

H10509

NOAA FORM 76-35A	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE	
DESCRIPTIVE REPORT	
Type of Survey	HYDROGRAPHIC/ SIDE SCAN SONAR
Field No.	HE-10-4-93
Registry No.	H-10509
LOCALITY	
State	TEXAS
General Locality	GULF OF MEXICO
Sublocality	7 NM NE OF PORT ARANSAS
19 93-94	
CHIEF OF PARTY LCDR G. E. WHITE, NOAA	
LIBRARY & ARCHIVES	
DATE	MAR 18 1996

HYDROGRAPHIC TITLE SHEET

H-10509

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-10-4-93

State TEXAS

General locality GULF OF MEXICO

Locality 7 NM NE OF PORT ARANSAS
~~NORTHEASTERN APPROACH TO PORT ARANSAS, TEXAS~~

Scale 1:10,000

Date of survey 1 OCT 93 - 4 AUG 94

Instructions dated 17 SEPTEMBER 1992

Project No. OPR-K320-HE-93

Vessel NOAA Ship HECK (EDP 9140)

Chief of party George E. White, LCDR, NOAA

Surveyed by LCDR George E. White, LT Gerd F. Glang, LTJG Michael Williamson
ENS Larry T. Krepp, ST Kevin B. Shaver

Soundings taken by echo sounder, hand lead, pole Echosounder

Graphic record scaled by LTJG Williamson, ENS Krepp, ST Shaver

Graphic record checked by LTJG Williamson

Protracted by N/A

Automated plot by HDAPS (FIELD)

Verification by Atlantic Hydrographic ^{BRANCH} Section, N/CG244

Soundings in ~~METERS~~ ~~feet~~ at MLW MLLW FEET

ENCLOSURE NOVA SET III PLOTTER (4x8)

REMARKS: Survey operations were conducted during the 1993 and 1994 field season.

NOTES ON THE ORIGINAL DESCRIPTIVE REPORT WERE MADE IN RED DURING
OFFICE PROCESSING.

AWAIS/BURK ✓ 5/8/96 SJV

SC MAR 18 1996

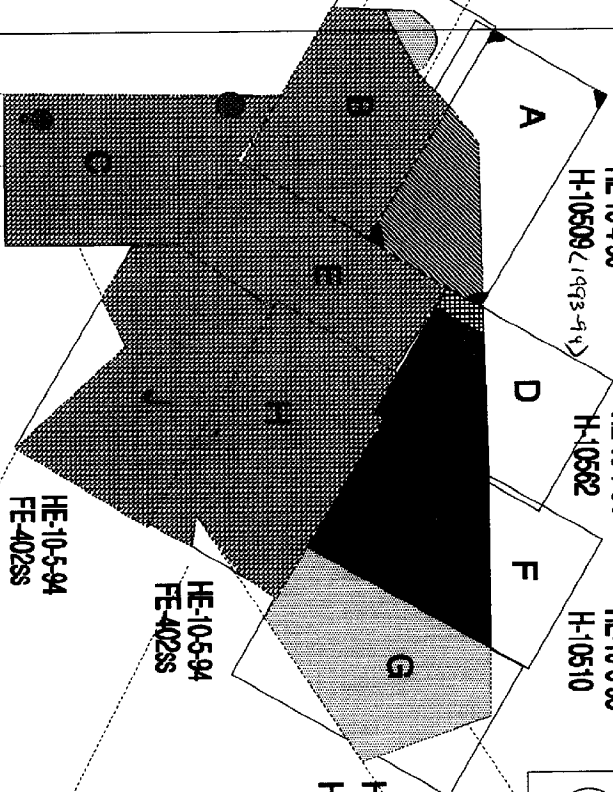
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97-00

HE-10-5-94
FE-402SS



HE-10-4-98
H-10509 (1993-94)

HE-10-7-94
H-10582

HE-10-3-93
H-10510

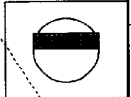
HE-10-8-94
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HE-10-5-94
FE-402SS

HE-10-5-94
FE-402SS

HE-10-2-93
H-10508

28-00



DESCRIPTIVE REPORT TO ACCOMPANY
SURVEY H-10509
FIELD NUMBER HE-10-4-93
TEXAS
GULF OF MEXICO
~~NORTHEASTERN APPROACH TO ARANSAS PASS, TEXAS~~ 7 NM NE OF
Scale 1:10,000 PORT ARANSAS
NOAA SHIP HECK S-591
LCDR George E. White, NOAA, CMDG.

A. PROJECT

1. This survey was conducted in accordance with Hydrographic Project Instructions OPR-K320-HE, Approaches to Aransas Pass, Texas. Data was collected during the 1993 and 1994 field season. This project was originally assigned to the WHITING. The WHITING was unable to complete this project and did no surveying on this sheet.
2. Original Project Instructions are dated September 17, 1992.
3. Change One to the Project Instructions is dated September 14, 1993. The project number has been changed from OPR-K220 to OPR-K320 according to the updated instructions. Change Two to the Project Instructions is dated March 22, 1994.
4. This sheet has been designated as Sheet "A".
5. The purpose of this project is to accomplish complete side scan sonar coverage (200%, <20 meters of water and 100%, >20 meters of water) of the safety fairway and the fairway anchorages at the approaches to Aransas Pass, Texas. The project area is traversed by vessels accessing the port of Corpus Christi. Tankers and cargo vessels are frequently anchored in the anchorage area to the north of the safety fairway. Aransas Pass also has a large shrimp boat fleet. Port Ingleside on the north side of Corpus Christi bay may serve as a home port to a major U.S. Naval battle group.

