

H10510

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-10-3-93
Registry No.	H-10510
LOCALITY	
State	TEXAS
General Locality	GULF OF MEXICO
Sublocality	16 NM ENE OF PORT ARANSAS
19 93-94	
CHIEF OF PARTY	
LCDR G. E. WHITE, NOAA	
LIBRARY & ARCHIVES	
DATE	MAR 18 1996

REGISTER NO.

**HYDROGRAPHIC TITLE SHEET**

H-10510

**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-10-3-93

State Texas

General locality Gulf of Mexico

Locality 16nm ENE of Port Aransas

Scale 1:10,000

Date of survey 30 September 1993;  
August 8 - September 12, 1994

Instructions dated 17 September 1993

Project No. OPR-K320-HE

Vessel NOAA Ship HECK (EDP 9140)

Chief of party George E. White, LCDR, NOAA

Surveyed by George E. White, LT Gerd F. Glang, LTjg Michael Williamson, ENS Larry Krepp  
ST Kevin Shaver

Soundings taken by echo sounder, ~~XXXXXXXXXX~~

Graphic record scaled by LTjg Michael Williamson, ENS Larry Krepp, ST Kevin Shaver

Graphic record checked by ENS Larry Krepp

Protracted by N/A

Automated plot by ENCAD NOVASET III (PLOTTER (AMB))  
HDAPS - ZETA 436 PLOTTER (KREPP)

Verification by Atlantic Hydrographic <sup>BRANCH</sup> Section, N/CG244

Soundings in ~~METERS~~ ~~XXXXXX~~ ~~FEET~~ at ~~XXXX~~ MLLW FEET

REMARKS: All times recorded in UTC

Change 1 dated 14 September 1993

Project number has been changed from OPR-K220 to OPR-K320

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

Data submitted to Atlantic Hydrographic Section N/CG244

NOTES IN THE ORIGINAL DESCRIPTIVE REPORT WERE MADE IN 260  
DURING OFFICE PROCESSING.

SC MAR 18 1996

AWOIS/SURF - 5/8/96 35!

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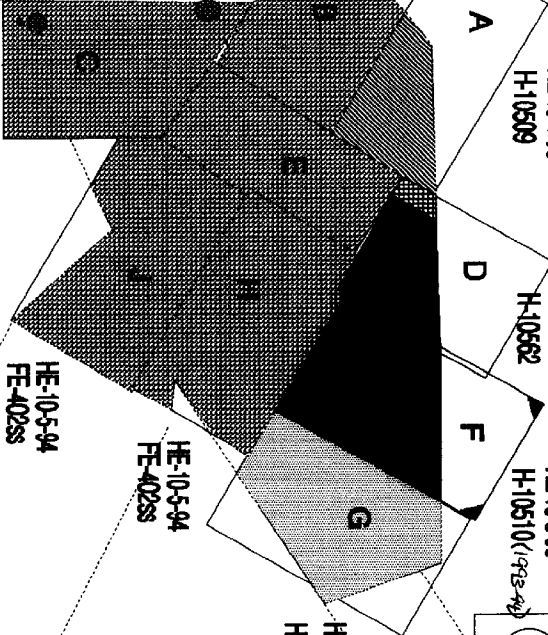
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Progress Sketch  
OPR-K320-HE-93  
Southwest Texas Coast  
NOAA Ship HECK  
LCDR George E. White, CMDG

97-00

HE-10-5-94  
FE-402ss



HE-10-4-93  
H-10509

HE-10-7-94  
H-10562

HE-10-3-93  
H-10510(1993-40)

HE-10-9-94  
FE-405ss

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-10510  
FIELD NUMBER HE-10-3-93  
TEXAS  
GULF OF MEXICO  
16nm ENE OF PORT ARANSAS, TEXAS  
Scale 1:10,000  
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, Southwest Texas Coast, Texas. Data was collected during the 1993 and 1994 field seasons. This project was originally assigned to the WHITING. The WHITING was unable to complete this project and did not conduct survey operations 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 "F".
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 serves as a home port to a major U.S. Naval battle group.

