

# 10329

Diagram No. 1285-2

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

Type of Survey .. Hydrographic .....  
Field No. .... AHP-10-4-90 .....  
Registry No. .... H-10329 .....

### LOCALITY

State ..... Texas .....  
General Locality Aransas Bay .....  
Sublocality .... Long Reef .....

1990

CHIEF OF PARTY  
LCDR V.D. Ross

### LIBRARY & ARCHIVES

DATE ..... August 1, 1991 .....

# 10329

REF: L-994(91)

EC/L

CHT

11314

11300 N/C

**HYDROGRAPHIC TITLE SHEET**

H-10329

**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.

AHP 10-4-90

State Texas

General locality Aransas Bay

Locality Long Reef

Scale 1:10,000 Date of survey Feb. 26 to April 23, 1990

Instructions dated September 14, 1989 Project No. OPR-K229-AHP2

Vessel Launch 1292

Chief of party LCDR V. Dale Ross, Chief, Atlantic Hydrographic Field Party 2

Surveyed by M.J. Briscoe, B.A. Link, M.J. McMann, C.E. Parker, J. Marsicano, F. Altany

Soundings taken by ~~echo sounder, hand lead, pole~~ Echo Sounder

Graphic record scaled by M.J.B., B.A.L., M.J.M.

Graphic record checked by M.J.B., B.A.L., M.J.M.

Verification by: C.R. Davies Automated plot by PHS Xynetics Plotter

Evaluation by: C.R. Davies

Soundings in ~~fathoms~~ feet at ~~MLW~~ MLLW

REMARKS: Time in UTC. Revisions and marginal notes in black were generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.

*NW015/SURF ✓ 8/26/91 SJ ✓*

*SC 1-30-91  
XWW 8/15/91*

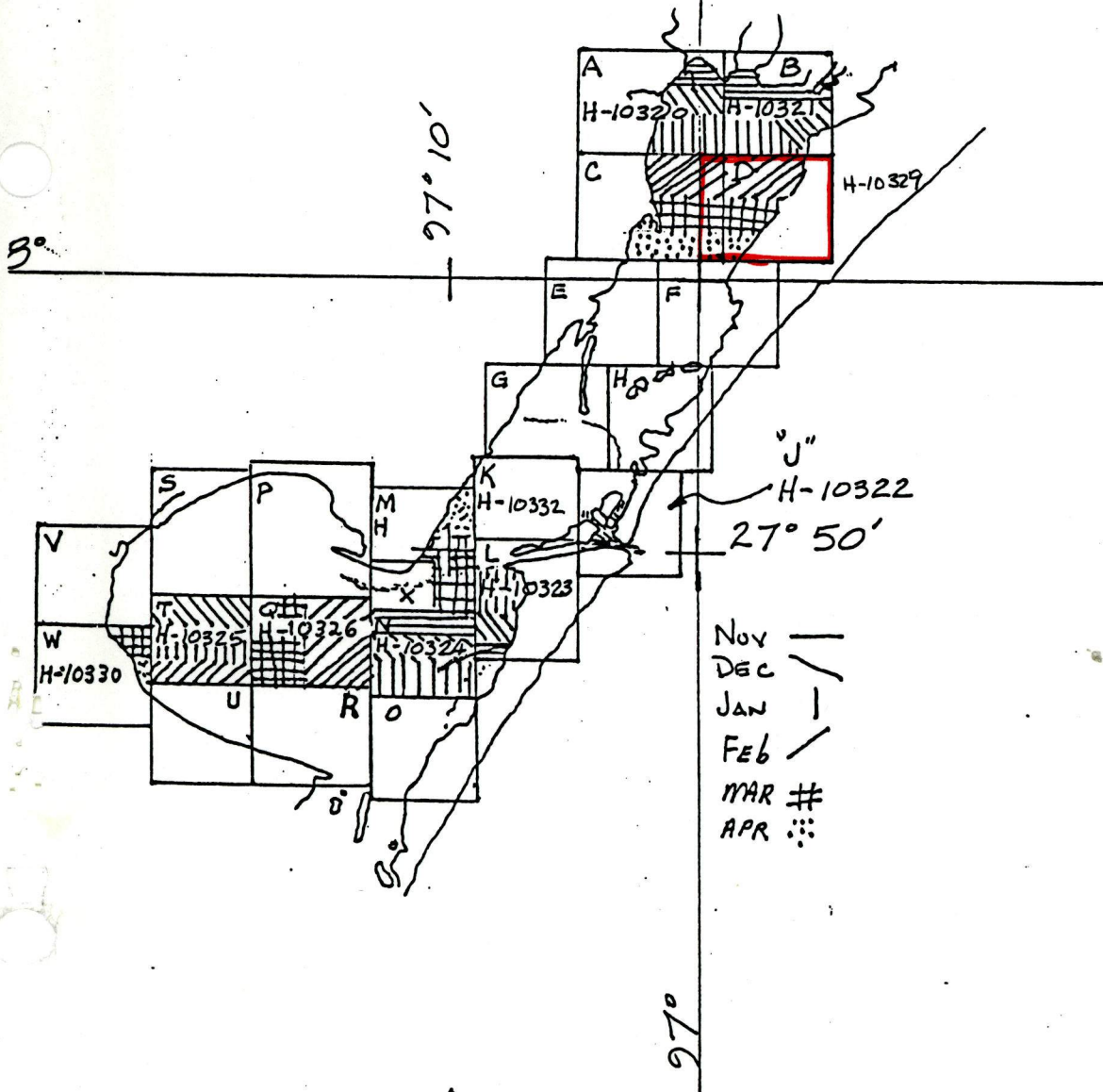
Progress Sketch

OPR-K229-AHP2-89  
 Corpus Christi  
 Texas

Atlantic Hydrographic Party Two  
 V. Dale Ross  
 Lieutenant Commander, NOAA  
 Chief of Party

LEGEND

	OCT	NOV	DEC	JAN	FEB	MAR	APR
SO NMI SDG	0	13	13	21	21	27	8
LNMI SDG	0	309	712	674	495	528	176
LNMI TO/FRM	0	258	422	527	326	342	183
LNMI MISC	0	129	259	350	293	248	183
DP/BS	0	88	177	455	107	190	290
TIDE STA	6	0	0	0	0	0	0
CONTROL	18	0	0	0	5	4	0



Nov ———  
 Dec \ / \ / \ /  
 Jan | | | | | |  
 Feb / / / / / /  
 MAR # # # # # #  
 APR ·· ·· ·· ·· ··

DESCRIPTIVE REPORT TO ACCOMPANY  
HYDROGRAPHIC SURVEY  
H-10329  
AHP 10-4-90  
OPR-K229-AHP2  
1990

A. PROJECT ✓

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K229-AHP2, Corpus Christi and Aransas Bays, Texas, dated September 14, 1989, Change Number 1, dated October 19, 1989, and Change Number 2, dated January 10, 1990.