B. AREA SURVEYED

1. The survey area, designated Sheet "A" in the Project Instructions, lies in the Gulf of Mexico, northeast of the entrance to Aransas Pass, Texas.

2. The approximate survey area is a polygon formed by connecting, in order, the following points:

- a. LAT 27°51'30"N LON 096°58'³⁰24"W
- b. LAT 27°53'36"N LON 096°56'40"W
- c. LAT 27°53'08"N LON 096°51'27"W
- d. LAT 27°49'¹⁶φφ LON 096°53'⁵³39"W

3. Survey operations for 1993 began on October 1 (DOY 274), and were completed on October 29 (DOY 302). Survey operations for 1994 began on July 11 (DOY 192), and were completed on August 4 (DOY 216).

C. SURVEY VESSELS

1. All hydrographic and side scan data were collected by NOAA Ship HECK (EDP 9140). All offset and layback information is contained in the offset table located in section IV of the separates.*

2. No unusual vessel configurations were used.

D. AUTOMATED DATA ACQUISITION AND PROCESSING - SEE ALSO EVALUATION REPORT.

1. Survey data acquisition and processing were accomplished utilizing HDAPS 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 Appendix VI.*

2. Program Velocity (version 2.10) was used to determine velocity corrections.

3. No nonstandard automated acquisition or processing methods were used.

E. SONAR EQUIPMENT

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

Towfish	S/N 10823	DOY 274-302 (1993)
Recorder	S/N 0012102	DOY 274-302 (1993)
Towfish	S/N 10823	DOY 192-216 (1994)
Recorder	S/N 0012105	DOY 192-216 (1994)

2. The beam width and down angle are not adjustable on this unit. The grazing angle dip switches are normally set to 01, unless otherwise noted on the sonargram.

3. All SSS data was collected using 100 Khz frequency.
4.
 - a. Line spacing of 160 meters on the 100 meter scale, 110 meters on the 75 meter scale, and 80 meters on the 50 meter scale were used to maintain the required line overlap as determined by the equation in FPM 7.3.2.2.
 - b. 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.
 - c. Required proof of sonar coverage is demonstrated through sonar coverage plots produced as HDAPS plots. Quality of bottom coverage to the outer edges of the sonargrams was assured during check scanning to the best of the hydrographers ability.
 - d. No anomalies were observed.
 - e. The towfish was deployed from the stern. All offset and layback information is provided in the offset table located in section IV of the separates.*
5. Contacts were investigated using side scan sonar developments using a two or three pass "wagon wheel" pattern over the target. Diver investigations were conducted on items that were determined to be significant as a result of the side scan sonar developments. Echosounder developments utilizing a reduced line spacing or multiple passes drifting over a target were used for targets lying in or near shipping channels when diving operations in or near the channels were considered dangerous.
6. The sonar contact list (Side Scan Sonar Manual 3.1.1.1.) is provided through the HECK's side scan survey contact abstract table and the automated HDAPS contact printout that is produced during the computation and logging of contacts. Depths on HDAPS contact printout are raw, however, depths on the side scan survey contact list are manually corrected for draft (+2.1 meters). Both are located in the separates.*

One contact table was used during this survey. In order to prevent confusion all items were identified using their position number. Some contacts have more than one target number from successive hits during 200% or 400% 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.

* DATA FILED WITH FIELD RECORDS.

Targets to develop were chosen based on contact height, strength of return, and shape. All contacts with heights greater than 0.6 meters were chosen for further development with side scan sonar or echosounder. Also chosen were contacts with strong returns or interesting shapes. Upon development, those contacts still meeting the criteria for significance (1.0 meter height in depths <20 meters and heights 10% in depths of water over 20 meters) were investigated by divers. Least depths were determined by using pneumatic depth gauge.

Annotations required by section 2.6 of the Side Scan Sonar manual (weather data and sea state) are on the sonargrams. Ship's speed and heading are located in the digital records and can be examined in the "Depth/Position Edit" sub-routine of the Post-Survey routine. Weather information is in the weather logs found in Appendix VI. *DATA FILED WITH FIELD RECORDS.*

F. SOUNDING EQUIPMENT

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

S/N A116N	DOY 274-302 (1993)
S/N A116N	DOY 192-216 (1994)

2. A pneumogauge was used to determine diver least depth during the 1994 field season. The pneumogauge-lead line comparison sheets are appended.

3. There were no equipment faults that affected the accuracy or quality of sounding data.

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

G. CORRECTIONS TO ECHOSOUNDINGS

1. a.1. The following table shows dates and locations of velocity casts conducted using the ODOM Digibar sound velocimeter (S/N 168):

<u>TABLE</u>	<u>DATE</u>	<u>LOCATION</u>
1	09/16/93 (DOY 259)	27°46'55"N 096°38'10"W
2	09/30/93 (DOY 272)	27°47'57"N 096°41'38"W
3	10/07/93 (DOY 280)	27°50'12"N 096°38'12"W
4	10/26/93 (DOY 299)	27°48'54"N 096°53'50"W
5	07/02/94 (DOY 183)	27°48'02"N 096°46'20"W
6	07/28/94 (DOY 209)	27°41'00"N 096°57'30"W
7	08/03/94 (DOY 215)	27°40'00"N 096°50'12"W

The velocity cast data were reduced and velocity corrections calculated using program VELOCITY version 2.10.

