

10375

Diagram No. 1265-3

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-20-1-91

Registry No. H-10375

LOCALITY

State Florida

General Locality . Gulf of Mexico

Sublocality Southeastern Approach to

. Pensacola Bay

19 91

CHIEF OF PARTY
LCDR S.R. Iwamoto

LIBRARY & ARCHIVES

DATE April 6, 1993

10375

EC/G

PRODUCTS

11384

11383

11382

11360

11006

411

CP5

HYDROGRAPHIC TITLE SHEET

H-10375

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-20-1-91

State FLORIDA

General locality GULF OF MEXICO

Locality SOUTHEASTERN APPROACH TO PENSACOLA BAY

Scale 1:20,000 Date of survey 17 April - 16 May 1991

Instructions dated 4 March 1991 Project No. OPR-J452

Vessel NOAA Ship HECK (EDP 9140)

Chief of party Lieutenant Commander Stanley R. Iwamoto, NOAA

Surveyed by LCDR Iwamoto, LT Moeller, LT Wilkes, LTJG Harbison, & ST Morris

Soundings taken by echo sounder, ~~hand lead line~~ Hand Lead Line

Graphic record scaled by LT Moeller, LT Wilkes, LTJG Harbison, ST Morris

Graphic record checked by LT Moeller

Protracted by N/A Automated plot by HDAPS

Verification by ATLANTIC HYDROGRAPHIC SECTION

Soundings in ~~feet~~ Meters at ~~MLLW~~ MLLW

REMARKS:

Notes in red were made during office processing

AWOIS/SURF

MLR 6/17/93

SC JAN 29 1997

RWW 9/30/93

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
- IV. ITEM INVESTIGATION DATA

** filed with the original field data*

DESCRIPTIVE REPORT TO ACCOMPANY
SURVEY H-10375
FIELD NUMBER HE-20-1-91
FLORIDA
GULF OF MEXICO
SOUTHEASTERN APPROACH TO PENSACOLA BAY
Scale 1:20,000
NOAA SHIP HECK S-591
LCDR Stanley R. Iwamoto, CMDG

A. PROJECT

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

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 B in the Project Instructions, lies in the Gulf of Mexico east of the entrance to Pensacola Bay.

Survey operations began on April 17, 1991 (DOY 107), and were completed on May 16, 1991 (DOY 136).

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.

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 107 - 136
Recorder S/N 012106 DOY 107 - 136

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. Position quality which met 1:10,000 requirements was maintained throughout the survey, so line spacing was used which resulted in 20 meters/1 mm of overlap between adjacent lines of side scan.

Confidence Checks were obtained, and annotated on the sonargrams, by towing the side scan unit past known targets 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.

Four contact tables were used during this survey and the contacts were numbered consecutively. Some contacts have more than one contact number from successive hits during 200% coverage, developments, and detached positions. In this case the contacts usually plotted on top of each other, however, the recommended positions are derived at from their respective DP's.

F. SOUNDING EQUIPMENT

The following Raytheon DSF-6000N echosounder was used during this survey:

S/N A107 DOY 107 -136

Both low and high frequency depths were digitized, but only high frequency depths were plotted.

A leadline was used to measure all diver least depths. Leadline calibration form is included in the separates.

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	04/17/91 (DOY 107)	30°13.5N 087°12.0W
2	05/13/91 (DOY 133)	30°13.0N 087°11.0W

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), at 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 acquired in the echosounder mode have been corrected by applying HIPPY correctors. The HIPPY was not functioning properly during two days of surveying and resulted in uncorrected data. These days were DOY 123 (pos. 461-635) and DOY 127⁸ (pos. 723-767). These positions were manually scanned during post processing.

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. *Approved tidal correctors and tidal zoning values were applied during office processing*

H. CONTROL STATIONS *see also section 2.a. of the Evaluation Report.*

The horizontal datum for this project is the North American Datum of 1983 (NAD 83). All coordinates were taken from NGS Geodetic Control Data. One temporary station was located by HECK

personnel, Sans Souci (Temp), on Santa Rosa Island. The data and computations for this station will be submitted to N/CG243 within four weeks of the submission of this report. A list of the horizontal control stations appears in appendix III, LIST OF HORIZONTAL CONTROL STATIONS submitted with this survey.

I. HYDROGRAPHIC POSITION CONTROL *See also section 2.a. 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. Each time the survey navigation configuration was altered, the control station and C-O 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.

On DOY 114, a Falcon system failure was experienced which effected the position control. The two RPU's were both determined to be inoperative and caused lock-ups of the screen. In order to overcome this problem both RPU's were replaced with new ones and another BLC was conducted on DOY 121. Since the onboard attenuator was damaged and a replacement was not available the BLC was done without an attenuator. The quality of these correctors was verified by the low residuals maintained throughout the survey.

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.

At no time during this project did the position quality consistently exceed 1:10,000 specifications (residuals \leq 5 meters and ECR \leq 15 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.a. of the Evaluation Report.*

17.3 miles of crosslines were run on this survey and they

represent 5.0% of all hydrography. Comparison to mainscheme soundings showed good agreement with random differences of ± 0.2 meters.

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

Not applicable as per project instruction.

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

Comparisons were made between the following prior surveys and survey soundings:

H-9466WD	1974	1:40,000
H-9943	1981	1:20,000
H-9971	1981-82	1:20,000
<i>H-9968</i>	<i>1981-82</i>	

Comparisons to H-9943 showed excellent agreement with the majority of survey soundings with random differences of 0 to 2 feet. The 60 foot contour appears to be migrating in a NNW direction. The displacement of the 60 foot contour is *slight*, approximately ~~50 to 100 meters with the greatest displacement occurring east of $087^{\circ}.0'W$.~~

AWOIS 758 ¹⁰ Obstruction. This item was located in position $30^{\circ}14'13.017''N$ $087^{\circ}12'08.977''W$ and investigated by ship's divers. The obstruction proved to be remaining bridge rubble as described. Recommend revising this item to an obstruction in the above position with a corrected least depth of ~~69.3ft/20.8m.~~ ⁶⁷ *Concur. See also section 6. a. 1) of the Evaluation Report.*

AWOIS 761 - Obstruction, reported as bridge rubble from the old Pensacola Beach bridge. This item was investigated with 400% side scan sonar coverage. No indication of an obstruction was found. Recommend this item be deleted from the chart. *Concur. AWOIS #761, A dangerous submerged Obstr. RA, charted in LAT: $30^{\circ}14'20.72''N$, Lon: $87^{\circ}11'59.88''W$. ORIGINATES WITH AN UNKNOWN SOURCE IS SHOWN ON THE PRIOR SURVEY AS A ⁶⁷ Obstr.*

Comparison to H-9971 showed excellent agreement with the survey with random differences of 0 to 2 feet. *See also section 6. a. 3) of the Evaluation Report.*

Comparison to H-9466WD showed good agreement between the hang at 70 feet and the hang at 74 feet which were verified as AWOIS items 758 and 7078 respectively. AWOIS 7091 the reported hang at 65 feet, "metal obstruction - extends 1 foot off the bottom" was disproved. *Concur. See also section 6. b. of the Evaluation Report.*

AWOIS 7076 - Obstruction, ^{Estimated Hang AT 70 FT} ~~Cleared 65 ft~~, reported as blocks of concrete with protruding metal pipes. This item was investigated with 400% side scan sonar coverage. No indication of an obstruction or shoaling was found. Recommend this item be deleted from the chart. *Concur*
AWOIS #7076 IS IN LAT: $30^{\circ}13'52.72''N$, Lon: $87^{\circ}12'19.88''W$

LAT: 30°13'48.72"N

LONG: 87°12'04.88"W

AWOIS 7078¹ - Obstruction, Estimated hang at 74ft. This item was investigated with side scan sonar and diver investigation. The item was located in position 30°13'56.¹⁹088"N 087°12'08.⁷⁷379"W and identified by ship's divers to be a pile of concrete rubble with protruding metal pipes on one section. The least depth as determined by divers was 66.9ft/20.2m. Recommend ^{CHARTING} revising this item ^{AS} to an obstruction with ^{and danger curve w/ blue tint} the above position and least depth. Concur.
~~DELETE THE CHARTED Dangerous Obstr.~~ Chart as shown on the present Survey

AWOIS 7091 - Obstruction, Cleared by 63 ft, reported as a metal obstruction extending 1 ft off the bottom. This item was investigated with 300% side scan sonar. No indication of an obstruction was located. It is recommended that this item be deleted from the chart. Concur.

AWOIS #7091, LAT: 30°14'36.72"N, LONG: 87°14'19.89"W. Estimated hang at 65ft.

N. COMPARISON WITH THE CHART *See also section 7. of the Evaluation Report.*

Comparison of surveyed soundings were made to NOS chart 11382, 32nd edition, Nov/90. The soundings agreed well with the charted soundings within 1 to 2 ~~feet~~ Meters

No dangers to navigation were submitted as a result of this survey.

Eighty eight contacts were identified during this survey and only ten were considered significant. All contacts deemed significant as per project instruction were investigated with additional side scan coverage and if warranted by divers. The significant contacts were 78, 81, 82, 83, 85, 30 (AWOIS 758), 52 (AWOIS 7078), 88, 95, and 100.