The purpose of project OPR-K229-AHP2 is to provide contemporary hydrography for the maintenance of existing charts and to compile a new chart for the naval base at Ingleside, Texas.

The sheet letter is "D" as specified by the project instructions.

B. AREA SURVEYED ✓

The area surveyed for H-10329 covers the eastern middle portion of Aransas Bay, in the vicinity of Long Reef. The survey limits are as follows:

North - Latitude 28° 04' 20"N  
South - Latitude 28° 02' 30"N  
East - Longitude 096° 57' 48"W  
West - Longitude 096° 59' 30 W

This survey was conducted from February 26, 1990 (day 057) to April 23, 1990 (day 113).

C. SOUNDING VESSELS ✓

NOAA launch 1292 (EDP No. 1292), a 21 foot MonArk, was used to collect all data on this survey. No problems were encountered with this vessel.

#### D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Raytheon DE-719C fathometer, S/N 3947, modified with an Odom Hydrographic Systems, Inc. Digitrace, was used for the entire survey. Depths on this survey ranged from 1-187 feet. No problems were experienced with this fathometer.

The Digitrace readings were closely monitored for comparison with the analog trace to insure agreement between the two. Any necessary adjustments were made and noted on the fathogram.

Weather permitting, lead line comparisons were conducted each day of hydrography to determine an instrument corrector. The average corrector for Fathometer S/N 3947 used on launch 1292 was 0.1 foot. No instrument error was applied to the soundings on the final field sheet. A leadline comparison form can be found in the separates of this report.\* *The instrument error was incorporated into the TRA corrector during office processing.*

Survey records were scanned by AHP-2 employees in accordance with the hydrographic manual. With the digital reading taking precedence over the analog trace, significant peaks and deeps which occurred between selected soundings, missed depths, incorrectly digitized soundings, and effects of sea and swell action were inserted or corrected while scanning.

The Raytheon DE-719C Fathometer was calibrated for a speed of sound through water of 4800 ft/sec. Corrections for the speed of sound through water were computed from data obtained with Odom Hydrographic Systems, Inc. DIGIBAR electronic speed of sound probes (SN 154). Data quality assurance tests were performed prior to each cast. Program "Velocity" version 1.00 was used for the speed of sound corrections computations. The following casts were taken:

<u>Cast</u>	<u>Day</u>	<u>Depth (m)</u>	<u>Digibar SN</u>
1	053/1990	4	154
2	074	4	154
3	094/1990	5	154
4	117/1990	5	154 (NOT used)

Complete cast data information is included in the cahier for survey H-10329.

All speed of sound correctors were applied to the final field sheet. Correctors from Table 1 were applied to days 053<sup>073061</sup> (1990). Correctors from Table 2 were applied to days 074-093<sup>087</sup> (1990). Correctors from Table 3 were applied to days 094-113 (1990). Table 4 was not used. A copy of the tables is in the separates of this report.\* Velocity support documentation is in the cahier for H-10329.

\* Filed with the hydrographic data

A static draft of one foot was applied on line. This was measured from a punch mark on the side of launch 1292, two feet above the transducer, to the water surface, then subtracting the difference.

Settlement and squat measurement for vessel 1292 was performed on November 9, 1989 (day 319) at the Sea Gun Resort in Lamar, Texas. The level method was used. Settlement and squat correctors were applied to all survey data. Data from the settlement and squat test is included in the separates of this report.\*

The final field sheet was plotted using predicted tides determined from the Galveston Channel using zones and correctors contained in the Project Instructions. The zone suggested which covered the limits of this survey, (+9.0 hr HW, +4.0 hr LW, 0.24 height ratio) was used.

Actual tide heights were requested from the Sea and Lake Levels Branch, N/OMA12, in a letter dated May 4, 1990. A copy of the letter is included in the Separates Following Text. \* *The tide note for survey H-10329 is attached to this report.*

#### E. HYDROGRAPHIC SHEETS ✓

The survey scale is 1:10,000. All sheets were produced by AHP-2 with the HDAPS on the Bruning ZETA 824 plotter. A list of sheets submitted for H-10329 are as follows:

<u>Sheet</u>	<u>Scale</u>	<u>Quantity</u>
Edited Trackline	1:10,000	1
Rough Sounding Plot	1:10,000	1
Final Field Sheet	1:10,000	1
Final Field Sheet Overlay	1:10,000	1

Unedited trackline plots and a rough sounding plot were used to monitor and evaluate the survey data. A mylar sheet with the shoreline drawn in blue before it was verified, was later used for the edited trackline plot. Main scheme hydrography, development splits, crosslines, shoreline, aids to navigation, and horizontal control stations used during the survey are plotted on the final field sheet. Detached positions, and bottom samples are plotted on the overlay. Cartographic symbols for the detached positions are shown on the final field sheet.

All survey sheets and data were submitted with the descriptive report to the Pacific Hydrographic Section, (N/CG 245), Seattle, Washington.

\* *Filed with the hydrographic data.*

F. CONTROL STATIONS ✓ See EVAC Report Section 2

The horizontal control datum for this project is the North American Datum of 1983. Stations 105, 108, 114, and 115, were used to control this survey. A signal list as well as a copy of the HDAPS Control Station Table\* is included in the separates of this report.

The Coastal Surveys Unit from Norfolk, Virginia used third order, class I traverse and intersection methods to establish horizontal control for this project. Additional control was established by AHP-2 personnel. The horizontal control report was written and submitted by the Coastal Surveys Unit personnel for OPR-K229-AHP2. An addendum to the horizontal control report dated April 11, 1990, was submitted by AHP-2 to N/CG23322.

