted hydrography to the south and west.

6. COMPARISON WITH PRIOR SURVEYS

a. Hydrographic

H-9971 (1981-82) 1:20,000

Prior survey H-9971 (1981-82) covers the entire present survey area. Prior hydrography is in good agreement with present hydrography with soundings ranging plus or minus (\pm) 1 to 2 feet (0^3 to 0^6 m).

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

b. Wire Drag

H-9466WD (1974) 1:40,000

Prior survey H-9466WD (1974) covers the northwestern part of the present survey area. Comparison with the prior survey shows four hangs that fall within the present survey area. These hangs are AWOIS items #7079, #7080, #7081, and #7092. Discussions and charting recommendations for AWOIS items #7079 and #7080 are found in section N. of the Descriptive Report. The following should be noted:

1) AWOIS item #7081, a charted dangerous sunken wreck in Latitude $30^{\circ}13'15.72''N$, Longitude $87^{\circ}18'41.90''W$, originates with the prior survey as an estimated hang at 62 feet (18^9 m). A side scan sonar contact with an undetermined height is seen on two adjacent lines in proximity of the AWOIS item. The AWOIS item is not considered disproved by the present survey.

The estimated 62-ft (18⁹ m) hang has been brought forward from the prior survey to supplement the present survey. No change in charting status is recommended. Additional work is recommended to verify or disprove this item at an opportune time.

2) AWOIS item #7092, a charted obstruction with a wire drag clearance depth 58-ft (17⁷ m) in Latitude 30°12'20.72"N, Longitude 87°16'34.89"W, originates with the prior survey as a 63 foot (19² m) hang subsequently cleared by 58 feet (17⁷ m). A side scan sonar contact (position 1107.38P) with an undetermined height is seen on one line in close proximity of the AWOIS item. The AWOIS item is not considered disproved by the present survey. The 63-ft (19² m) hang has been brought forward from the prior survey to supplement the present survey. No change in charting status is recommended. Additional work is recommended to verify or disprove this item at an opportune time.

There are no conflicts between the present survey depths and the effective clearance depths shown on the prior survey.

7. COMPARISON WITH CHART 11382 (32nd Ed., Nov. 10/90)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys and requires no further consideration. Specific items discussed in section N. of the Descriptive Report have charting recommendations that require no additional comments except as noted in that report.

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

b. Dangers to Navigation

Two Danger to Navigation reports were submitted by the hydrographer to the Commander (oan), Eighth Coast Guard District, New Orleans, Louisiana 71030-3396 and to N/CG222, Chart Information Section. Copies of the reports are appended to the Descriptive Report. No additional dangers were noted during office processing.

c. Aids to Navigation

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

8. COMPLIANCE WITH INSTRUCTIONS

This survey complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is an adequate basic hydrographic, side scan sonar survey. Additional field work is recommended in sections 6.b.1) and 6.b.2) of this report.

Por- Richard H. Whitfield

Douglas V. Mason
Cartographic Technician
Verification of Field Data

Leroy G. Cram

Leroy G. Cram
Supervisory Cartographic
Technician
Evaluation and Analysis

APPROVAL SHEET
H-10383

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 sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Richard H. Whitfield
Richard H. Whitfield
Cartographer, Evaluation and Analysis Team
Atlantic Hydrographic Section

Date: 23 April 1993

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
Christopher B. Lawrence, CDR, NOAA
Chief, Atlantic Hydrographic Section

Date: 23 April 1993

Final Approval:

Approved: J. Austin Yeager
J. Austin Yeager
Rear Admiral, NOAA
Director, Coast and Geodetic Survey