Contact number 78 (same as #12 & 75) was located in position. 30°16'09.⁴¹338"N 087°12'24.¹⁴159"W. This item was identified by divers as a 20ft runabout with a corrected least depth of 62ft/18.8m. The runabout was loaded with various debris. Recommend charting this item as an ~~obstruction~~ ^{WRECK} with the above position and least depth. Concur. dangerous

AWOIS 8587

Contact number 81 (same as #7 & 46) was located in position 30°16'13.³¹190"N 087°13'28.³³292"W. This item was identified by divers as a 17ft runabout surrounded by various debris. The item has a corrected least depth of 55.8ft/16.4m. Recommend charting this item as an ~~obstruction~~ ^{WRECK} with the above position and least depth. Concur. dangerous

8588

Contact number 82 (same as #1) was located in position 30°16'26.⁷⁷64"N 087°15'15.⁶¹602"W. This item was identified by divers as a 12ft skiff surrounded by various debris. The item has a least depth of 45.3ft/13.2m. Recommend charting this item as an ~~obstruction~~ ^{WRECK} with the above position and least depth. Concur. dangerous

8589

Contact number 83 (same as #8) was located in position 30°16'03.⁵⁸446"N 087°15'27.⁰⁸075"W. This item was identified by

8590

divers as rusted metal caging. The item has a least depth of ~~46~~⁴⁸ft/14.3²m. Recommend charting this item as an obstruction with the above position and least depth. *Concur.* [↑] dangerous

Contact number 85 (same as #20) was located in position 30°15'24.74⁵"N 087°11'59.90⁸"W. This item was identified by divers as a tank drum cut in half approx. 20'x 6'. The tank was filled with various debris and came about 1 meter off the bottom. This item has a least depth of ~~65~~⁶³ft/19.5⁴m. Recommend charting this item as an obstruction with the above position and least depth. *Concur.* [↑] dangerous

AW015
8591

Contact number 88 (same as #56) was located in position 30°13'29.55⁷"N 087°14'46.48⁵"W. This item was identified by divers as a car lying upright on the bottom heavily covered with marine growth. The least depth of this item is ~~70~~⁶⁹ft/21.2¹m. Recommend charting this item as an obstruction with the above position and least depth. *Concur.*

AW015
8592

Contact number 95 was located in position 30°12'46.39³"N 087°15'38.86⁵"W. This item was identified by divers as a car body surrounded by various debris. The car has a least depth of ~~67~~⁶⁹ft/20.8⁵m and comes off the bottom approx. 1 meter. Recommend charting this item as an obstruction with the above position and least depth. *Concur.*

AW015
8593

Contact number 108 (same as #100) was located in position 30°13'12.96³"N 087°11'48.02⁰"W. This item was identified by divers as a Volkswagen Bug with some debris laying flat on the bottom around it. The least depth of this item is ~~70~~⁶⁷ft/21.0⁰m. Recommend charting this item as an obstruction with the above position and least depth. *Concur.*

AW015
8594

O. ADEQUACY OF SURVEY

This survey 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 7.6. of the Evaluation Report.*

No aids to navigation are located in the area of this survey.

Q. STATISTICS

ITEM	for... NOAA Ship HECK	AMOUNT
1. Total No. of Positions		899 Fixes
2. Lineal NM of Soundings		374.5 NMI
3. Square NM Hydrography		13.8 NMI ²
4. Days of Production		29 Days
5. Bottom Samples		14
6. Tide Stations Established		None
7. Current Stations Established		None
8. Velocity Casts Performed		2 Casts
9. Magnetic Stations Established		None
10. Detached Positions		12

R. MISCELLANEOUS

No anomalies in either tide or current were noted.

Fourteen bottom samples were taken and Log Sheet M was submitted to the Smithsonian Institution. A copy is included in section II of the separates. No actual samples were sent as per project instruction.

S. RECOMMENDATIONS

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

T. REFERRAL TO REPORTS

A Horizontal control report for OPR-J452-HE-91 will be submitted within 4 weeks of this survey to N/CG243.

Respectfully Submitted,

Dana S. Wilkes, LT, NOAA
Field Operations Officer
NOAA Ship HECK

55

APPROACHES TO PENSACOLA OPR J452 HE
LIST OF GEOGRAPHIC POSITIONS

7/9/91
COASTAL SURVEYS
(DECREIX)

SPN	STATION NAME	GPN CODE	LATITUDE			LONGITUDE			G-NBR
			K	DEG	NN	SEC	DEG	NN	
1	PENSACOLA LIGHTHOUSE CENTER	9	30	20	46.06414	87	18	29.11322	
2	GULF BREEZE TANK	9	30	21	36.02210	87	10	55.99934	
3	PENSACOLA BEACH TANK	9	30	19	55.13598	87	8	27.33262	
4	SANS SOUCI TEMP	5	30	19	38.64431	87	9	49.57228	(USE FOR HYDRO)
5	PECOLA LIGHT TEMP	5	30	20	46.00127	87	18	29.13238	? Methods questionable
6	VISTA DEL MAR TEMP	5	30	17	53.04384	87	25	11.97971	
7	UNIDENTIFIED TANK 1	2	0	0	.00000	0	0	.00000	
8	UNIDENTIFIED TANK 2	2	0	0	.00000	0	0	.00000	
9	UNIDENTIFIED TANK 3	2	0	0	.00000	0	0	.00000	
10	R 40 FDNR	9	30	18	16.40277	87	23	34.91093	
11	UNIDENTIFIED ANT POLE	2	0	0	.00000	0	0	.00000	
12	PENSACOLA USN AIR STA PWR STK	9	30	20	48.03819	87	16	6.70254	
13	FIXED	9	30	19	9.41204	87	15	26.92897	
14	TP 1	5	30	19	21.63073	87	13	46.88833	

"O.K. FOR HYDRO"
"NOT THIRD ORDER"
ESTABLISHED

H-73-FL

30 19 19.186 / 087 17 06.099 published position

June 12, 1991

To: NOAA Ship Heck

From: Robert DeCroix

Subject: Geodetic Control NOAA Ship Heck
Pensacola Bay Entrance Area

In response to Lt. David W. Moellers, NOAA Ship Hecks Executive Officers Horizontal Control Report, OPR-J452-HE I feel several false assumptions were made. We cannot use a vertical angle from an unknown bench mark to determine the elevation of a new station whether the station is temporary or not. Also while positioning station SAN SOUCI through a 3-point fix there are only three known positions so therefore there is no check. You are forced to assume all three so-called known stations were correct. The station WATER TANK NEAR WARRINGTON has no published or known position either by NGS or AMC. In an effort to determine if a known tank had been erroneously observed I tried all the known tanks in the Warrington area. None of the known tanks worked. In the Horizontal Report Lt. Moeller mentions computing a position on the WATER TANK NEAR WARRINGTON from a 1927 datum to NAD83 using the NGS program NADCON. There is no known record of a 1927 position on this tank and the NGS program NADCONS conversions are not meant to be accurate enough to use for 3rd Order work. This is especially true if the 1927 position was scaled off a US Geological Quad Map.

It has been the policy of NGS as well as AMC to never dial in meteorological corrections (PPMs) into the EDM1. Zeros are dialed in with the corrections being applied later during the computations.

The only station I could compute using the field data supplied by the ship was a no check station; VISTA DEL MAR TEMP and that had no azimuth checks at all on the station used to locate it and the actual station VISTA DEL MAR TEMP was not occupied satisfactorily.

All in all the data and resulting new positions should be used with extreme care and Coastal Field Surveys can accept no responsibility for this work.

Submitted by:

Robert DeCroix
Robert DeCroix

Approved by:

James E. Dunford
James E. Dunford
Chief, Coastal Surveys Unit

July 1, 1991

Amendment to June 12, 1991 letter;

After two more attempts at correcting the problems with the control near Pensacola thru NOAA Ship Heck has come up with an acceptable solution to the geodetic position. Through a traverse from station FIXED, a NGRS published station, they came up with a geodetic position which resulted in azimuth checks of 2.4" and -8.6" compared to Pensacola Lighthouse Center, a well known and used landmark in the area. They apparently misidentified several landmarks with their previous attempts.

The position I came up with for the San Souci Temp station is;

Lat 30-19-38.644
Long 087-09-49.572

The elevation 35.548 is based on the elevation of station FIXED carried forward through TP 1 with zenith angles.

Robert DeCroix

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 15 MAY 1991

LOCATION: GULF OF MEXICO

DIVE MASTER: LT. MOELLER
TENDERS: _____

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # _____
CONTACT # 78 / 85

DIVERS : LT WILKES
LT MOELLER

DIVE PLAN: _____

DEPTH: (1) 62.0 (78)
65.1 (85) PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

CONDITIONS:

WIND : DIR 170 KTS 10
SEAS : DIR _____ FT 2
CURRENT : KTS Surface 1-2

MAX DEPTH: _____ FT
MAX TIME : _____ MIN
AVERAGE LEAST DEPTH: _____ FT
LEAST DEPTH TIME : 18:20 (78)
19:48 (85)

PNEUMOFATHOMETER:
S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE
DIVE VISIBILITY: 30
AIR TEMP: 80
WATER TEMP: 75

ALL TIMES GMT

DIVERS #	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
1				<u>2900 / 1200</u>		D <u>1807</u>	<u>15</u>	<u>80</u>	
1				<u>3100 / 600</u>		U <u>1822</u>	<u>15</u>	<u>80</u>	
				<u>_____ / _____</u>					

2				<u>2900 / 1400</u>		D <u>1935</u>	<u>15</u>	<u>70</u>	
2				<u>3000 / 900</u>		U <u>1950</u>	<u>15</u>	<u>70</u>	
				<u>_____ / _____</u>					

POST DIVE COMMENTS DIVERS DESCENDED TO BOTTOM AND CAME DOWN 18.9m
-0.4m
18.5m D
ON TOP OF CONTACT. THE ITEM WAS A SMALL BOAT approx 20'
in length stopped and filled with various debris ie: DISHWASHER
and tires.