The Digibar was checked on December 14, 1992 and February 8, 1994 by ODOM and found to be functioning correctly. Field checks using the prescribed fresh water method were accomplished prior to each cast and recorded on the velocity cast form.

- b. There are no variations in the instrument initial on the DSF-6000N.
- c. There are no instrument correctors on the DSF-6000N.
- d. On DOY 154 (1994) a dual leadline comparison was conducted. A mean difference of 0.04 meter was obtained resulting in a corrector of 0.0 meter.
- e. The computed velocity correctors were applied on line to echosounder depths (both high and low frequency) by entering the correction data into the HDAPS sound velocity table.
- f. The static draft of 2.10 meters was applied on line to all echosoundings via the HDAPS offset table.

g. Settlement and squat values for NOAA'S HECK were determined on March 03, 1993 in the vicinity of Craney Island fuel pier in Norfolk, Virginia using the level rod method. These correctors are on file at N/CG244 and are included in separates section IV.*

Settlement and squat values were applied on line to hydrographic soundings via the HDAPS offset table located in section IV of the separates.*

h. 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 have been corrected by applying HIPPY correctors.

2. No unusual methods or instruments for determination of correction to soundings were used.

3. No zoning or special correctors were used.

4. Pneumogauge calibrations are provided in Separates Section IV.* Any correctors are applied to the pneumogauge readings.

5. There were no unusual factors affecting DSF records.

6. a. The tidal datum for this survey was mean lower low water (MLLW). The tide station at Bob Hall Pier, Corpus Christi, Texas (877-8570) was the reference station. The station was inspected and bracketing levels were run by HECK'S crew. No tide stations were established by HECK in support of this survey.

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

c. Zoning was in accordance with project instructions. No zoning was used. APPROVED TIDES AND ZONING WERE APPLIED DURING OFFICE PROCESSING.

H. CONTROL STATIONS

SEE ALSO EVALUATION REPORT

1. The horizontal datum for this project is the North American Datum of 1983 (NAD 83).

2. Horizontal control was accomplished using GPS in conjunction with the DGPS beacons at Port Aransas, TX and Galveston, TX.

3. Coast Guard DGPS beacons were positioned by N/CG241. All control stations were positioned to Third order, Class 1 standards.
4. No horizontal control stations were installed or maintained by HECK.
5. No horizontal control report has been submitted to NOAA Atlantic Hydrographic Section, N/CG244.
6. No known anomalies or unconventional methods of horizontal control were used.

I. HYDROGRAPHIC POSITION CONTROL

1. Position control was by Differential Global Positioning System (DGPS). Control station positions were entered into the HDAPS control station Table. The first, and most commonly used, was the Port Aransas beacon. The Galveston beacon was also used for performance checks and occasionally for primary positioning. The list of the DGPS beacons and their positions appear in Appendix III, LIST OF HORIZONTAL CONTROL STATIONS submitted with this survey. *DATA APPENDED TO THIS REPORT.*
2. Accuracy requirements were met as specified by the Hydrographic Manual and Field Procedures Manual.
3. Equipment serial numbers appear as part of the header information on each day's data print out. The two GPS receivers on board are Ashtech OEM sensors (s/n 700417B1012 and 7004178B1195, both with version 1E11 D-P EPROMs). The differential receivers are Magnavox MX50R receivers. The serial number for DGPS receiver 1 is 079. The serial number for DGPS receiver 2 is 077.
4. The DGPS beacons used for this survey were the USCG beacons located at Port Aransas, TX (304 kHz) and Galveston, TX (296 kHz).
5. Performance checks using both DGPS positions (Port Aransas and Galveston) were conducted using the SHIPDIM program. These checks compare positions computed by both DGPS beacons and compare their subsequent position differences. The performance checks were sent to Atlantic Hydrographic Section N/CG244 as part of the data. *DATA FILED WITH FIELD RECORDS.*
6. When Differential GPS was used, the maximum allowable HDOP was set at 3.7 for the Port Aransas beacon and 3.0 for the Galveston beacon to avoid EPE's in excess of the allowable 15 meters for this scale survey. Data not meeting these requirements were examined and either accepted, smoothed or rejected.

7. a. No unusual methods of operating or calibrating electronic equipment were used.
- b. The Port Aransas beacon was prone to significant outages during the 1993 field season. The beacon would lock-up resulting in no correctors being transmitted until the beacon was reset by Coast Guard personnel. These outages did not reduce the quality of the positioning data since no data was collected during these outages. The DGPS equipment at the Port Aransas station was upgraded during the 1993-1994 winter. There were no problems receiving DGPS correctors from either station during the 1994 season.
- c. No unusual atmospheric conditions were noted and did not effect our reception of the DGPS signals.
- d. The positioning accuracy using the DGPS beacons was not compromised at all during the survey.
- e. No systematic errors were discovered.
- f. and g. All survey offsets were applied on-line using the HDAPS Offset Table 1.

J. SHORELINE

Not applicable as per project instructions.