Date: 9/28/93

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

Hydrographic Index No. 85 F

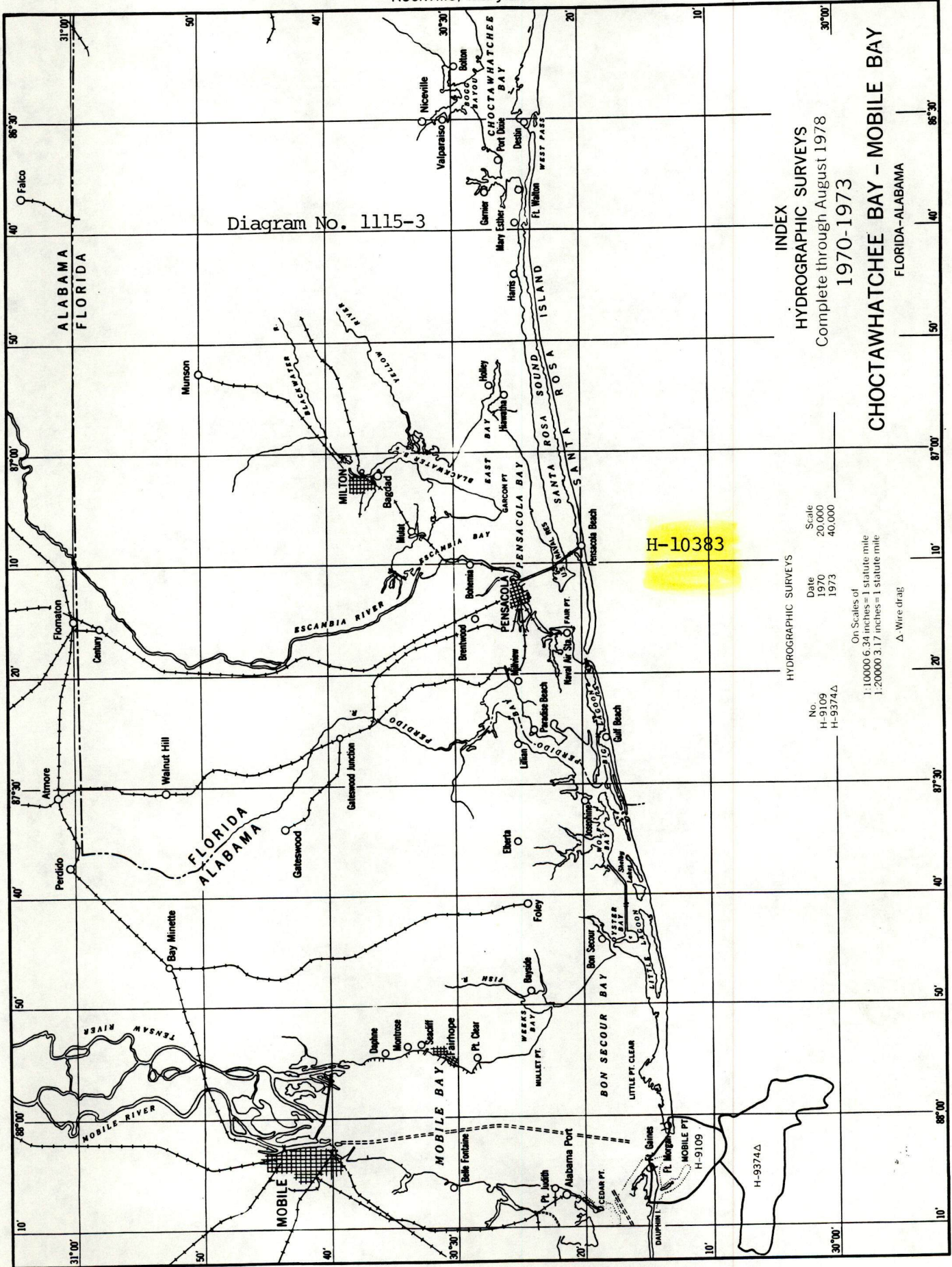


Diagram No. 1115-3

INDEX
HYDROGRAPHIC SURVEYS
Complete through August 1978
1970-1973

HYDROGRAPHIC SURVEYS
No. H-9109
H-9374Δ

Date 1970
1973

Scale 20,000
40,000

On Scales of
1:100000 6.34 inches = 1 statute mile
1:200000 3.17 inches = 1 statute mile
Δ Wire drag

CHOCTAWHATCHEE BAY - MOBILE BAY
FLORIDA-ALABAMA

H-9374Δ

H-9109