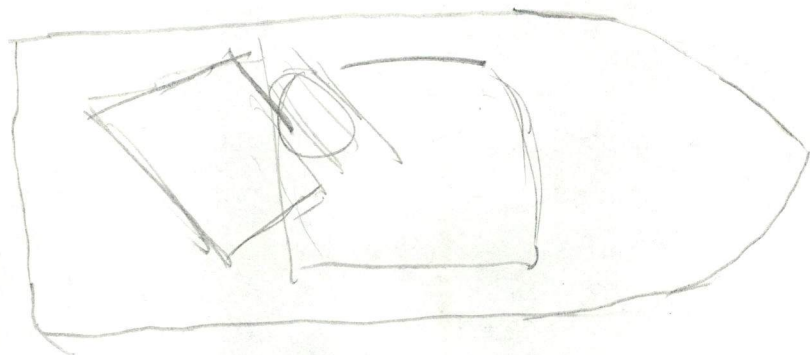
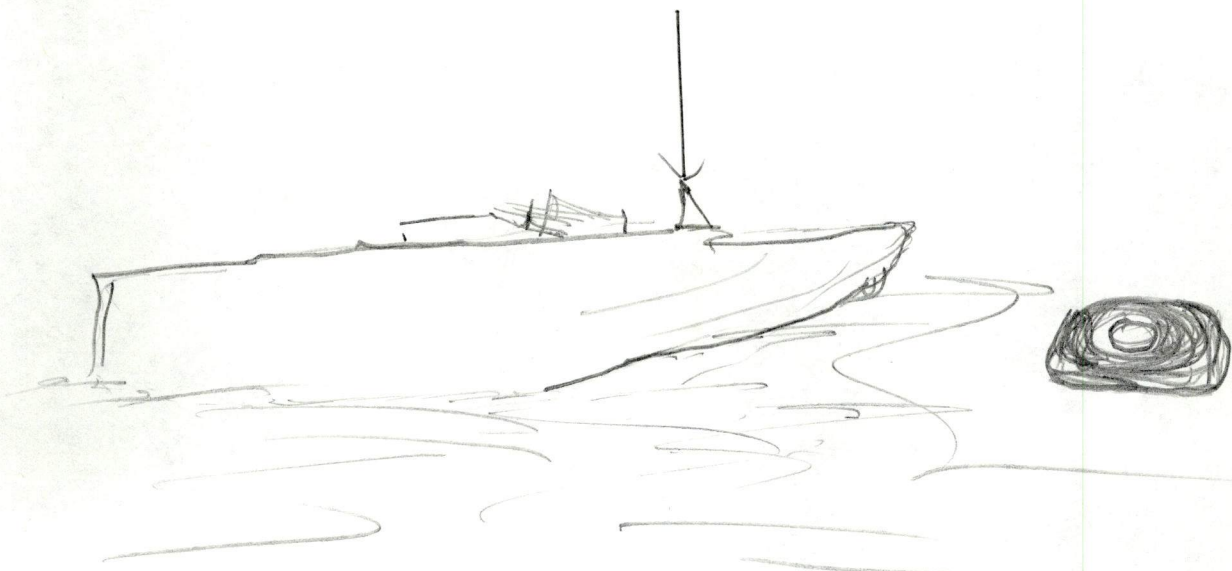
(2) DIVERS DESCENDED THEN large school of fish and came
down upon the contact (85) The item appeared to be 19.8m
-0.3m
19.5m
one tank cut in half with the open side facing up. A lot of
debris (tires) was spread around.

DIVE MASTER SIGNATURE

SEE ALSO SECTION N. OF
THE D.R.

Contact # 78

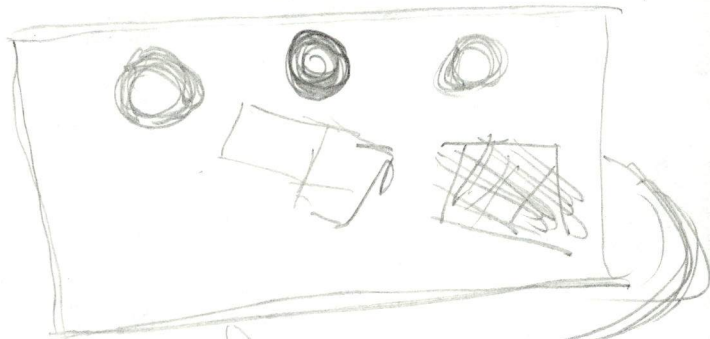
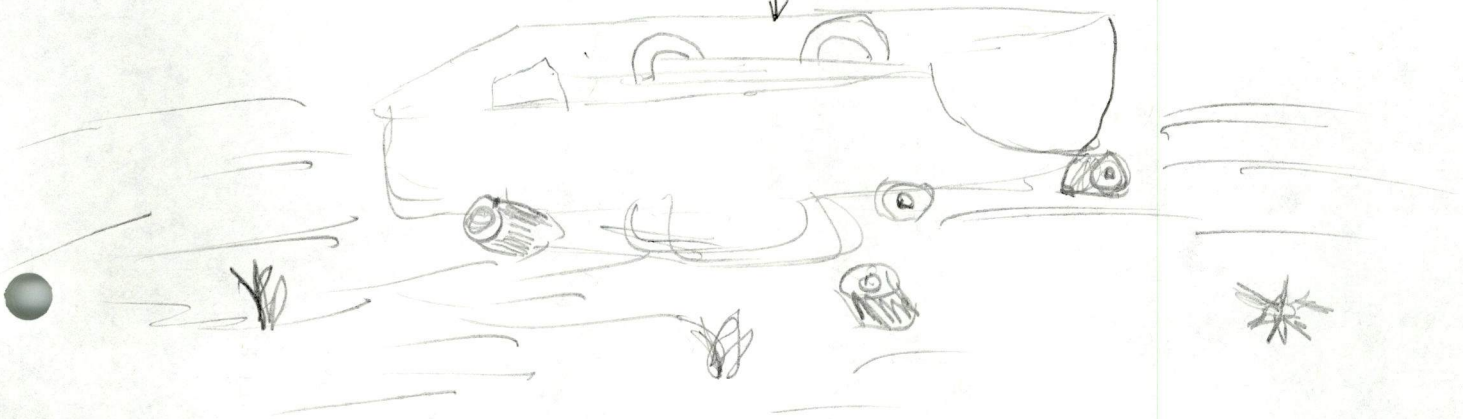
18.5 m *



* Corrected For Pred. Tides

Contact # 85
15 May

19.5m *



* Corrected for Pred. Tides

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 15 MAY 1991

UNIT: NOAA SHIP HECK S591

LOCATION: GULF OF MEXICO

AWOIS ITEM #

CONTACT # 81

DIVE MASTER: LT. MOELLER
ENDERS: ST. MORRIS
SS LEWIS ✓

DIVERS: LCDR IWAMOTO ✓
LT. MOELLER ✓
LT. WILKES
LTJG HARBISON ✓

DIVE PLAN: CIRCLE SEARCH AND ITEM INVESTIGATION. MAX DEPTH: 70 FT
MAX TIME: 15 MIN
AVERAGE LEAST DEPTH: 53.8 FT
LEAST DEPTH TIME: 16:50

DEPTH: (1) 53.8' PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

S/N 8607004N (SHALLOW) GAGE

S/N 8704986 (DEEP) GAGE

CONDITIONS:

VISIBILITY:

AIR TEMP:

WATER TEMP:

WIND : DIR KTS

SEAS : DIR FT

CURRENT : KTS

ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
MOELLER				/					
HARBISON 34	D	17		2800 / 1800	100	D 1638 U 1653	15	70	G
IWAMOTO 34	D	17		1800 / 700	1100		15	70	G
MOELLER				IN /		D			
WILKES				OUT /		U			
IWAMOTO									

POST DIVE COMMENTS 1 - FOUND 15-18 FOOT RUNABOUT WITH VARIOUS HOUSEHOLD

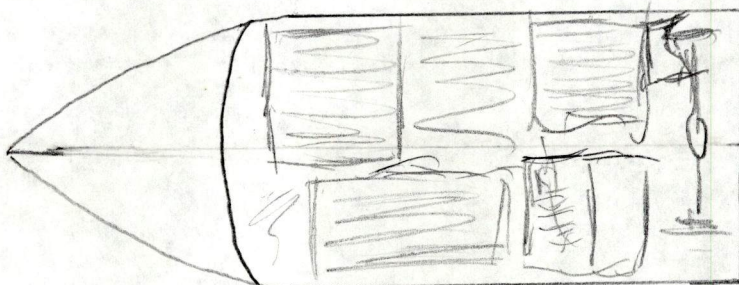
APPLIANCES IN SIDE OF IT. (MT OFF BOTTOM: 1 METER, LEAST DEPTH 17 METERS)

17.0 m
- 0.6 tide
16.4 m Least Depth

See also section N. of the D.R.