K. CROSSLINES

1. The first and second 100% coverage were run perpendicular to each other. The second 100% is used as crossline to compare it to the first 100%.
2. Comparison to mainscheme soundings showed fair agreement with random differences of $\pm 0.4^3$ meters. A maximum difference of 0.6^3 meters was observed.
3. No significant discrepancies were noted.
4. There were no sounding equipment changes made during this survey.

L. JUNCTIONS - SEE ALSO EVALUATION REPORT.

This survey junctions with two WHITING surveys of 1991, H-10392 and H-10399 designated as sheets B and E, respectively. Comparison between the present survey and the two WHITING surveys show good agreement with random difference less than $\pm 0.4^6$ meters. There is no pattern (shoaling or deepening) to the differences noted. *CONCUR*

M. COMPARISON WITH PRIOR SURVEYS *SEE THE EVALUATION REPORT.*

The Atlantic Hydrographic Section HECK processing team is completing survey comparisons as agreed upon at the start of the 1994 field season.

N. ITEM INVESTIGATION REPORTS

N1. SUMMARY OF ITEMS INVESTIGATED

AWOIS NO. TGT #	SECTION	STATUS	RECOMMENDATION
198	N2	Disproved	Delete Obstruction
7908	N3	Disproved	Delete Wreck
8877	N4	Found	See N5
1695.05 (Tgt)	N5	Found	Chart Wreck

N2 AWOIS ITEM #198

1. Area of Investigation

Reported Position:

Latitude: 27°53'00.08" N

Longitude: 096°56'11.95" W

Datum: NAD 83

Depth: 46ft. (42.5ft least depth)

Feature: Obstruction

2. Description of Item

This item is reported as 3 steel cylinders, 3 feet in diameter, extending 4 feet off the bottom as determined by divers (1973).

3. Survey Requirements

Survey requirements specify determining the existence of this item by 200% side scan coverage over a 300 meter radius, diver investigation, or salvage documentation.

4. Method of Investigation

NOAA Ship HECK completed 400% side scan coverage on this item.

5. Results of Investigation

No contacts were found within this AWOIS circle.

6. Comparison with Prior Survey

The Atlantic Hydrographic Section HECK processing team is completing survey comparisons as agreed upon at the start of this project.

7. Comparison with the Chart and Charting Recommendations

This item is currently shown on charts #11300 (1:460,732, 32nd Ed., Apr '94), #11307 (1:80,000, 32nd Ed., Aug '92), and #11313 (1:80,000, 20th Ed., Jul '92). This item does not fall within the limits of chart #11309 (1:40,000, 33rd Ed., May '94). No significant differences were observed between charted surrounding depths and depths from the present survey.

Recommendation: Delete Obstruction from the chart at latitude 27°53'00.08" N, longitude 096°56'11.95" W. *CONCUR ✓*

N3. AWOIS ITEM #7908

1. Area of Investigation

Reported Position:

Latitude: 27°50'01.09" N
Longitude: 096°56'00.95" W
Datum: NAD 83
Depth: Unknown
Feature: Dangerous Wreck (PA)

2. Description of Item

This item is listed as the 46' fishing vessel "Mr. B" that sank in 1988.

3. Survey Requirements

Survey requirements specify determining the existence of this item through 200% side scan coverage of the northern half of a 3000 meter radius (NOAA Ship WHITING completed southern half), diver investigation, or salvage documentation.

4. Method of Investigation

NOAA Ship HECK completed 200% side scan coverage on the northern half of this AWOIS item. NOAA Ship WHITING completed 200% coverage on the southern half in 1991.

5. Results of Investigation

One item was found within this AWOIS circle. This item does not match the description of "Mr B" and is believed to be the "VILCO 22", (AWOIS #8877 Section N4) which has an overlapping AWOIS area.

6. Comparison with Prior Survey

The Atlantic Hydrographic Section HECK processing team is completing survey comparisons as agreed upon at the start of this project.

7. Comparison with the Chart and Charting Recommendations

This item is currently shown on charts #11300 (1:460,732, 32nd Ed., Apr '94), #11307 (1:80,000, 32nd Ed., Aug '92), and #11313 (1:80,000, 20th Ed., Jul '92). This item does not fall within the limits of chart #11309 (1:40,000, 33rd Ed., May '94). No significant differences were observed between charted surrounding depths and depths from the present survey.

Recommendation: Delete Dangerous Wreck (PA) from the chart at latitude 27°50'01.09" N, longitude 096°56'00.95" W. *CONCUR* ✓

N4. AWOIS ITEM #8877

1. Area of Investigation

Reported Position:
Latitude: 27°51'24.00"
Longitude: 096°55'42.00"
Datum: NAD 83
Depth: 55ft
Feature: Dangerous Wreck (PA)

2. Description of Item

This item is listed as the fishing vessel "Vilco 22" that burned to the waterline, turned upside-down, and sank in 55ft of water.

3. Survey Requirements

Survey requirements specify determining the existence of this item through salvage documentation, 200% side scan coverage over a 3000m radius, or diver investigation.

4. Method of Investigation

NOAA Ship HECK completed 200% side scan coverage on the northern 7/8 of this AWOIS item. NOAA Ship WHITING completed 200% coverage on the southern 1/8 in 1991 during the course of a hydrographic survey, prior to the vessel sinking. Since the vessel was found, it was not necessary to re-run the southern 1/8 of this item.