**B. AREA SURVEYED**

1. The survey area, designated Sheet "F" in the Project Instructions, lies in the Gulf of Mexico, 16nm east-northeast of <sup>PORT</sup> ~~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°48'48"N      LON 096°48'<sup>49</sup>48"<sup>21</sup>W
- b. LAT 27°52'36"N      LON 096°47'12"W
- c. LAT 27°52'03"N      LON 096°43'<sup>44</sup>11"<sup>45</sup>W
- d. LAT 27°46'54"<sup>48</sup>N      LON 096°45'05"W

After survey operations were complete, it was discovered that the sheet size was 78cm (2cm too long along the northeast corner). This was caused by an inadvertent error in laying out of the sheets at the start of the project.

3. Survey operations for 1993 began on September 30 (DOY 273), and were completed on September 30 (DOY 273). Survey operations for 1994 began on August 8 (DOY 220), and were completed on September 12 (DOY 255).

#### 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.

\* DATA FILED WITH FIELD RECORDS.

## 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 273 (1993)
Recorder	S/N 0012102	DOY 273 (1993)
Towfish	S/N 10823	DOY 220-233 (1994)
	S/N 016989	DOY 234-251 (1994)
	S/N 10823	DOY 252-255 (1994)
Recorder	S/N 0012105	DOY 220-235 (1994)
	S/N 0011443	DOY 236-255 (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 260 meters on the 150 meter scale, 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. DATA

*FILED WITH FILE RECORDS.*

5. Contacts were investigated using side scan sonar developments using a two or three pass "wagon wheel" pattern over the target. Diver investigations are normally conducted on items that are 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 are normally used for targets if diving operations are considered dangerous. No dives or echosounder developments were necessary during this survey.

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.

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) are normally investigated by divers, with least depths determined by pneumatic depth gauge. No dives were necessary in this survey.

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.\*

## F. SOUNDING EQUIPMENT

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

S/N A116N	DOY 273 (1993)
S/N A116N	DOY 220-254 (1994)



2. A pneumogauge, normally used to determine diver least depths was not needed in this survey.
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>
2	09/30/93 (DOY 272)	27°47'57"N 096°41'38"W
7	08/03/94 (DOY 215)	27°40'00"N 096°50'12"W
8	08/15/94 (DOY 227)	27°47'36"N 096°45'12"W
<del>9</del>	<del>08/22/94 (DOY 234)</del>	<del>27°49'42"N 096°47'42"W</del>
10	09/06/94 (DOY 249)	27°51'36"N 096°44'30"W
<del>11</del>	<del>09/20/94 (DOY 253)</del>	<del>27°57'02"N 096°34'52"W</del>

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).

\*DATA FILED WITH FIELD RECORDS.

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. Horizontal control stations were neither installed nor 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.

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. 21.71nm of crosslines were run perpendicular to the mainscheme soundings, representing 10.7% of all hydrography.
2. Comparison to mainscheme soundings showed fair agreement with random differences of  $\pm 0.2$  meters. A maximum difference of 0.4 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 one HECK survey of 1993, H-10508, one HECK survey of 1994, H-10562, and one WHITING survey of 1991, H-10400. These sheets are designated as sheets "G", "D" and "H" respectively. A comparison of soundings between the present survey and the two HECK surveys and the WHITING survey show good agreement with random difference less than  $\pm 0.4$  meters. There is no pattern (shoaling or deepening) to the differences noted.

**M. COMPARISON WITH PRIOR SURVEYS** - SEE ALSO 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** - SEE ALSO SECTION O. OF THE EVALUATION REPORT.

**N1. SUMMARY OF ITEMS INVESTIGATED**

TARGET #	SECTION	STATUS	RECOMMENDATION
164.28	N2	Insignificant	Do Not Chart
185.71	N2	Insignificant	Do Not Chart
565.58	N2	Insignificant	Do Not Chart
701.61	N2	Insignificant	Do Not Chart
969.19	N2	Insignificant	Do Not Chart
1054.20	N2	Insignificant	Do Not Chart

**N2 CONTACT DESCRIPTION**

All of the contacts listed in section N1 above are listed in contact table number one and were chosen for further development based on computed heights scaled from side scan sonar or echosounder records. All of the contacts were further investigated using the side scan sonar on the 75 and 50 meter range scales or with the echosounder using a reduced line spacing and a wagon wheel pattern over the target. None of the contacts investigated were proven to be significant during development. Therefore, no significant contacts were located as a result of this survey. *CDACUR* ✓

**O. COMPARISON WITH THE CHART - SEE ALSO THE 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
<del>11307</del>	<del>32nd</del>	<del>AUG 94</del>	<del>1:80,000</del>
11313	20th	JUL 92	1:80,000