DIVE MASTER SIGNATURE

TOP



SIDE

5516.4 m^{*} 7.0 m



1 METER

* Corrected For Predicted Tides

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 15 MAY 1991

UNIT: NOAA SHIP HECK S591

LOCATION: GULF OF MEXICO

AWOIS ITEM #

CONTACT # 82 183

DIVE MASTER: LT. MOELLER
ENDERS: ST. MORRIS
SS LEWIS ✓

DIVERS: LT. MOELLER
LT. WILKES
LTJG HARBISON

DIVE PLAN: CIRCLE SEARCH AND ITEM INVESTIGATION. MAX DEPTH: _____ FT
MAX TIME: _____ MIN

DEPTH: (1) 45.3' (82)
48.8' (83) PNEUMO/LEAD LINE

AVERAGE LEAST DEPTH: _____ FT
LEAST DEPTH TIME: 15:34 (82)
16:00 (83)

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

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

CONDITIONS:
WIND: DIR _____ KTS
SEAS: DIR _____ FT
CURRENT: KTS _____

VISIBILITY: _____
AIR TEMP: _____
WATER TEMP: _____

ALL TIMES GMT

TGT 82

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
MOELLER				/		D 1526			
WILKES				2800 / 1700	1100				
HARBISON						U 1536	10	50'	B
IWAMOTO				3200 / 2400	800		10	50'	B

TGT 83

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
MOELLER	8	8	8	IN 1700 / 700		D 1554	8		D
WILKES									
HARBISON	18	B	10	OUT 2400 / 1800	1000	U 1604	8	50	D
IWAMOTO	18	B	10		600		8	50	D

POST DIVE COMMENTS 1- FOUND OVERTURNED ALUMINUM SKIFF (10-12 FT), AND 3 HOUSEHOLD APPLIANCES. (HT OFF BOTTOM 1 METER LEAST DEPTH 13.8 METERS)

2- FOUND RUSTED STEEL CAGING, (LEAST DEPTH 14.9 METERS)

HIT OFF BOTTOM 1 METER)

Item 82 13.8 m
- 0.6 m Tide
13.2 m Least Depth

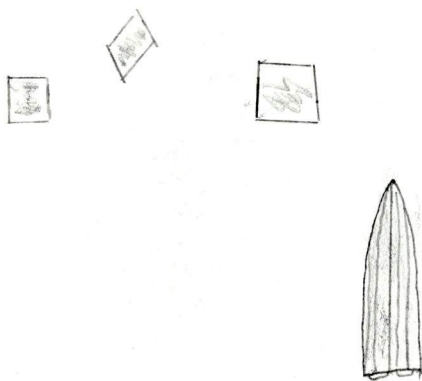
Item 83 14.9 m
- 0.6 m Tide
14.3 m Least Depth

See also section N. of the D.R.

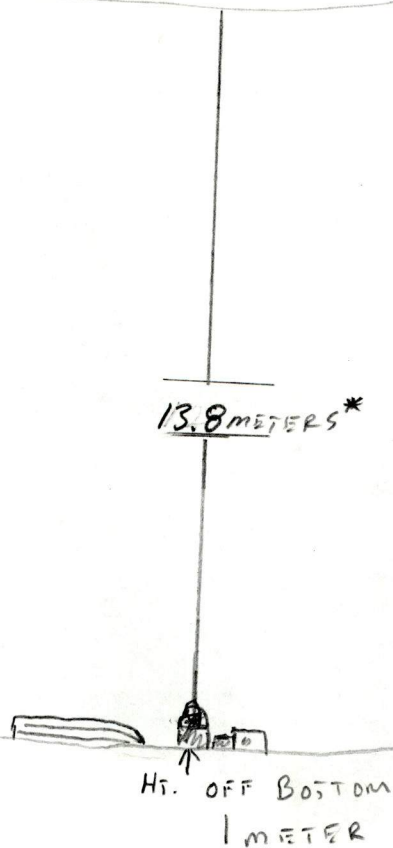
DIVE MASTER SIGNATURE

15 MAY 91
CONTACT 82

Top



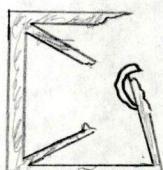
SIDE



* Corrected for Predicted Tides

TOP

15 MAY 91
CONTACT 83



SIDE

14.9 METERS *



* corrected for Predicted Tides

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 5-14 1991

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

LOCATION: ~~SOUTHERN NEW ENGLAND COAST~~
Gulf of Mexico

DIVE MASTER: LT. MOELLER
TENDERS: ST. MORRIS
SS LEWIS ✓

DIVERS : LT. MOELLER ✓
LT. WILKES ✓

DIVE PLAN: CIRCLE SEARCH AND ITEM INVESTIGATION. MAX DEPTH: _____ FT
MAX TIME : _____ MIN
AVERAGE LEAST DEPTH: _____ FT
LEAST DEPTH TIME : 17:05

DEPTH: (1) 70.8 PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:
S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE
VISIBILITY:
AIR TEMP:
WATER TEMP:

CONDITIONS:

WIND : DIR _____ KTS
SEAS : DIR _____ FT
CURRENT : KTS _____

ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
MOELLER				3300 / 300		GMT D 1658 / 1715	17	80	E
WILKES				2900 / 1300		U 1707 / 1723	17	80	E
IWAMOTO				/					

MOELLER				IN _____ / _____		D _____			
WILKES				OUT _____ / _____		U _____			
IWAMOTO									

POST DIVE COMMENTS Car Body Lying upright on bottom.

L.C. 30451.0
477088.0

21.6 m
-0.4 m Tide
21.2 m LD

See also section N. of the D.R.

DIVE MASTER SIGNATURE

DATE: 2-14 1991

LOCATION: ~~...~~
CANT of 12.10
...

13 -
7
20

5
20.8

...

100/1100 80
100/1100 80

3300 300
8400 1300

Car body - kind upright or bottom.

21.5m LD
-0.4m Tilt
21.6m

L.C. 304210
M10880

...

70.8' Least DEPTH
21.6 M



74

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 16 MAY 1991

Day 176

GULF OF MEXICO

UNIT: NOAA SHIP HECK S591
AWOIS ITEM #
CONTACT # 95

LOCATION: SOUTHERN NEW ENGLAND COAST

DIVE MASTER: LT. MOELLER
TENDERS: ST. MORRIS
SS LEWIS

DIVERS: LT. MOELLER
LT. WILKES

DIVE PLAN: CIRCLE SEARCH AND ITEM INVESTIGATION. MAX DEPTH: 80 FT
MAX TIME: 14 MIN
AVERAGE LEAST DEPTH: 69.2 FT
LEAST DEPTH TIME: 18:26

1 m off star
20.6
67.5

DEPTH: (1) 69.2' PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

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

CONDITIONS:
WIND : DIR KTS
SEAS : DIR FT
CURRENT : KTS

VISIBILITY:
AIR TEMP:
WATER TEMP:

ALL TIMES GMT

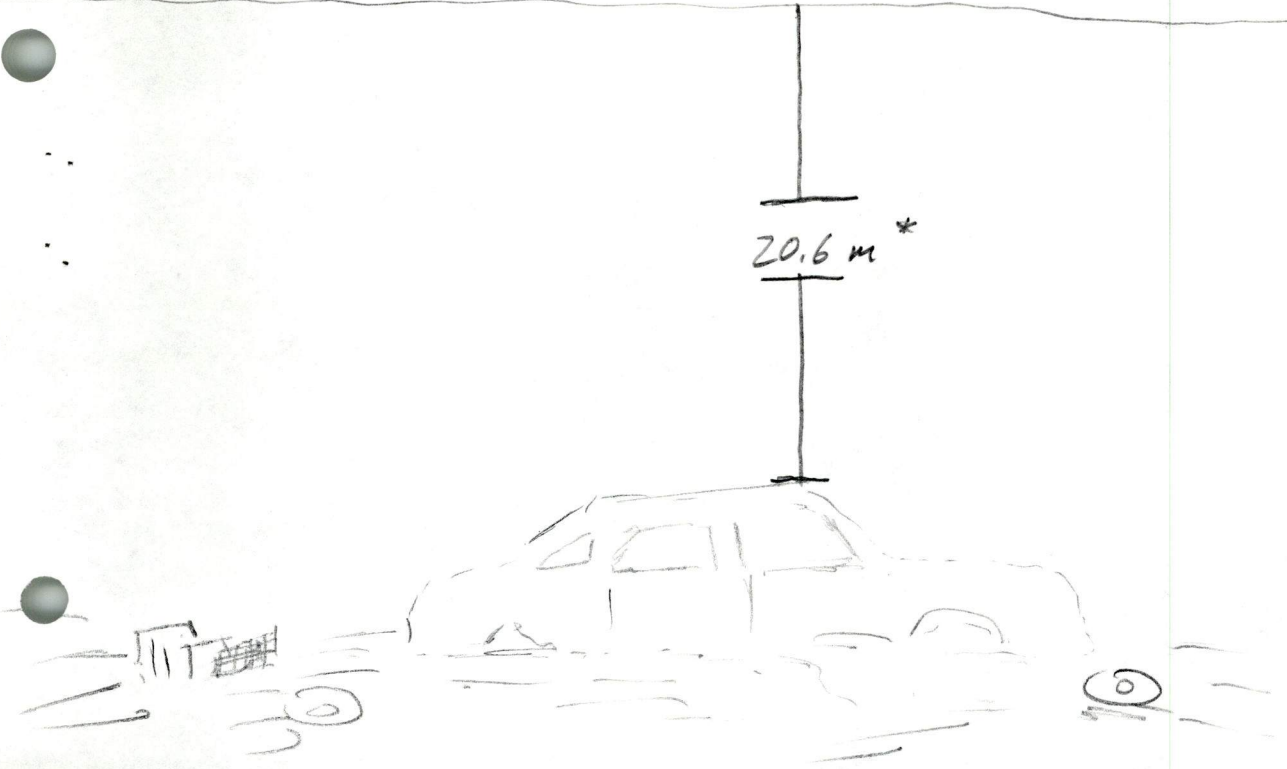
DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
MOELLER				/		GMT D 1816	14	80	E
WILKES				3100 / 2000		U 1830	14	80	E
IWAMOTO				3100 / 1800					
MOELLER				IN /		D			
WILKES				OUT /		U			
IWAMOTO									

POST DIVE COMMENTS: DIVERS DESCENDED TO AN OBJECT WHICH TURNED OUT TO BE A FOUR DOOR CAR BODY AND OTHER ITEMS SUCH AS A GROCERY CART AND WASHER MACHING BODY.