5. Results of Investigation

One item was found within this AWOIS circle. The hydrographer believes this item to be the "VILCO 22" based on the results of the diver investigation of this item.

6. Comparison with Prior Survey

The Atlantic Hydrographic Section HECK processing team is completing survey comparisons as agreed upon at the start of this project.

7. Comparison with the Chart and Charting Recommendations

This item is currently shown on chart #11300 (1:460,732, 32nd Ed., Apr '94), and shown as a chart correction on charts #11307 (1:80,000, 32nd Ed., Aug '92), and #11313 (1:80,000, 20th Ed., Jul '92). This item does not fall within the limits of chart #11309 (1:40,000, 33rd Ed., May '94). No significant differences were observed between charted surrounding depths and depths from the present survey.

Recommendation: See N5 *FOR CHARTING RECOMMENDATION.*

N5 CONTACT NO. 1695.05

This contact is listed in contact table #4 with a computed height of 2.2 meters in 16.4 meters of water. The contact was further investigated on DOY 192 (1994) between fixes 1814 and 1819 with side scan sonar on the 75 meter range. A diver investigation was conducted on July 28, 1994. Divers found a steel hull of what is believed to be a fishing boat. The least depth was determined from DP# 2335.

DP# 2335

Date: July 28, 1994

Time (UTC): 1818

Measured Depth (pneumogage): 14.2 meters

Predicted Tide Corrector: -0.1 meters

Corrected Least Depth: 14.1 meters

LAT: 27°51'00.176"N

LON: 096°55'46.802"W

E: 27679.4

N: 29629.6

DATUM: 1983

Recommendation: Delete Dangerous Wreck (PA) (AWOIS 8877, Section N4) charted at latitude 27°51'24.00"N, longitude 096°55'42.00"W, and chart Dangerous Wreck at latitude 27°51'00.176"N, longitude 096°55'46.802"W, *WITH A KNOWN DEPTH OF 14'm (46FT). CONCUR CHART (46WK)*

This item has been submitted as a danger to navigation.

0. COMPARISON WITH THE CHART *SEE ALSO EVALUATION REPORT.*

1. The Atlantic Hydrographic Section is responsible for comparisons with current editions of the following NOS charts:

<u>CHART</u>	<u>EDITION</u>	<u>DATE</u>	<u>SCALE</u>
11300	32nd	APR 94	1:460,732
11307	32nd	AUG 92	1:80,000
11309	33rd	MAY 94	1:40,000
11313	20th	JUL 92	1:80,000

New Editions for charts 11307 and 11313 were expected due in July, 1994.

2. One Danger to Navigation report has been submitted during the course of this survey in connection with the item discussed in N5 above.

3. a. The charted soundings are consistent with the survey depths.

b. No shoaling or deepening has been observed. The depths from this survey should replace all prior depths in the area.

c. No extraordinary hydrographic features were noted.

d and e. Thimble Shoals Channel falls within the survey area. The depths found are consistent with the charted depths.

4. There are no non-sounding features other than those mentioned in Section N in this survey.

5. No changes are recommended to scale coverage or format of published charts within the survey area.

P. ADEQUACY OF SURVEY - SEE ALSO EVALUATION REPORT.

1. This survey meets or exceeds 1:10,000 specifications, and is adequate to supersede all prior surveys for the purposes of charting the depths and hazards to navigation within the survey area.

2. No portion of this survey has been identified as substandard or incomplete.

Q. AIDS TO NAVIGATION

1. No correspondence was initiated with the Coast Guard regarding floating aids to navigation.

2. There is one floating aid to navigation charted close to the survey area. A visual search of 0.5 NM from the charted position disproved the existence of this buoy at the charted location.

DP #2334

Wreck Buoy (PA)

LAT: 27°53'02.009"N

LON: 096°58'31.026"W

E: 23200.7

N: 33396.5

Bearing:

Distance:

DATUM: 1983

Recommendation: Delete Wreck Buoy (PA) charted at latitude 27°53'02"N, longitude 096°58'31"W from the chart. *CONCUR ✓*

3. There are four platforms and wells close to the survey area. They have been positioned by the following detached positions.

DP #2330
 Platform COG-MI-851-~~LE~~^{L-C}
 LAT: 27°51'11.636"N LON: 096°59'01.517"W
 E: 22353.3 N: 30002.2
 Bearing: 238° Distance: 30M
 DATUM: 1983

DP #2331
 Platform COG-MI-721-~~LA~~^{L-A}
 LAT: 27°51'49.624"N LON: 096°58'45.167"W
 E: 22805.2 N: 31169.8
 Bearing: 189° Distance: 30M
 DATUM: 1983

DP #2332
 Well COG-MI-721-~~LB~~^{L-B}
 LAT: 27°52'11.237"N LON: 096°58'38.309"W
 E: 22995.4 N: 31834.4
 Bearing: 227° Distance: 40M
 DATUM: 1983

DP #2333
 Platform COG-MI-8045-5
 LAT: 27°53'13.237"N LON: 096°58'58.810"W
 E: 22442.1 N: 33745.1
 Bearing: 226° Distance: 80M
 DATUM: 1983