G. HYDROGRAPHIC POSITION CONTROL ✓

Range/range positioning was the only method used to control this survey. Multiple lines of position (up to four) using Motorola Falcon 484 Mini-Rangers were used. The following Falcon Mini-Ranger equipment was used:

<u>VESNO</u>	<u>Equipment</u>	<u>S/N</u>	<u>Code</u>
1292	RPU	E0154	
	RT	E2917	
	R/S	E2977	4
	R/S	E2912	5
	R/S	E2909	6
	R/S	C2096	8
	R/S	F3237	2

Baseline calibrations of the Motorola Falcon 484 equipment were performed on October 25, 1989 and January 8, 1990 and March 20, 1990. The correctors were applied on-line through the Complex "C-0" tables. Baseline calibration forms and the "C-0" tables are included in the separates.\*

When using three or four lines of position, a critical system check is continuously being obtained by observing the error circle radius (ecr) and residual (res) values on the Complex screen on the survey vessels. When the error circle radius (ecr) was greater than 15m (1.5m at the survey scale) or the residuals were greater than 5m (.5m at the survey scale) for more than three to five minutes, survey operations were suspended in the area until the problem could be resolved. Any positions which had high error circle radii or residuals in an otherwise good line were smoothed during processing. If any five consecutive soundings had high error circle radii or residuals the data were rejected.

\* Filed with the hydrographic data.

A critical system check was performed prior to using the control configuration for this survey. Error values were less than 5 meters which is within the required limits of the field procedures manual. \*\* Results of the calibrations are included in the Separates Following Text. \*

\*\* 1989 Edition

H. SHORELINE *See Eum Report, Section 2*

Shoreline detail shown on the final field sheet was transferred by hand from TP-01196. This shoreline manuscript was compiled on NAD 1927. The datum shift from NAD 1983 (Field Sheet) to NAD 1927 (TP-01196) was applied.

The shoreline manuscript was compiled at 1:20,000 scale. They were enlarged to 1:10,000 scale for use with this survey.

Shoreline verification was accomplished by comparison of the main scheme hydrography which junctions at shore, or by visual inspections. Verified shoreline is shown in black ink on the final field sheet.

I. CROSSLINES ✓

A total of 23.4 linear nautical miles of crosslines were run on H-10329 which equals 18% of the main scheme hydrography. Crosslines agree within 1 foot when compared with main scheme hydrography. Where disagreement is seen, the crosslines are deeper.

J. JUNCTIONS *See Eum Report, section 5*

This sheet junctions with H-10320 and H-10321 (1989/90), 1:10,000 scale, to the north; with H-10327 (1990), 1:10,000 scale, to the west; and will junction with OPR-K229-AHP sheet "F" (H-10366) scheduled for completion in 1990-91 field season, to the south. Junction soundings between the present survey and H-10320, H-10321 and H-10327 agree well, within 1 foot. Junction soundings are shown in black ink on the rough sounding plot. Soundings agreed within one foot in all junction areas.

K. COMPARISON WITH PRIOR SURVEYS *See Eum Report, section 6*

None of the sixteen AWOIS items assigned, originated from any prior survey.

\* Filed with the hydrographic data.



This survey was compared with the following prior surveys:

<u>Registry #</u>	<u>Scale</u>	<u>Year Surveyed</u>
H-5693	1:20000	1935
H-5875	1:20000	1935
T-9297	1:20000	1925 <sup>52</sup>
T-9296	1: <del>20000</del>	1946-48-49

With H-5693 ✓

Depths agree within 1 foot when comparing the prior survey to H-10329, with the exception of intracoastal waterway channel that cuts through at latitude 28°02'30"N, longitude 096°59'30"W, and runs northeast through Aransas Bay. There is a considerable amount of Long Reef exposed on prior survey H-5693, (1935); whereas on present survey (H-10329), Long Reef is mostly covered with water of 1 foot or less, from Pauls Mott northwest to the intracoastal waterway.

With H-5875 ✓

Depths agree within 1 foot when comparing the prior survey to H-10329 in the common areas.

With T-9297 ✓

There were no major differences between present survey H-10329 and T-9297 (date of issue July, 1952). See *EVAC Report, section 7*

L. COMPARISON WITH THE CHART *See EVAC Report, section 7*

This survey was compared to the 15th edition of chart 11314, dated August 15, 1987.

There are sixteen AWOIS items assigned to H-10329.

The charted areas of all items were visually inspected for any exposed evidence of the particular feature. Since no evidence of any of the items existed, dive investigations are the only method for resolving these items properly. Prolonged windy conditions precluded the proposed diving operations before AHP 2 moved to the northern project area. All the items, except number 5197, will be investigated, as required, upon AHP 2 returning in the fall. Item 5197 was adequately resolved by a visual search. A complete discussion of this item is on the item investigation form in the separates of this report. *See additional work in Fall report following this report.*

One danger to navigation concerning the location of a fixed aid to navigation was identified. This is discussed in section N. No other uncharted dangers to navigation were identified on H-10329.

Sounding agreement between charted soundings and H-10329 were excellent, agreeing to within one foot. The exposed area forming Long Reef has diminished in size and no longer uncovers as large an area as charted. Instead numerous isolated uncovered areas are present. This is most likely due to natural storm forces.

Indications of shoaling were found extending from latitude 28°03'39.0"N, longitude 096°56'45.0"W north to latitude 28°04'09.0"N, longitude 096°56'45.0"W. This area was developed with reduced line spacing and found to have least depths of 3 feet at:

latitude 28°03'46.0"N, longitude 096°56'45.0"W (least depths of 4 feet)  
latitude 28°04'02.0"N, longitude 096°56'42.0"W (least depths of 4 feet)  
latitude 28°04'06.0"N, longitude 096°56'43.5"W

This shoaling, located in an area currently charted as four feet, is not considered a danger to navigation.

One uncharted oil well platform was located at latitude 28°03'08.1"N, longitude 096°59'10.7"W. This platform was not reported as a danger to navigation because of the magenta note charted which warns of obstructions, wells and pipelines. This platform should be charted. *COMLUT*

An uncharted pile was located at latitude 28°04'07.6"N, longitude 096°56'03.2"W, which bares 3 feet at MLLW. This was not considered a danger to navigation, being in 1.5 feet of water. This pile should be charted. *COMLUT*

M. ADEQUACY OF SURVEY *See EVAC Report, section 4 and 7*

This survey is a complete basic hydrographic survey and is adequate to supersede all prior surveys within the common area. *COMLUT*

N. AIDS TO NAVIGATION ✓

~~Three~~<sup>Two</sup> fixed aids to navigation lie within the limits of this survey.