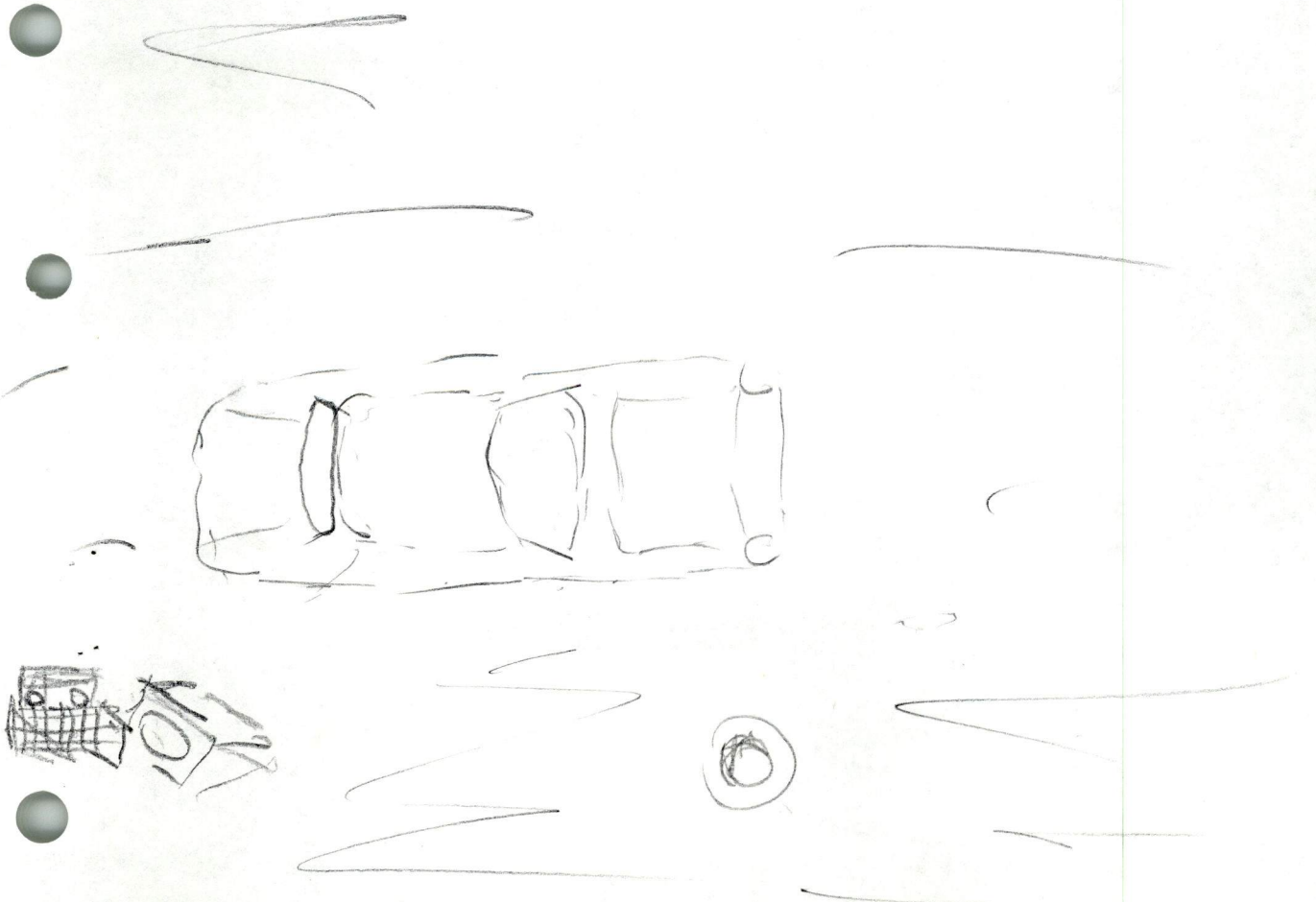
21.1 m
- 0.5 m Tide
20.6 m least Depth

See also section N. of the D.R.

DIVE MASTER SIGNATURE



20.6 m *



* Corrected for Pred. Tides.

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 16 May 1991

GULF OF MEXICO

LOCATION: ~~SOUTHERN NEW ENGLAND COAST~~

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # _____
CONTACT # 108

DIVE MASTER: LT. ~~MOELLER~~ WILKES
TENDERS: ST. MORRIS _____
SS LEWIS ✓

DIVERS: C.O. _____
LT. MOELLER _____
LT. WILKES ✓

DIVE PLAN: CIRCLE SEARCH AND ITEM INVESTIGATION. MAX DEPTH: 75 FT
MAX TIME: 14 MIN
AVERAGE LEAST DEPTH: ~~65~~ 70.2 FT
LEAST DEPTH TIME: 19:15

DEPTH: (1) ~~65~~ 70.2 PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

S/N 8607004N (SHALLOW) GAGE

S/N 8704986 (DEEP) GAGE

VISIBILITY: 35

AIR TEMP: _____

WATER TEMP: _____

CONDITIONS:

WIND : DIR _____ KTS _____

SEAS : DIR _____ FT _____

CURRENT : KTS _____

ALL TIMES GMT

DIVERS	SI	GROUP	RNT	TNK PRESURE	PRES.	DIVE TIMES	BOTTOM	DEPTH	GROUP
NAME				IN / OUT	CHANGE	DOWN/UP	TIME		
MOELLER	#			/		GMT			
1						D 1903	15	80	
WILKES	E			3000/2000		U 1918	15	80	
1									
IWAMOTO	E			1900/500					
MOELLER				IN /		D			
2									
WILKES				OUT /		U			
2									
IWAMOTO									

POST DIVE COMMENTS

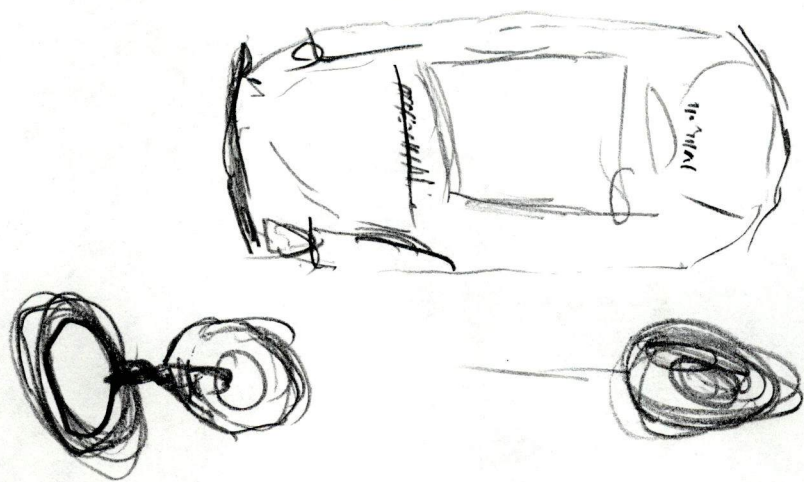
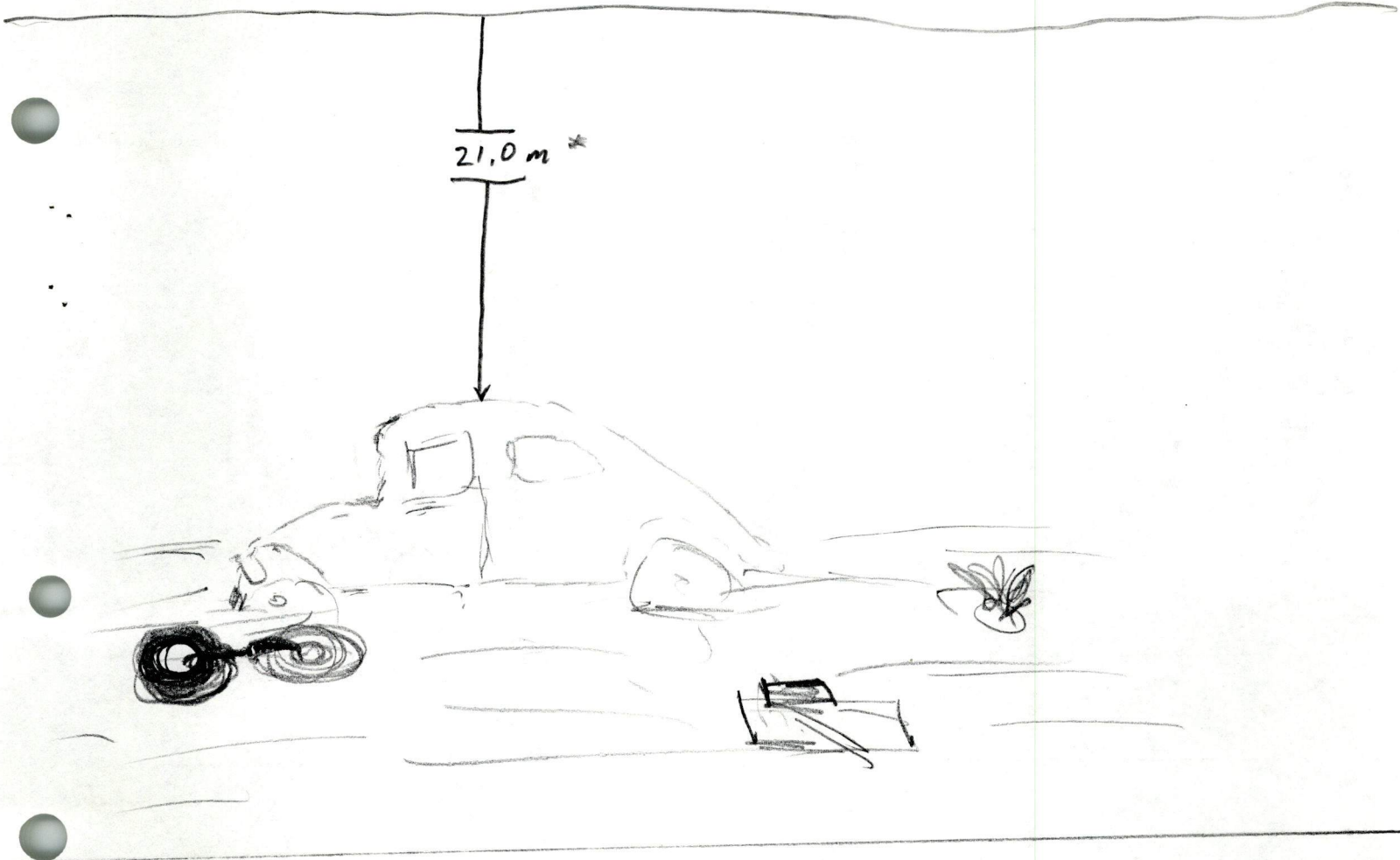
DIVERS DESCENDED WITHIN VISIBILITY RANGE OF