4. There are no bridges or tunnels within the survey area

5. No submarine cables, submarine pipelines, or ferry routes were noted within the survey area.

6. There are no uncharted ferry terminals within this survey area.

R. STATISTICS

	<u>ITEM</u>	<u>AMOUNT</u>
a.	Square NM Hydrography	30.6 NMi ²
b.	Days of Production	20 Days
c.	Detached Positions	5
d.	Bottom Samples	4
e.	Tide Stations Established	None
f.	Current Stations Established	None
g.	Velocity Casts Performed	7 Casts
h.	Magnetic Stations Established	None
i.	XBT Drops	None

S. MISCELLANEOUS - SEE ALSO EVALUATION REPORT.

1. a. The water in this area of the Gulf of Mexico is silty which results in a muddy bottom type.
- b. No unusual submarine features were noted.
- c. No unusual tide conditions were observed.
- d. No unusual current conditions were observed.
- e. No magnetic anomalies were noted.
2. Four bottom samples were taken during the course of this survey as per project instructions. Bottom types are the same as those charted. Bottom samples were not sent to the Curator, Division of Paleobiology, Smithsonian Institution.

T. RECOMMENDATIONS - SEE ALSO SECTION P. OF THE EVALUATION REPORT.

1. No additional field work is recommended.
2. No salvage or dredging operations should affect this survey.
3. No further investigation of unusual features or sea conditions is recommended.

U. REFERRAL TO REPORTS

1. A User Evaluation Report will be submitted to N/CG241 and N/CG244 at the end of this project.
2. A Coast Pilot Report will be submitted to N/CG244 and N/CG222 at the end of this project.
3. A LORAN-C Chart Verification Report will not be submitted for this survey. Loran-C values observed at the locations of wrecks and obstructions are recorded in section N as required.
4. No Horizontal Control Report or Electronic Control Report will be submitted for this survey.

SUBMISSION

Respectfully Submitted,

For *James A. Kepp*

Michael Williamson, LT(jg), NOAA
Operations Officer
NOAA Ship HECK

CONTROL STATION TABLE FOR FE-381SS

No	Latitude	Longitude	Cart	Name
100	029:19:45.092	094:44:10.484	250	GALVESTON TX, GPS, 1992
200	027:50:18.156	097:03:32.646	250	PORT ARANSAS TX, GPS, 1992

**DIVING OPERATIONS
OPR -K320-HE-93
APPROACHES TO PORT ARANSAS, TX
NOAA SHIP HECK S- 591**

DOY: 209
Date: 28 JULY 94
Target # 1695.05
DP # 2335
Sheet : A

Max Depth (Ft): 56
Max Time (min): 24
Least Depth (Ft): 46.6
Time (UTC): 1818

ATM. CONDITIONS

WIND DIR: NE
WIND SPD (KNTS): 10
TEMP (C): 26.0

SEA CONDITIONS

DIRECTION: 045
HEIGHT (Ft): 2
TEMP (C): 26.9
VISIBILITY: 10 FEET

Diver Name	Surf Int	RNT	GR	TNK Pressure In/Out	dP	Dive Times Up/Down	Bottom Time	Depth	GR
WILL'	+ 12	0	-	2800/750	2050	1325/1257	24 BT	56	-
KREPP	+ 12	0	-	3100/1600	1500	1325/1257	24 BT	56	-

DP # 2335

Lat: 27-51-00.176 East: 27679.4
Long: 096-55-46.802 North: 29629.6

LORAN Rates

W: 11073.1 L Y: 46773.2
X: 24032.1 L Z: 64039.4

Diver Comments:

DIVERS FOUND A STEEL-HULL WRECK FLIPPED OVER. NO SUPERSTRUCTURE WAS VISIBLE.
HULL HAD A LENGTH OF APPROXIMATELY 20 METERS AND BEAM OF 7 METERS.

Pneumo Gauge Readings: 46.6', 46.6', 46.6' AT 1818 utc (1318 LOCAL TIME)

14.2 M

DIVING OPERATIONS
OPR - K 320 - HE
APPROACHES TO PORT ARANSAS, TX
NOAA SHIP HECK 8-691

DOY: 209
 Date: 28 July 94
 Target # 1695.05
 DP # 2335

Max Depth (Ft): 56
 Max Time (min): 24
 Least Depth (Ft): 46.6
 Time (min): 1818 UTC

shur A

ATM. CONDITIONS

WIND DIR: NE
 WIND SPD (KNTS): 10
 TEMP (C): 26.0

SEA CONDITIONS

DIRECTION: 075
 HEIGHT (Ft): 2
 TEMP (C): 26.9
 VISIBILITY: 10 ft

Diver Name	Surf Int.	GP	BS	TK Gas Supp. (L/Min)	SP	Also Depth Below	Bottom Time	Depth	Gr
WILLIAMSON			36	2800/750	250	1325/1257 * SAFETY STOP 3 min 75ft.	24 min. (B.T.)	56	
KREPP			30	3100/1600	150	1325/1257 * SAFETY STOP 3 min 75ft.	24 min. (B.T.)	56	

DP # 2335

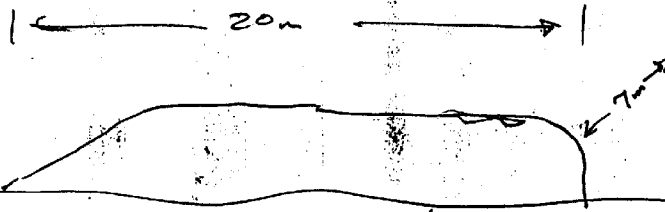
Lat: 029-51-00.176 East: 27679.4
 Long: 096-55-46.802 North: 29629.6