Aransas Bay Light 31, number 35635 from the 1990 USCG Light List Volume 4, was located by detached position at latitude 28°03'08.0"N, longitude 096°58'50.8"W. This was found to be 50 meters southeast of a location which would safely mark the channel. A danger to navigation report was sent to the Eighth U.S. Coast Guard District. This light is also 205 meters southwest of the

charted position. This is not what is creating the danger to navigation, but rather the fact the light is too far from the channel edge. A copy of the danger to navigation letter is included in the separates of this report.

The other two fixed aids to navigation are privately maintained markers. Each have a sign reading "WARNING DO NOT ANCHOR OR DREDGE GAS PIPELINE CROSSING" with a white light.

One, Aransas Bay Pipeline Marker Light A, 1990 U.S.C.G. Light List, Volume 4, number 35650 was found at latitude 28°02'44.8"N, longitude 096°59'21.7"W. This is 100 meters north of the charted position.

The other is Aransas Bay Pipeline Marker B, 1990 U.S.C.G. Light List, Volume 4, number 35655. This was found at latitude 28°02'40.0"N, longitude 096°59'15.8"W. This position is 110 meters north of the charted location. NOAA form 76-40 may be found in the Separates Following Text.

Seven floating aids to navigation were located and entered into the hydrographic records. None of the aids were found at their charted location, but all still adequately serve the purpose for which established. The table below list distances from the charted position:

<u>BUOY</u>	<u>Dist/Dir from Charted Pos.</u>
N"34"	130 meters northeast
C"33"	90 meters northeast
N"32"	175 meters southwest
C"29"	30 meters northeast
N"28"	130 meters northeast
C"27"	330 meters northeast
N"26"	160 meters northeast

No bridges, overhead cables, nor ferry routes exist in the survey area.

Numerous pipelines exist in the survey area. No recommendation is made to chart these pipelines. Per a telephone conversation with Mr. James Dailey in the Mapping and Charting Branch (N/CG2222) the current NOAA policy regarding charting of the pipelines in this survey area is to let the magenta note warning of obstructions, wells, and pipelines suffice.

O. STATISTICS ✓

<u>Description</u>	<u>Quantity</u>
Total Positions	1270
Detached Positions	12
Duplicate Positions	2
Total Miles of Hydrography	168.9
Sq. Nautical Miles of Hydrography	4
Bottom Samples	23
Digibar Casts	4
Tide Stations	9
Days of Production	12

P. MISCELLANEOUS ✓

No anomalous currents were observed in the survey area.

Bottom samples were taken and submitted to the Smithsonian Institution as directed in Section 6.7 of the project instructions. Bottom sample positions were plotted on the overlay with the other detached positions. The bottom samples were listed on the Oceanographic Log Sheet - M, NOAA form 75-44, and may be found in the Separates Following Text.\*

The protective cover for small craft chart 11314 has Copano Bay misspelled as "Copana Bay". This should be corrected on future editions of chart 11314. *Chief Geographer notified via fax.*

Q. RECOMMENDATIONS: *See EVAL Report, section 7 and 9*

AWOIS items could not be fully resolved due to severe weather. The AWOIS items will be resolved by AHP-2 in the near future and forwarded under separate cover.

R. AUTOMATED DATA PROCESSING ✓

Data is collected on-line using a Comflex 1030 NX hard disk and raw data is transferred to the off-line processing system using a 3.5" floppy disk. Off-line processing is accomplished on the HDAPS consisting of the following components: a Hewlett Packard (HP) 9000 Model 300 computer, an HP 9153C Disk Drive with a Winchester hard disk storage capacity of 20 Mbytes, an HP 7959B 300 Mbyte hard drive, an HP 98785A color monitor, a Bruning ZETA 824 plotter, an HP Ruggedwriter printer, and an HP model 9145 32 track tape drive. All off-line software programs are written in HP BASIC while all on-line programs are written in QUICKBASIC.

\* Filed with the hydrographic data.

Raw data on the floppy disks, and edited data stored on magnetic tapes have been submitted to the Pacific Hydrographic Section (N/CG245), Seattle, WA., with the other survey data.

During data acquisition, high frequency digitized depths are recorded while simultaneously applying draft and settlement and squat corrections. Mini-ranger baseline calibration correctors for each line of position are also applied on-line. Predicted tides and speed of sound correctors are applied to the final field sheet from the respective corrector tables. Sounding plots and trackline plots are produced during processing.

In addition to the HDAPS, the following non-HDAPS computer programs were used:

VELOCITY (IBM PC)	Ver. 1.0 Ext. 9/89
MTEN 3 with enhancements (IBM PC)	Ver. 6/88

S. REFERRAL TO REPORTS ✓

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report For Surveys H-10320, H-10321, and H-10327	Pacific Hydrographic Section Seattle, Washington (N/CG245)
Horizontal Control Report for OPR-K229-AHP2 (CM-8716 and HC-9901)	Field Photogrammetry Section Norfolk, VA (N/CG233)
Chart Sales Agent Report for OPR-K229-AHP2	Chart Distribution Branch (N/CG33) Rockville, MD.
User Evaluation Report OPR-K229-AHP2	Atlantic Hydrographic Section (N/CG244) Norfolk, VA.
Chart Inspection Report OPR-K229-AHP2	Atlantic Hydrographic Section (N/CG244) Norfolk, VA.

Coast Pilot Report

Coast Pilot Section  
Mapping and Charting Branch  
(N/CG22)  
Rockville, MD.

Danger to Navigation Report

Commander, 8th USCG District  
New Orleans, LA.  
[with copies to NOAA, N/CG241,  
N/CG221, and N/CG2441]

Submitted by: Michael J. Briscoe,

Survey Technician

CHART # 11314

ITEM # 5197

ITEM DESCRIPTION: Obstruction "MARKER"

SOURCE: CL1109/77

INVESTIGATION DATE: 4, April, 1990 TIME: End of day VESNO: 1292

OIC: Lcdr. V. Dale Ross, NOAA

REFERENCES: OPR-K-229 AHP-2

Position No. None Volume pg.

CORRECTIONS APPLIED:

Velocity TRA Corrections  
Predicted or Actual Tide Correctors

GEODETTIC POSITION:

Charted: Latitude Longitude  
(Removed from 11th Ed. 11314) 28/03/04.5 N 096/56/48.0 W  
Observed: Not found

Position Determined By:

METHOD OF ITEM INVESTIGATION: Visual search for marker was done with binoculars from as close as boat can approach this area. The area has depths less than one foot. No marker was seen in this uncovers area. *Hydro line with depths of 3ft less than 15m away.*

CHARTING RECOMMENDATIONS: Delete, charted marker from chart.