TARGET. CONTACT WAS A CAR BODY WITH MANY FISH SWIMMING ABOVE IT. VISIBILITY WAS GOOD. CAR WAS DETERMINED TO BE A VW BUG. THE BODY WAS IN FAIRLY GOOD CONDITION WITH MINIMAL MARINE GROWTH.

21.4 m
- 0.4 m tide
21.0 m Least Depth

See section N. of the D.R.

DIVE MASTER SIGNATURE



* Corrected for Predicted Tides

DIVING OPERATIONS
OPR-J452-HE-91

DATE: 13 MAY 1991

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # 758
CONTACT # _____

LOCATION: GULF OF MEXICO

DIVE MASTER: LT. MOELLER
TENDERS: SS LEWIS

DIVERS: LT MOELLER
LTJG HARBISON

DIVE PLAN: _____

MAX DEPTH: 75' FT
MAX TIME: _____ MIN
AVERAGE LEAST DEPTH: 69.3 FT
LEAST DEPTH TIME: 17:12

DEPTH: (1) 69.3' PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:
S/N 8607004N (SHALLOW) GAGE
S/N 8704986 (DEEP) GAGE
DIVE VISIBILITY: 20 FT
AIR TEMP: 85°F
WATER TEMP: 73°F

CONDITIONS:

WIND : DIR - KTS -
SEAS : DIR - FT -
CURRENT : KTS -

ALL TIMES GMT

DIVERS NAME	SI	GROUP	RNT	TNK PRESURE IN / OUT	PRES. CHANGE	DIVE TIMES DOWN/UP	BOTTOM TIME	DEPTH	GROUP
# MOELLER				<u>3,000 / 1400</u>	<u>1,600</u>	D <u>1655</u>	<u>20</u>	<u>80</u>	
HARBISON 1				<u>2,700 / 700</u>	<u>2,000</u>	U <u>1715</u>	<u>20</u>	<u>80</u>	
				<u> / </u>					

2				<u> / </u>		D _____			
2				<u> / </u>		U _____			
				<u> / </u>					

POST DIVE COMMENTS 1- DIVE, FOUND BRIDGE RUBBLE (CONCRETE SLABS AND STEEL)

LEAST DEPTH 69.3 FT, HT. OFF BOTTOM 1.2 METERS

21.1m
-0.3m Tide
20.8m LD

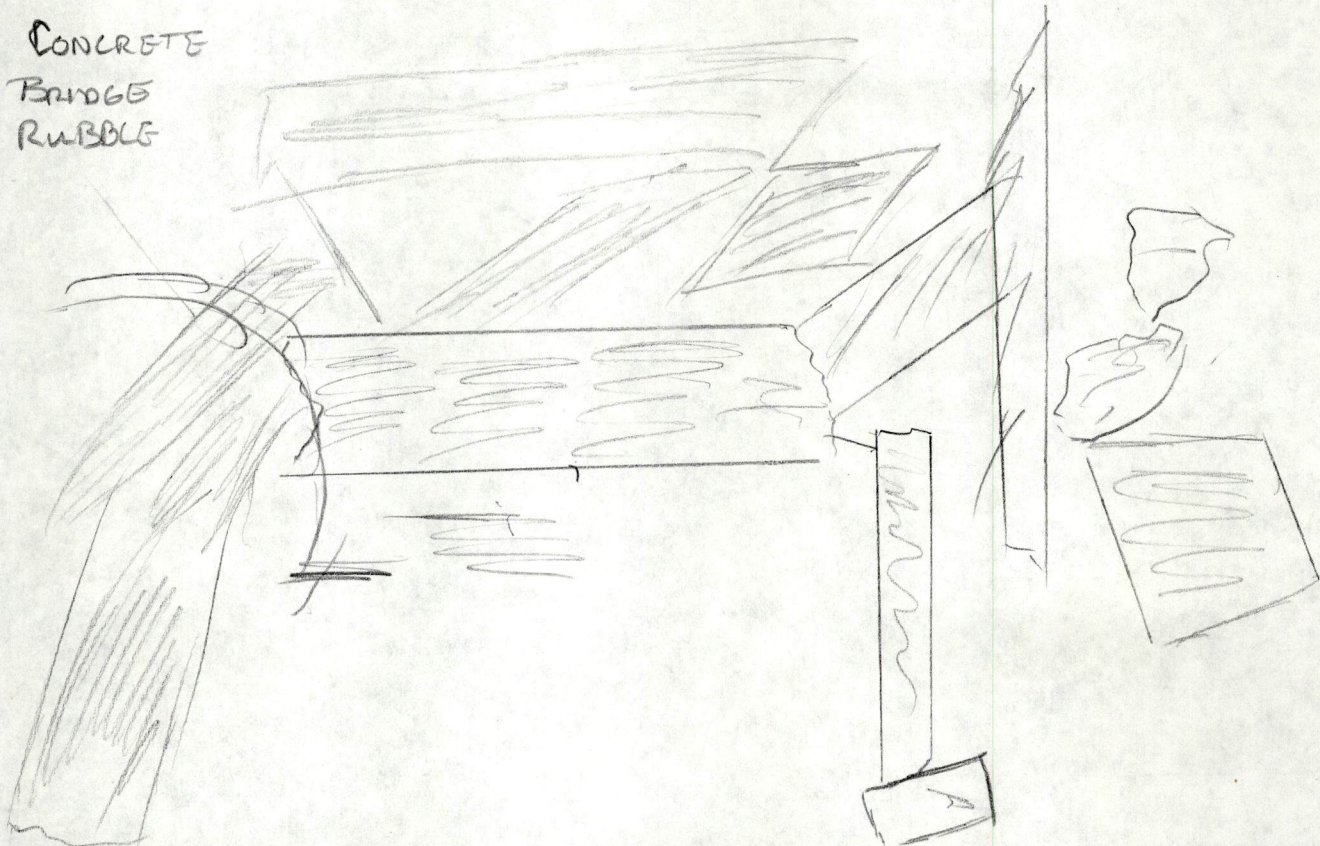
See Section M. of D.R.

DIVE MASTER SIGNATURE

TOP

AWOIS 758

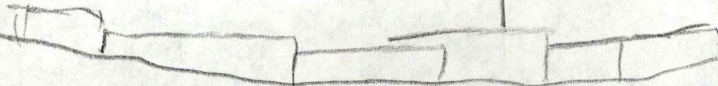
CONCRETE
BRIDGE
RUBBLE



SIDE

LEAST DEPTH 69.3 FT

(1.2 m OFF BOTTOM)



DIVING OPERATIONS
OPR-J452-HE-91

DATE: 14 MAY 1991

UNIT: NOAA SHIP HECK S591
AWOIS ITEM # 2078
CONTACT # ~~82-87~~

LOCATION: ~~SOUTHERN NEW ENGLAND COAST~~
Gulf of Mexico

DIVE MASTER: LT. MOELLER
TENDERS: ST. MORRIS
SS LEWIS ✓

DIVERS : LT. MOELLER ✓
LT. WILKES ✓

DIVE PLAN: CIRCLE SEARCH AND ITEM INVESTIGATION. MAX DEPTH: 80 FT
MAX TIME : 20 MIN
AVERAGE LEAST DEPTH: 66.9 FT
LEAST DEPTH TIME : 18:58

DEPTH: (1) 66.9 PNEUMO/LEAD LINE

EQUIPMENT USED: OPEN CIRCUIT SCUBA.