2. No Danger to Navigation report has been submitted during the course of this survey.

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. A portion of the Northeast Safety Fairway approach to Aransas Pass 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 THE 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 are no floating aids to navigation within the survey area.
3. There are no platforms or wells within the survey area.
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	28.13 NMi <sup>2</sup>
b. Days of Production	10 Days
c. Detached Positions	0
d. Bottom Samples	4
e. Tide Stations Established	None
f. Current Stations Established	None
g. Velocity Casts Performed	6 Casts
h. Magnetic Stations Established	None
i. XBT Drops	None

**S. MISCELLANEOUS** - SEE ALSO THE 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.

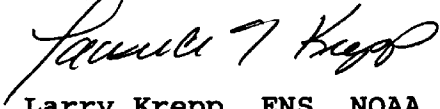
3. A LORAN-C Chart Verification Report will not be submitted for this survey.

4. No Horizontal Control Report or Electronic Control Report will be submitted for this survey.



**SUBMISSION**

Respectfully Submitted,



Larry Krepp, ENS, NOAA  
Operations Officer  
NOAA Ship HECK

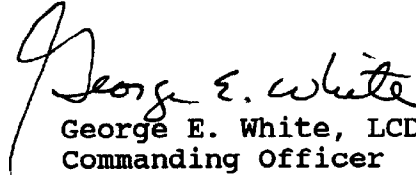
CONTROL STATION TABLE FOR FE-381SS

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

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**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 17, 1995

HYDROGRAPHIC SECTION: Atlantic

HYDROGRAPHIC PROJECT: OPR-K320

HYDROGRAPHIC SHEET: H-10510

LOCALITY: Gulf of Mexico, 16 Nautical Miles ENE of Port Aransas,  
Tx.

TIME PERIOD: September 30, 1993; August 8 - September 12, 1994

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.
  2. Data for Bob Hall Pier, Tx. (877-5870) was temporarily stored in file #677-5870.

*William M. Hilborn*  
CHIEF, DATUMS SECTION



GEOGRAPHIC NAMES

H-10510

Name on Survey	A ON CHART NO. 11300 B ON PREVIOUS SURVEY NO. C ON U.S. QUADRANGLE MAPS D FROM LOCAL INFORMATION E ON LOCAL MAPS F P.O. GUIDE OR MAP G RAND McNALLY ATLAS H U.S. LIGHT LIST K											
	MEXICO, GULF OF	X										
PORT ARANSAS (title)	X											2
TEXAS (title)	X											3
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												25

Approved:

*Charles E. Huntington*  
Chief Geographer - N/CG25

OCT 21 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

MAR 13<sup>15 DM</sup>, 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
- COPY OF THE DESCRIPTIVE REPORT FOR H-10510
- 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-10510

NUMBER OF CONTROL STATIONS	2
NUMBER OF POSITIONS	1326
NUMBER OF SOUNDINGS	7558

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	66	10/26/94
VERIFICATION OF FIELD DATA	67	01/29/96
QUALITY CONTROL CHECKS	10	
EVALUATION AND ANALYSIS	10	
FINAL INSPECTION	4	11/16/95
COMPILATION	24	03/14/96
TOTAL TIME	181	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		11/29/95

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**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT FOR H-10510 (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

**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 survey datum and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27 datum move the projection lines 1.092 seconds (33.624 meters or 3.36 mm at the scale of the survey) north in latitude, and 0.938 seconds (25.678 meters or 2.57 mm at the scale of the survey) west in longitude.

**L. JUNCTIONS**

H-10400 (1991) to the south  
H-10508 (1993) to the east  
H-10562 (1994) to the west

A standard junction was effected with H-10562 (1994). A standard junction could not be effected with H-10400 (1991) and H-10508 (1993). These junctional surveys are archived at National Ocean Service, (NOS), Headquarters, Silver Spring, Maryland. Junctions will have to be effected during chart compilation.

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





**APPROVAL SHEET**  
**H-10510**

**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.

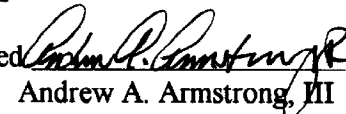


Date: NOV 29, 1995

Nicholas E. Perugini  
Commander, NOAA  
Chief, Atlantic Hydrographic Branch

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**Final Approval:**

Approved 

Date: 3-20-96

Andrew A. Armstrong, III  
Captain, NOAA  
Chief, Hydrographic Surveys Division