*COMLW*

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Compilation Use Only

CHART

APPLIED AS

SIGNAL LIST

~~101 028:08:05.046 097:00:21.412 Rogan,1989~~  
102 028:07:30.073 096:58:51.475 Goose,1987  
~~103 028:06:36.298 097:01:40.122 Causeway,1931~~  
~~104 028:06:12.876 097:01:19.666 Condo,1989~~  
105 028:04:58.905 097:00:36.739 Copano Bay Approach Lt. 2,1989  
~~106 028:04:35.443 096:57:55.110 Good,1989~~  
~~107 028:02:10.676 097:01:32.072 Nine 3,1972~~  
108 028:00:49.662 096:58:12.654 Sas,1989  
~~109 027:59:46.121 097:03:43.686 Shell 2,1971~~  
~~110 027:59:23.706 096:58:52.815 Allyn,1989~~  
~~111 027:55:59.444 097:02:35.781 Skiff,1989~~  
~~112 028:07:34.090 096:55:47.455 Ham,1934~~  
~~113 028:01:49.582 097:02:24.587 Little Bay Tower,1990~~  
114 028:01:27.412 097:01:14.362 Nine mile Pt. Lt.2,1990  
115 028:04:12.363 096:57:56.812 Aransas Bay Lt.25 (ICW),1990

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RESPONSIBLE PERSONNEL

TYPE OF ACTION		NAME		ORIGINATOR	
OBJECTS INSPECTED FROM SEAWARD (F-L Hydro D.P.)		Hydrographer used the Falcon Mini Ranger system, with multiple lines of position (IOP) onboard survey vessel. <i>Michael J. Brisson, AHP</i>		<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODEIC PARTY <input type="checkbox"/> OTHER (Specify)	
POSITIONS DETERMINED AND/OR VERIFIED				FIELD ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES				OFFICE ACTIVITY REPRESENTATIVE	
				<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  
(Consult Photogrammetric Instructions No. 64.)

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042  
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

- F - Field
- L - Located
- V - Verified
- 1 - Triangulation
- 2 - Traverse
- 3 - Intersection
- 4 - Resection
- 5 - Field Identified
- 6 - Theodolite
- 7 - Planetable
- 8 - Sextant
- P - Photogrammetric
- Vis - Visually

A. Field positions\* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L  
8-12-75

\*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions\*\* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V  
8-12-75  
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.  
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.  
8-12-75

\*\*PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

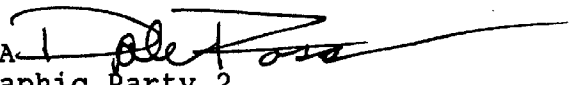


**U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration**

NATIONAL OCEAN SERVICE  
Atlantic Hydrographic Party 2  
439 W. York St.  
Norfolk, VA 23510-1114

April 24, 1990

To: Commander, 8th U.S. Coast Guard District  
Hale Boggs Federal Building  
500 Camp Street  
New Orleans, LA 70130-3396

From: V. Dale Ross, LCDR. NOAA   
Chief, Atlantic Hydrographic Party 2

Subject: Danger to Navigation Notice for inclusion in the Local  
Notice to Mariners.

While conducting a basic hydrographic survey of Aransas Bay for nautical charting, survey H-10329, the location of Aransas Bay Light 31 was found 50 meters (164 feet) southeast of the east side of the intracoastal waterway. This is light number 35635 in the U.S. Coast Guard Light List, Vol. 4, 1990.

This light was found at latitude 28°03'07.97"N, longitude 096°58'50.78"W. This puts the light in a position which is off line with respect to the other aids established along the east side of the intracoastal waterway and creates a shoal with depths to 8 feet within the channel limits. This creates a danger for vessels navigating the eastern half of the channel in this area.

This information was reported by telephone to Petty Officer Franklin, of the Aids to Navigation Team, in Corpus Christi, Texas on April 24, 1990.

This light was located by four lines of position from Motorola Falcon Mini-Ranger electronic positioning system units set up on third order, class 1, ground control stations. The depth on the shoal was corrected for vessel draft and predicted tides. The position of the light is North American Datum of 1983.

Attached is a copy of the survey in the area of light 31 as well as a copy of the affected section of chart 11314.

Questions regarding this letter can be directed to me at telephone (804)441-6746.