LORAN Rates

W: 11073.1 @ Y: 46773.2
 X: 24032.1 @ Z: 64039.4

Diver Comments:

STEEL-HULLED WRECK



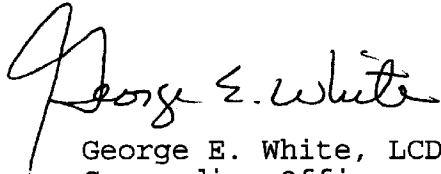
Pneumo Gauge Readings:

48.6 46.6 46.6 @ 1318L

1818 UTC

LETTER OF APPROVAL

Field operations contributing to the accomplishment of this survey were conducted under my direct supervision with daily 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.



George E. White, LCDR, NOAA
Commanding Officer
NOAA Ship HECK



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March ¹⁶ 30, 1994

MARINE CENTER: Atlantic

HYDROGRAPHIC PROJECT: OPR-K320

HYDROGRAPHIC SHEET: H-10509

LOCALITY: Texas Gulf of Mexico, 7 N.M. ENE of Port Aransas, Tx.

TIME PERIOD: October 1 - 29, 1993

TIDE STATION USED: 877-5870 Bob Hall Pier, Tx.
Lat. $27^{\circ} 34.8'N$ Lon. $97^{\circ} 13.0'W$

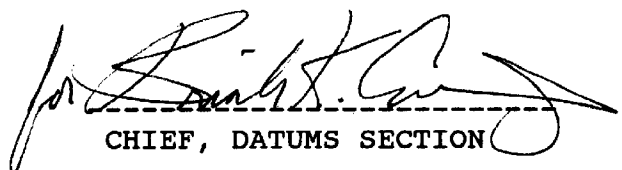
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 20.58 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.6 ft.

REMARKS: RECOMMENDED ZONING

Times and heights are direct on Bob Hall Pier, Tx. (877-5870). = 1.00

Note: Times are tabulated in Central Standard Time. = 360.00


CHIEF, DATUMS SECTION





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 17, 1995

HYDROGRAPHIC SECTION: Atlantic

HYDROGRAPHIC PROJECT: OPR-K320

HYDROGRAPHIC SHEET: H-10509

LOCALITY: Gulf of Mexico, 7 Nautical Miles ENE of Port Aransas, Tx.

TIME PERIOD: July 11 - August 4, 1994
(October 1 - 29, 1993 previously sent)

TIDE STATION USED: 877-5870 Bob Hall Pier, Tx.
Lat. $27^{\circ}34.8'N$ Lon. $97^{\circ}13.0'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 20.58 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.6 ft.

REMARKS: RECOMMENDED ZONING

Times are direct, and apply a X1.07 range ratio to heights using Bob Hall Pier, Tx. (877-5870).

- Notes: 1. Times are tabulated in Greenwich Mean Time. 00
2. Data for Bob Hall Pier, Tx. (877-5870) was temporarily stored in file #677-5870.

William M. Hobbs
CHIEF, DATUMS SECTION



GEOGRAPHIC NAMES

H-10509

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
MEXICO, GULF OF												1
PORT ARANSAS (title)												2
TEXAS (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. Harrison
Chief Geographer - N/CG 245

SEP 29 1994

N/CS33-51-96

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 GROUP, N/CS3x1
 NOAA/NATIONAL OCEAN SERVICE
 SSMC3, STATION 6813
 1315 EAST-WEST HIGHWAY
 SILVER SPRING, MARYLAND 20910-3282

DATE FORWARDED

ISDAB
MAR 13, 1996

NUMBER OF PACKAGES

1 (ONE) TUBE, 1 (ONE) 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.

OPR-K320

TEXAS, GULF OF MEXICO

1 BOX CONTAINING:

- 1 COPY OF THE DESCRIPTIVE REPORT FOR H-10509
- 1 COPY OF THE DESCRIPTIVE REPORT FOR H-10510
- 1 COPY OF THE DESCRIPTIVE REPORT FOR H-10562

1 TUBE CONTAINING:

- 1 SMOOTH SHEET FOR H-10509
- 1 SMOOTH SHEET FOR H-10510
- 1 SMOOTH SHEET FOR H-10562
- 1 PAPER PLOT FOR EACH OF THE ABOVE SURVEYS FOR NOS CHART 11313
- 1 MYLAR H-DRAWING FOR NOS CHART 11313
- 1 PAPER COMPOSITE PLOT OF SURVEY H-10562 FOR NOS CHART 11307
- 1 MYLAR H-DRAWING FOR NOS CHART 11307

FROM: (Signature)

DEBORAH A. BLAND

Deborah A. Bland

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

ATLANTIC HYDROGRAPHIC BRANCH
 N/CS331
 439 WEST YORK STREET
 NORFOLK, VA 23510-1114

03/15/96

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10509

NUMBER OF CONTROL STATIONS	2
NUMBER OF POSITIONS	2425
NUMBER OF SOUNDINGS	13822

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	118	10/20/94
VERIFICATION OF FIELD DATA	146.50	09/14/95
QUALITY CONTROL CHECKS	11	
EVALUATION AND ANALYSIS	18	
FINAL INSPECTION	6	11/16/95
COMPILATION	34	03/14/96
TOTAL TIME	334	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		11/29/95

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H-10509 (1993-94)**

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

AUTOCAD, Release 12
Hydrographic Processing System
Microstation, version 5.0
NADCON, version 2.10

The smooth sheet was plotted using an ENCAD NovaJet III plotter.