PNEUMOFATHOMETER:

S/N 8607004N (SHALLOW) GAGE

S/N 8704986 (DEEP) GAGE

VISIBILITY: _____

AIR TEMP: _____

WATER TEMP: _____

CONDITIONS:

WIND : DIR KTS

SEAS : DIR FT

CURRENT : KTS

ALL TIMES GMT

DIVERS	SI	GROUP	RNT	TNK PRESURE	PRES.	DIVE TIMES	BOTTOM	DEPTH	GROUP
NAME				IN / OUT	CHANGE	DOWN/UP	TIME		
MOELLER				3000 / 200		D 1849	20	80	⊗ I
WILKES				2800 / 700		U 1909	20	80	⊗ I
IWAMOTO				/					

MOELLER				IN /		D			
WILKES				OUT /		U			
IWAMOTO									

POST DIVE COMMENTS Concrete Rubble with Re-bars

L.C. 38° 13.96
87° 12.07

20.4 m
- 0.2 m Tide
20.2 m L.D.

See section 11. of the D.R.

DIVE MASTER SIGNATURE

DATE: 14 May 1991

UNIT: NOAA SHIP HULL 1212
ANCHOR: 1205
CONTACT: 88-81

OFFICE: ~~ST. MORRIS~~
OFFICE: ~~ST. MORRIS~~
OFFICE: ~~ST. MORRIS~~
OFFICE: ~~ST. MORRIS~~

20
80
E

66.9

1 26
E

20

D

80

I 80
II 80

D

18
20

38m
40

3000 200
2800 100

Concrete rubble with re-bars

50.4 m
- 0.5 m

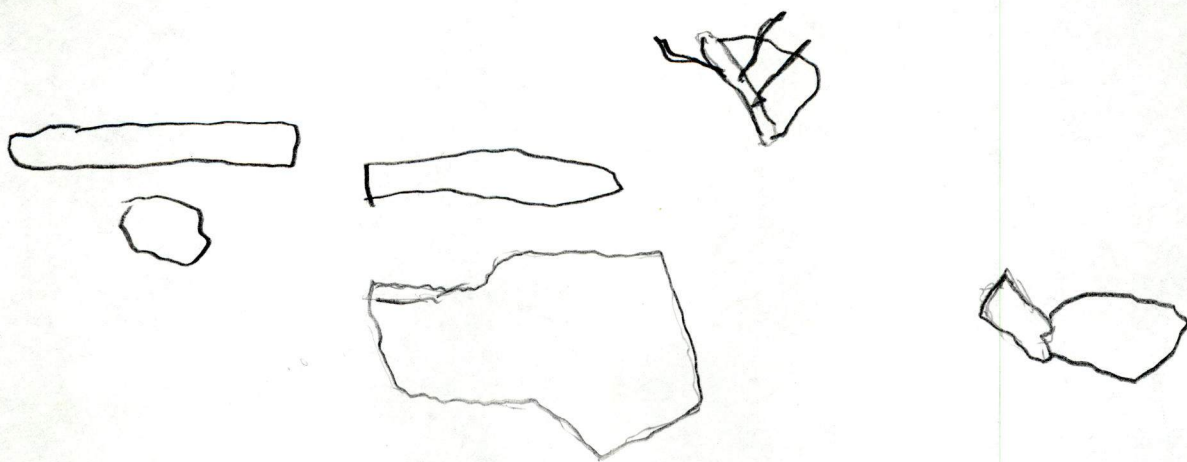
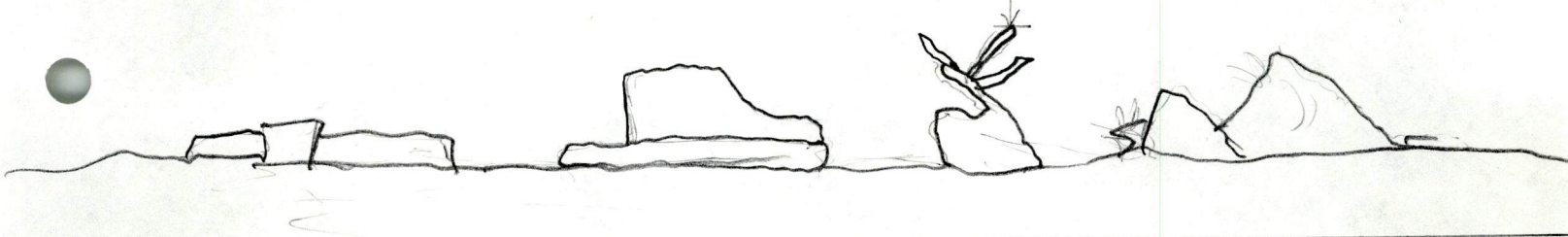
50.9 m

801.8.07
801.8.07

[Handwritten signature]

Awois # 7078

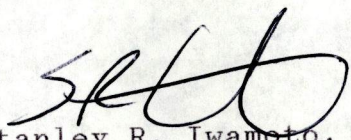
20.2 m*



* Corrected for Prod. Tides

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, fieldsheets, 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: July 1, 1991

MARINE CENTER: Atlantic

OPR: J452-HE-91

HYDROGRAPHIC SHEET: H-10375

LOCALITY: Gulf of Mexico, Approaches to Pensacola Bay, Florida

TIME PERIOD: April 17 - May 16, 1991

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

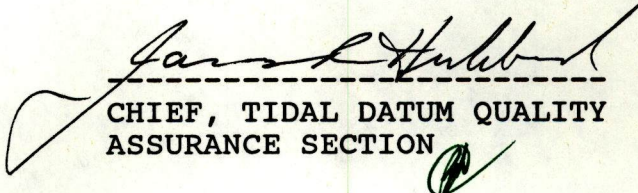
Lat. 30° 24.2'N Lon. 87° 12.8'W

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.



CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

GEOGRAPHIC NAMES

H-10375

Name on Survey	Source of Information											
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	CON 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
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved:

Charles E. Harrington
Chief Geographer - N/CG 2x5

MAR - 9 1993

04/01/93

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10375

NUMBER OF CONTROL STATIONS

3

NUMBER OF POSITIONS

999

NUMBER OF SOUNDINGS

6789

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	192	07/03/91
VERIFICATION OF FIELD DATA	190	01/14/92
ELECTRONIC DATA PROCESSING	61	
QUALITY CONTROL CHECKS	70	
EVALUATION AND ANALYSIS	66	03/16/93
FINAL INSPECTION	29	03/24/93
TOTAL TIME	608	
ATLANTIC HYDROGRAPHIC SECTION APPROVAL		03/26/93

N/CG244-42-93

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-2, 6015 Executive Blvd.,
Rockville, Maryland 20852

DATE FORWARDED

30 March 1993

NUMBER OF PACKAGES

1 box, 1 tube

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-10375

Florida, Gulf of Mexico, Southeastern Approach To Pensacola Bay

1 Tube containing:

- 1 Final Smooth Sheet
- 1 Final Smooth Position Overlay
- 2 Excess Overlays
- 4 Smooth Field Plots (one(1) swath, one(1) track and two(2) sounding)
- 3 Rough field plots (one(1) swath, one(1) sounding and one(1) contact)

1 Box containing:

- 1 Envelope containing Original Descriptive Report for H-10375
- 1 Envelope containing Miscellaneous Data removed from the original Descriptive Report and Control Data
- 1 Envelope containing Sounding Correctors (velocity, tides and TRA data)
- 1 Envelope containing Miscellaneous Field HDAPS listings
- 1 Cahier with final sounding, position, "L" file and control listings
- 17 Envelopes containing, fathograms and daily printouts and side scan sonograms for VESNO 9140 for JDs: 108, 109, 112, 113, 114, 122, 123, 127, 128, 133, 134, 135, 136 and 107 (bottom sample data only)

FROM: (Signature)

Robert R. Hill Jr.
Robert R. Hill Jr.

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

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

D. L. Clark
4/6/93

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

SURVEY NO.: H-10375

FIELD NO.: HE-20-1-91

Florida, Gulf Of Mexico, Southeastern Approach To
Pensacola Bay

SURVEYED: 17 April through 16 May 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
.....D. S. Wilkes
.....K. N. Harbison
.....W. R. Morris

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

1. INTRODUCTION

a. This is primarily a side scan sonar survey. A RAYTHEON DSF-6000N fathometer was operated concurrently with the side scan sonar. A leadline was used to determine least depths during dive operations. No wire drag was accomplished during this survey.

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 later performed, 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 NAD 83 and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27 datum, move the projections .726 seconds (22.341 meters or 1.12 mm at the scale of the survey) north in latitude, and 0.110 seconds (2.929 meters or 0.15 mm at the scale of the survey) west in longitude.

All geographic positions listed in this report are on the NAD 83 datum unless otherwise specified.

b. There is no shoreline within the limits of this survey.

3. HYDROGRAPHY

a. Where applicable, soundings at crossings are in good agreement and comply with the criteria found in sections 4.6.1 and 6.3.4.3. of the HYDROGRAPHIC MANUAL.

b. Where applicable, standard depth curves could be drawn in their entirety. One brown curve was also added to better show bottom topography.

c. The development of the bottom configuration and determination of least depths of items located and shown on the smooth sheet are considered adequate except where noted in this report.