THIS IS ADVANCE FIELD INFORMATION  
SUBJECT TO OFFICE VERIFICATION

cc: N/CG241  
N/CG221  
N/CG2441

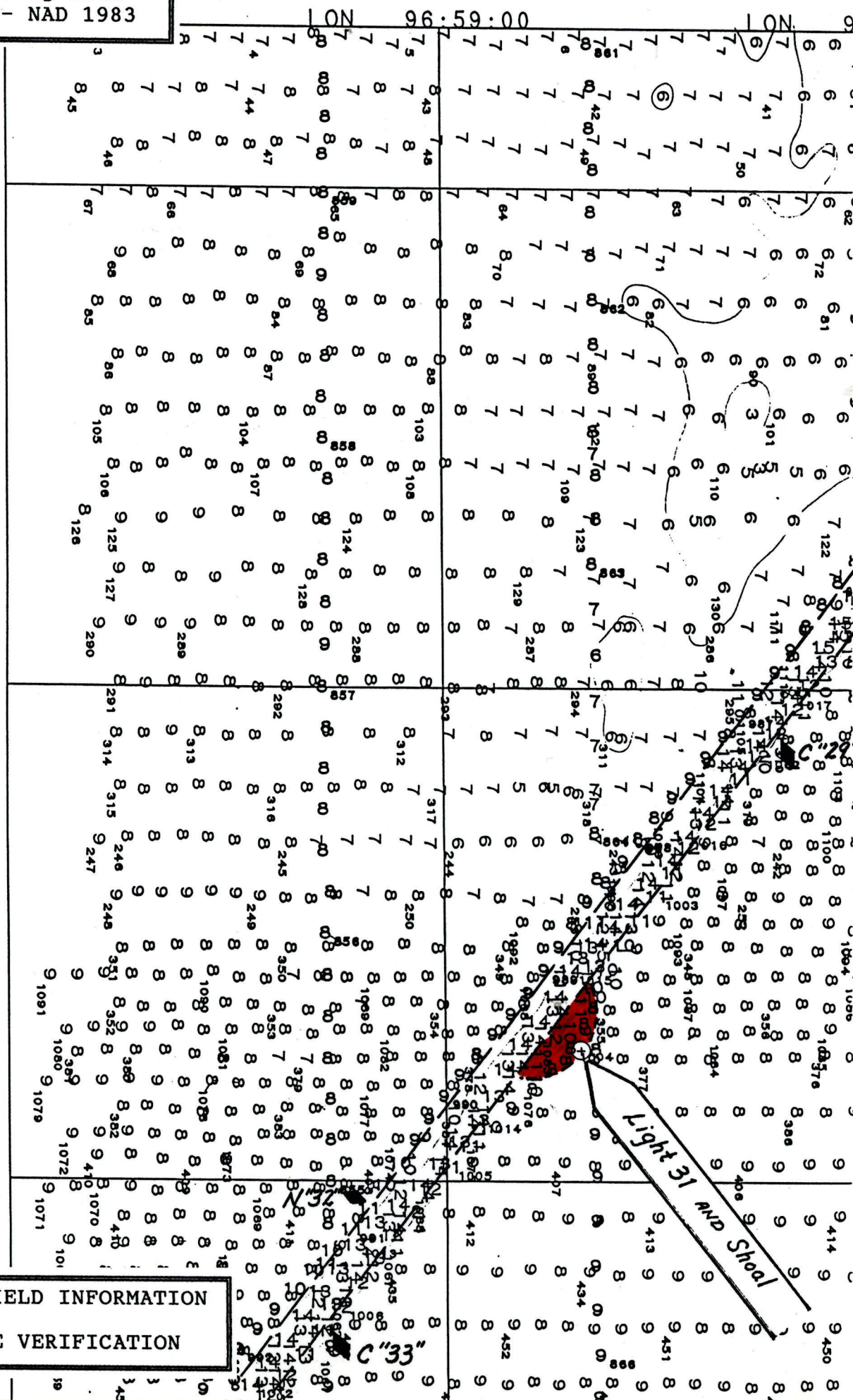


Section from Survey H-10329  
Aransas Bay - Long Reef  
1:10,000 Scale - NAD 1983

LAT 28:04:00

LAT 28:03:30

LAT 28:03:00

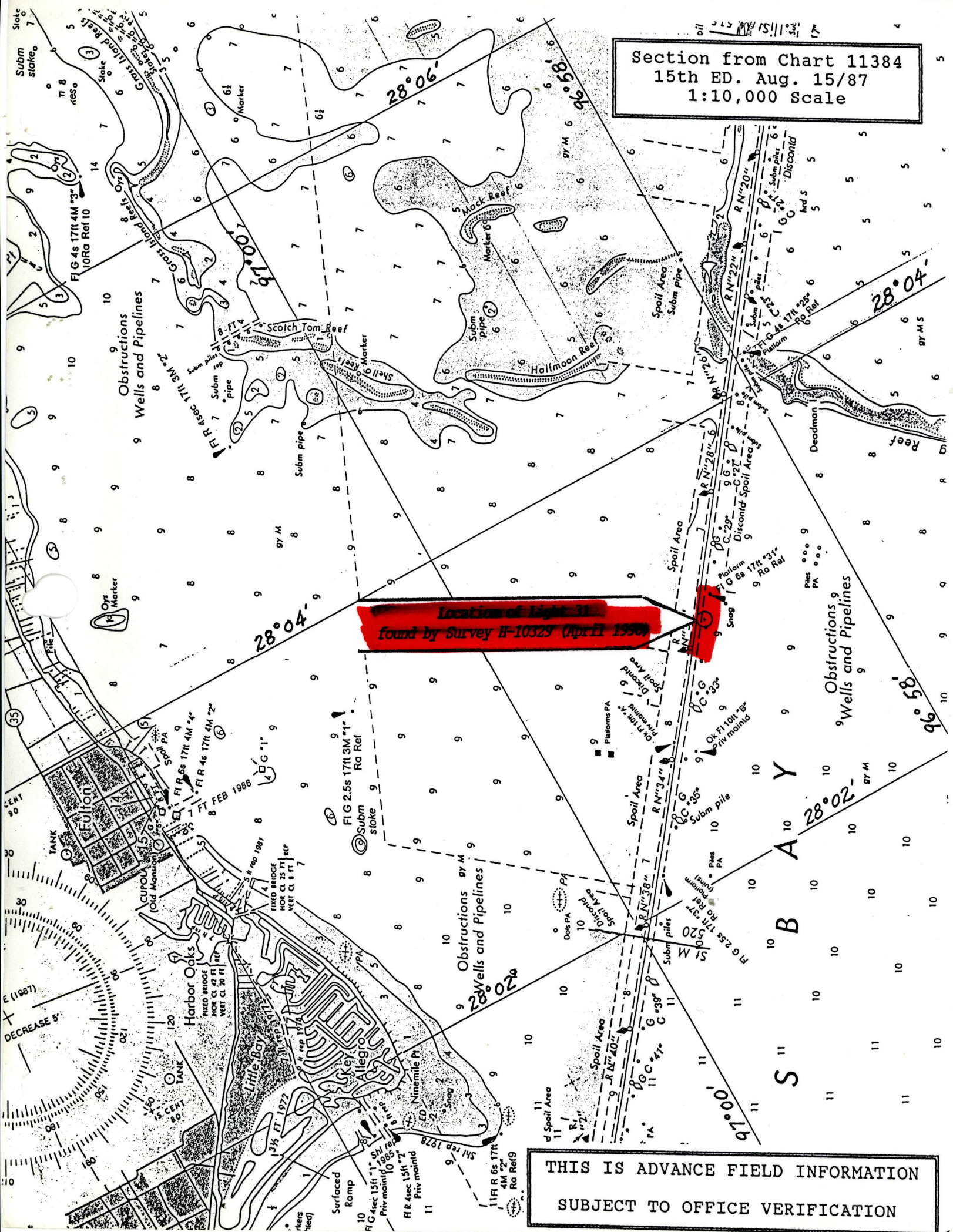


THIS IS ADVANCE FIELD INFORMATION  
SUBJECT TO OFFICE VERIFICATION

Section from Chart 11384  
15th ED. Aug. 15/87  
1:10,000 Scale

Location of Light 31  
found by Survey H-10329 (April 1986)

THIS IS ADVANCE FIELD INFORMATION  
SUBJECT TO OFFICE VERIFICATION



APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY

OPR-K229

AHP-10-4-90

H-10329

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-K229-AHP2, the hydrographic manual, the hydrographic survey guidelines, and the field procedures manual. The survey data and reports were completed and reviewed in their entirety and all supporting records were also checked.