H. CONTROL STATIONS

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 projection lines 1.091 seconds (33.581 meters or 3.36 mm at the scale of the survey) north in latitude, and 0.950 seconds (25.995 meters or 2.60 mm at the scale of the survey) west in longitude.

L. JUNCTIONS

H-10392 (1991) to the south
H-10399 (1991) to the southeast
H-10562 (1994) to the northeast

Standard junctions could not be effected with surveys H-10392 (1991) and survey H-10399 (1991). These surveys are

archived at National Ocean Service (NOS) Headquarters, Silver Spring, Maryland. Any adjustments to the depths curves in the junctional areas will have to be made during compilation. A standard junctions was effected between the present survey and H-10562 (1994).

There are no junctional surveys to the north or west. Present survey depths are in harmony with the charted hydrography to the north and west.

M. COMPARISON WITH PRIOR SURVEYS

A comparison with prior surveys was not conducted. This is in accordance with section 4. of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

- O. COMPARISON WITH CHART**
- | |
|--|
| <u>11300 (32nd Edition, Apr. 16/94)</u> |
| <u>11307 (32nd Edition, Aug. 22/92)</u> |
| <u>11313 (20th Edition, Jul. 4/92)</u> |
| <u>11340 (56th Edition, Jul. 17/93)</u> |

Hydrography

The charted hydrography originates with prior surveys and require no further consideration. The hydrographer makes adequate chart comparisons in sections N. and O. of the Descriptive Report.

The present survey is adequate to supersede the charted hydrography within the common area.

Dangers To Navigation

One Danger to Navigation report was submitted to Commander (oan), Eighth Coast Guard District, New Orleans, Louisiana for inclusion in the Local Notice to Mariners, and to the Marine Chart Division, N/CS3x1, Silver Spring, Maryland. A copy of the report is appended to this report.

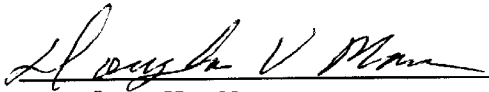
P. ADEQUACY OF SURVEY

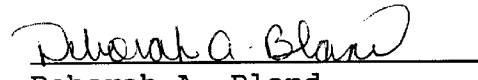
This is an adequate hydrographic/side scan sonar survey; no additional work is recommended.

S. MISCELLANEOUS

Chart compilation using the present survey was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to the Marine Chart Division, Silver Spring, Maryland.

HECK PROCESSING TEAM


Douglas V. Mason
Cartographic Technician


Deborah A. Bland
Cartographer



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship HECK 8-591
439 W. York Street
Norfolk, VA 23510-1114

September 13, 1994

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

Dear Sir,

The following dangerous wreck was located during hydrographic survey operations, and is considered a danger to navigation:

REPORT OF DANGER TO NAVIGATION

Hydrographic Survey Number H-10509
State Texas
General Locality Gulf of Mexico
Locality Northeastern Approach to
 Aransas Pass
Project Number OPR-K320-HE-93
Surveyed By NOAA Ship HECK

Object Discovered: Dangerous Wreck

A dangerous wreck was originally reported in LNTM 43/92. While conducting survey operations in the area, the NOAA Ship HECK discovered the item 6.3nm east of Port Aransas, Texas (0.4nm south of the original charted position). The Wreck is submerged, and is covered with a least depth 14.1 meters (46.3 feet) MLLW based on predicted tides. The preliminary position of this dangerous wreck is Latitude 27°51'00.18"N, Longitude 096°55'46.80"W (NAD83). The presently charted depths in this area are approximately 53 feet.

Affected Nautical Charts:

CHART NUMBER	EDITION NO.	DATE	REPORTED DEPTH	HORIZ. DATUM	GEOGRAPHIC POSITION	
					LATITUDE	LONGITUDE
11300	32	Apr. 16, 1993	7½ fm.	NAD83	27°51'00.18'N	096°55'46.80"W
11307	32	Aug. 22, 1992	46 ft.	NAD83	"	"
11313	20	Jul. 4, 1992	46 ft.	NAD83	"	"

This is advance information subject to office review. Questions concerning this report should be directed to the Chief, Atlantic Hydrographic Section, at (804) 441-6746.

Sincerely,

George E. White
Lieutenant Commander, NOAA
Commanding Officer

Attachment:
Chartlet of 11313


cc: N/CG244, N/CG241, N/CG221, DMAHTC




APPROVAL SHEET
H-10509

Initial Approvals:

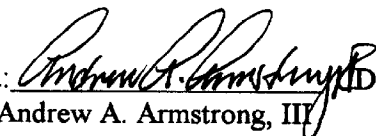
The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproof of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. A final sounding printouts of the survey has been made. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.


Date: 11/29/95
Norris A. Wike
Cartographer
Atlantic Hydrographic Branch

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.


Date: Nov 29, 1995
Nicholas E. Perugini
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Final Approval:

Approved: 
Date: 3/20/96
Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