4. CONDITION OF SURVEY

The smooth sheets and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the HYDROGRAPHIC MANUAL, SIDE SCAN SONAR MANUAL, FIELD PROCEDURES MANUAL, and the Project Instruction.

5. JUNCTIONS

H-10383 (1991) to the southwest
H-10387 (1991) to the northwest

Adequate junctions were effected between the present survey and the surveys listed above.

Present survey depths are in harmony with the charted depths to the north, east, and south.

6. COMPARISON WITH PRIOR SURVEYS

a. Hydrographic

H-9943 (1981)	1:20,000
H-9968 (1981-82)	1:10,000
<u>H-9971 (1981-82)</u>	<u>1:20,000</u>

The prior surveys listed above cover the entire present survey.

1) Prior survey H-9943 (1981) shows excellent agreement with the present survey with prior hydrography varying within plus or minus (\pm) 1 to 2 feet (0^3 to 0^6 m). Attention is directed to the following:

AWOIS item #758, a charted dangerous submerged obstruction, PA with a danger curve, in Latitude $30^{\circ}14'15.72''N$, Longitude $87^{\circ}12'03.88''W$, originates with the prior survey as an obstruction with a fathometer least depth of 57-ft (17^4 m) that is described as "possible bridge rubble". An investigation was conducted for this item using side scan sonar (200% coverage) and diver searches. Bridge rubble was located by the field unit in Latitude $30^{\circ}14'13.10''N$, Longitude $87^{\circ}12'09.06''W$ and a depth of 20^6 meters (67 ft) was determined by diver held leadline. Side scan sonograms from the present survey show submerged rubble covering an area approximately 150 meters or greater in diameter. This could easily explain why the present survey located "bridge rubble" 160 meters SSW of the charted dangerous submerged obstruction, PA. Due to the size of the feature and the failure of the field unit to conduct an echosounder investigation, it is quite possible that the diver search did not locate the shoalest depth on this item. The 57 foot (17^4 m) obstruction has been brought forward from the prior survey to supplement the present survey. It is recommended that this obstruction be charted as shown on the present survey.

2) Prior survey H-9968 (1981-82) covers the northwest corner of the present survey. Prior survey hydrography shows excellent agreement with the present survey with soundings varying plus or minus (\pm) 1 to 2 feet (0^3 to 0^6 m).

3) Prior survey H-9971 (1981-82) covers the west end of the present survey. Prior survey hydrography shows excellent agreement with the present survey with soundings varying plus or minus (\pm) 1 to 2 feet (0^3 to 0^6 m). Attention is directed to the following:

The hydrographer ran a line of hydrography and side scan sonar in the vicinity of Latitude $30^{\circ}13'20.0''N$, Longitude $87^{\circ}16'21.0''W$ near an obstruction with a depth of 61 feet (18^6 m) shown on the prior survey. The obstruction is AWOIS item #7080. A side scan sonar contact that the hydrographer failed to address can be seen on the side scan sonagram at position 766.4S. This is in proximity to the position of the AWOIS item and the obstruction found by survey H-10383 (1991). This item was not brought forward to the present survey because AWOIS item #7080 was developed and resolved on survey H-10383 (1991). A discussion and charting recommendation for AWOIS #7080 can be found in section N. (Target 74) of the Descriptive Report for H-10383 (1991).

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

b. Wire Drag

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

Prior survey H-9466WD (1974) covers the entire present survey area. Comparison with the prior survey shows three (3) hangs that fall within the present survey area. These hangs are AWOIS items #7076, #7078 and #7091 that originate with this prior survey. Discussions and charting recommendations for these items are found in section M. of the present survey Descriptive Report and require no additional comments.

Scattered conflicts of 1 foot (0^3 m) or less were noted between the present survey and the prior wire drag survey effective clearance depths. In the following areas, the wire drag effective depths are 1 to 4 feet (0^3 to 1^2 m) deeper than the present survey.

<u>Effective Depths (ft/m)</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>	<u>Present Depths (ft/m)</u>
55/16 ⁷	30°15'55.0"	87°15'40.0"	51-54/15 ⁵ -16 ⁴
46/14	30°16'15.0"	87°16'22.0"	42-45/12 ⁸ -13 ⁷

These differences may be attributed to subsequent change in the bottom configuration. It is recommended that these conflicts be disregarded.

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.

b. Aids to Navigation

The field unit located one (1) floating aid to navigation within the limits of this survey. This aid appears adequate to serve it's intended purpose.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted elsewhere in this report.

9. ADDITIONAL WORK

This is an adequate side scan sonar survey, no additional work is recommended.

Franklin L. Saunders
Franklin L. Saunders
Cartographic Technician
Verification of Field Data

Robert R. Hill Jr.
Robert R. Hill Jr.
Senior Cartographic
Technician
Verification Check &
Evaluation and Analysis

APPROVAL SHEET
H-10375

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

Date: MARCH 26, 1993

Richard H. Whitfield
Cartographer, Evaluation and Analysis Team
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: March 26, 1993

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

Final Approval:

Approved: J. Austin Yeager

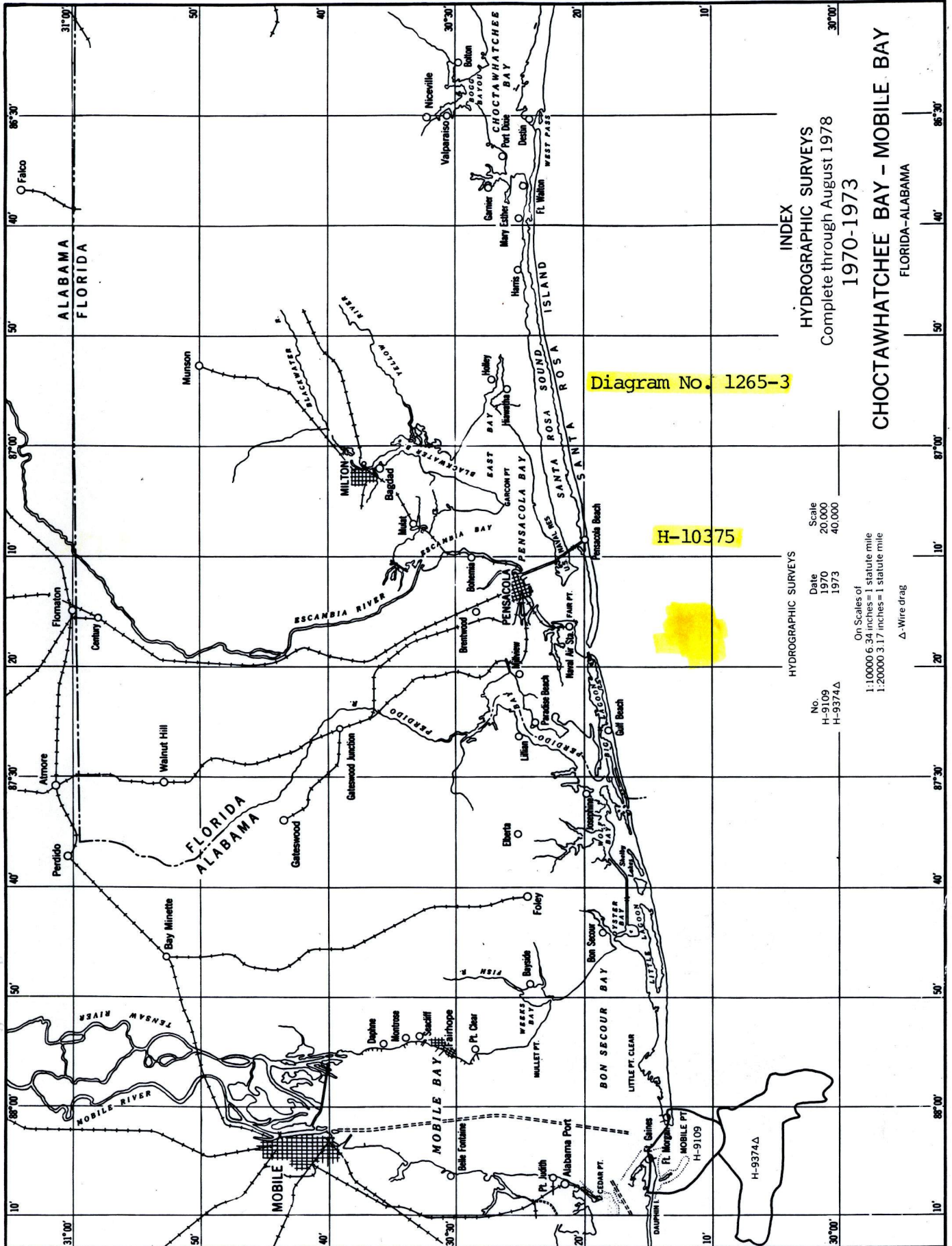
Date: 9/28/93

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

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 85 F



INDEX
HYDROGRAPHIC SURVEYS
Complete through August 1978
1970-1973

CHOCTAWHATCHEE BAY - MOBILE BAY
FLORIDA-ALABAMA

Diagram No. 1265-3

H-10375

HYDROGRAPHIC SURVEYS
No. H-9109
H-9374Δ
Date 1970
1973
Scale 20,000
40,000

On Scales of
1:10000 6.34 inches = 1 statute mile
1:20000 3.17 inches = 1 statute mile
Δ - Wire drag