This survey is a complete basic hydrographic survey for the area described in Section B of this report.

V. Dale Ross   
LCDR NOAA  
Chief, Atlantic Hydrographic Party Two

**HYDROGRAPHIC TITLE SHEET**

H-10329

**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.

AHP 10-4-90

State Texas

General locality Aransas Bay

Locality Long Reef

Scale 1:10,000 Date of survey 10/12/90 to 11/1/90

Instructions dated September 14, 1989 Project No. OPR-K229-AHP2

Vessel NOAA LCH.1291 and NOAA LCH. 0517

Chief of party LCDR V. Dale Ross, Chief, NOAA/AHP2

Surveyed by LT Conricote, LCDR G. White, B.A. Link, M.J. Briscoe, and C.E. Parker

Soundings taken by echo sounder, ~~and lead pole~~ Raytheon DE-719C (S/N 3947 & S/N 8652) Innerspace 448 (S/N 188)

Graphic record scaled by LT Conricote, B.A. Link and M.J. Briscoe

Graphic record checked by LT Conricote, B.A. Link and M.J. Briscoe

Verification by C.R. Davies Automated plot by PHS Xynetics Plotter

Evaluation by C.R. Davies

Soundings in ~~fathoms~~ ~~feet~~ at MLW MLLW Meters

REMARKS: Time in UTC. Revisions and marginal notes in black were generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.

DESCRIPTIVE REPORT TO ACCOMPANY ADDITIONAL WORK  
FOR HYDROGRAPHIC SURVEY H-10329  
Field Number: AHP-10-4-90  
OPR-K229-AHP2  
Scale: 1:10,000  
Atlantic Hydrographic Party Two  
Chief of Party: Lt. Cdr. V. Dale Ross, NOAA  
1990

A. PROJECT ✓

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K229-AHP2, Aransas Bay, Texas, dated September 14, 1989, Change Number 1, dated October 19, 1989, and Change Number 2, dated January 10, 1990.

The purpose of project OPR-K229-AHP2 is to provide contemporary hydrography for the maintenance of existing charts and to compile a new chart for the naval base at Ingleside, Texas.

The sheet letter is "D" as specified by the project instructions.

B. AREA SURVEYED ✓

The area surveyed for H-10329 covers the eastern-middle portion of Aransas Bay, Texas in the vicinity of Long Reef. The survey limits are as follows:

North	-	Latitude	28° 04' 20"N
South	-	Latitude	28° 02' 08"N
East	-	Longitude	096° 58' 48"W
West	-	Longitude	096° 59' 30"W

This work was conducted from 12 October (day 285) through 1 November (day 305) 1990 to complete the AWOIS investigations which could not be completed during the previous field season.

C. SOUNDING VESSELS ✓

NOAA launch 1292 (EDP No. 1292) and NOAA launch 517 (EDP No. 0517), 21-foot MonArks, were used to collect all data on this survey. No problems were encountered with these vessels.



D. AUTOMATED DATA ACQUISITION AND PROCESSING ✓

Hewlett-Packard HDAPS Programs:

<u>Program</u>	<u>Version</u>	<u>Date</u>
Survey	4.33	5/26/90
Constat	2.02	3/9/90
Postsur	4.14	7/20/90
Printout	2.23	7/12/90
Baseline	1.01	6/15/90
Backup	1.02	3/9/90
Quick	1.01	7/27/90
Conplot	1.02	6/25/90
Diagnostic	2.50	3/9/90
Compute	2.02	3/9/90
Point	1.20	7/27/90
Install	1.20	3/26/90
Plotall	1.70	7/27/90
Oldpostsur	4.13	4/9/90
Oldconvert	2.33	3/12/90
Loadnew	1.00	7/27/90
Convert	2.34	6/20/90
Filesys	4.55	5/26/90
Oldplotall	1.60	5/26/90
Inverse	1.21	7/27/90
Abst	3.05	5/26/90

PC-DAS programs, in the NOAAEXE directory, version 3.6, were used for on-line data acquisition on the survey vessel.

In addition to the HDAPS, the following non-HDAPS computer programs were used:

VELOCITY (IBM PC)	ver. 1.11	3/9/90
MTEN 3 w/ enhancements (IBM PC)		6/88
WordPerfect	ver. 5.1	1987

E. SONAR EQUIPMENT ✓

Not applicable.

F. SOUNDING EQUIPMENT ✓

Raytheon DE-719C fathometer, S/N 8652, modified with an Odom Hydrographic Systems, Inc. Digitrace was used by NOAA launch 517 during these AWOIS investigations. No problems were experienced with this fathometer.

An Innerspace Model 448 echo sounder, S/N 188, was used by NOAA launch 1292 during these AWOIS investigations. No problems were experienced with this echo sounder.

The Digitrace readings were closely monitored for agreement with the analogue trace. Any necessary adjustments were made and noted on the echogram.

All AWOIS investigations were done by divers' searches or chain drag. Least depths were taken using a lead line or sounding pole. Chain drags were performed where possible. Chain drags could not be performed in many areas due to the well heads and pipe lines. Diver searches were made in those areas. Lead lines was compared to a steel tape before the beginning of field work. No corrections are needed for the lead lines.

#### G. CORRECTIONS TO SOUNDINGS ✓

A static draft of 0.3 meter was applied on-line. This was measured from a punch mark on the side of the launches, 0.6 meter above the transducer, to the water surface, then subtracting the difference.

Settlement and squat measurements for vessels 1292 and 517 were performed on 4 October 1990 (day 277) in Little Bay at Rockport, Texas. The level method was used. Settlement and squat correctors were applied to all survey data through the offset table. Data from the settlement and squat tests are included in the separates of this report.\*

A final field sheet was not plotted for these AWOIS investigations.

The graphic records were scanned as a cursory check to ensure that no significant peaks or deeps were missed between selected soundings. Only positional edits were made to the data.

Actual tidal heights were requested from the Sea and Lake Levels Branch, N/OMA12, in a letter dated 20 November 1990. A copy of the letter is included in the separates of this report.\*

#### H. CONTROL STATIONS *See EVAL Report, section 2*

The horizontal control datum for this project is the North American Datum of 1983. Stations<sup>102</sup> 105, 108, 114, and 115 were used for vessel positioning during these investigations. A signal list, as well as a copy of the HDAPS Control Station Table, is included in the separates of this report.

The Coastal Surveys Unit, from Norfolk, Va., used third order, class I traverse and intersection methods to establish the ground control network for this project. Additional control stations were established by the Atlantic Hydrographic Party Two. All

\* Filed with the hydrographic data

observations and computations were forwarded to the Coastal Surveys Unit for inclusion in the Horizontal Control Report which they wrote and submitted to the Atlantic Hydrographic Section in Norfolk, Va.

#### I. HYDROGRAPHIC POSITION CONTROL ✓

Range/range positioning was the only method used to control this work. Up to four lines of position from the Motorola Falcon 484 MiniRangers were used. The following Falcon equipment was used:

<u>VESNO</u>	<u>Instrument</u>	<u>S/N</u>	<u>Code</u>
1292	RPU	E0154	
	RT	E2919	
517	RPU	F0241	
	RT	E2967	
	R/S	E2977	4
	R/S	E2926	5
	R/S	E2919	6
	R/S	F3290	8
	R/S	F3180	2
	R/S	G3572	1

Baseline calibrations of the Motorola Falcon 484 were performed on October 2<sup>nd</sup> and 3<sup>rd</sup> 1990. The correctors were applied on-line through the Complex "C-O" tables. Baseline calibrations forms and listings of the "C-O" tables are included in the separates of this report.\*

When using three or four lines of position, a critical system check is continuously being obtained and continually observed by noting the error circle radius (ecr) and residual values (res) on the Complex screen. When the error circle radii are greater than 1.5mm at the survey scale or the residual values are greater than 0.5mm at the survey scale for more than three minutes, survey operations are suspended until the problem can be resolved. Any positions which had high error circle radii or residual values along an otherwise good survey line were smoothed during data processing. If any five consecutive soundings had high error circle radii or residual values, the data were rejected and rerun. Position quality statistics were less than 5 meters as required according to the field procedures manual. See *EVX Report section 2*

#### J. SHORELINE *See Section 2 of EVX Report*

Not applicable.

\* Filed with the hydrographic data.

K. **CROSSLINES** ✓

Not applicable.

L. **JUNCTIONS** See ERM Report section 5

Not applicable.

M. **COMPARISON WITH PRIOR SURVEYS** See ERM Report, section 6

Not applicable.

N. **COMPARISON WITH THE CHART** See ERM Report, section 7

This survey was compared to the 15<sup>th</sup> edition of chart 11314, dated 15 August 1987.

There were sixteen AWOIS items assigned to H-10327<sup>9</sup> that were not investigated during the 1989-90<sup>1990</sup> field season. All of the item investigations data and results are in the Separates To Be Included With Survey Data accompanying this report.

On day 297, vessel 1292 found a pile while performing a chain drag. The pile was not within an AWOIS survey area, but was within the channel limits. The Army Corps of Engineers and the U.S. Coast Guard were notified. A danger to navigation letter was issued. A copy of the letter is included in the separates of this report.

*This danger, pile, is found on survey H-10327.*

O. **ADEQUACY OF SURVEY** See ERM Report section 4 and 7

This additional work, in conjunction with the survey work performed by the Atlantic Hydrographic Party Two during the 1989-90<sup>1990</sup> field season, comprise a complete basic hydrographic survey adequate to supersede all prior surveys within the common areas. Concur, See ERM Report sections 4, 7, and 9

P. **AIDS TO NAVIGATION** See ERM Report, section 7 and hydrographer's report for spring 1990.

Not applicable.

Q. STATISTICS ✓

<u>Description</u>	<u>Amounts</u>	
Total positions	379	*
Detached positions	17	
Duplicate positions	11	
Total nautical miles of hydrography	17	
Square nautical miles of hydrography	N/A	
Bottom samples	0	
Sound speed casts	0	
Tide stations	8	
Days of production	6	

R. MISCELLANEOUS ✓

No anomalous currents were observed within the survey area.

S. RECOMMENDATIONS ✓

Not applicable.

T. REFERRALS TO REPORTS ✓

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report To Accompany Survey H-10327	Pacific Hydrographic Section Seattle, Washington
Descriptive Report To Accompany Survey H-10329	Pacific Hydrographic Section Seattle, Washington
Horizontal Control Report for OPR-K229-AHP2 (CM-8716 and HC 9901)	Field Photogrammetry Section Norfolk, Va.
Chart Sales Agent Report OPR-K229-AHP2	Chart Distribution Branch N/GC33 Rockville, MD.

\* These positions are centers of dive areas and chain drag data.  
One position was retained, the remaining were rejected.

Title

Transmittal Information

User Evaluation Report  
OPR-K229-AHP2

Atlantic Hydrographic Section  
N/CG244  
Norfolk, Va.

Chart Inspection Report  
OPR-K229-AHP2

Atlantic Hydrographic Section  
N/CG244  
Norfolk, Va.

Coast Pilot Report

Coast Pilot Unit  
N/CG 22  
Mapping and Charting Branch  
Rockville, MD

Submitted by: Martin P. Conricote, Launch Hydrographer-in-Charge

CHART:#11314 PRE-SURVEY REVIEW ITEM:#5193,5194,5198,5203,5206,  
5209,5211 (OBSTRUCTIONS)

SOURCE: BP1025/54

INVEST.DATE: 10/23/90 TIME:155400GMT. VESSEL:#1292

Chief of Party: LCDR. V. D. Ross

REFERENCE: H-10329 (OPR-K229-AHP) POSITION:#3011-3131

CORRECTORS APPLIED: None.

GEODETIC POSITION:	LATITUDE(N)	(WAD27)	LONGITUDE(W)
CHARTED:	(PSR 5193)	28°02'51.05"N	096°59'04.96"W
	(PSR 5194)	28°02'58.05"N	096°58'58.96"W
	(PSR 5198)	28°03'06.05"N	096°58'51.96"W
	(PSR 5203)	28°03'21.55"N	096°58'38.96"W
	(PSR 5206)	28°03'29.55"N	096°58'32.96"W
	<i>See following page</i> — (PSR 5209)	28°03'43.05"N	096°58'18.96"W
	<i>See following page</i> — (PSR 5211)	28°03'53.55"N	096°58'11.96"W

OBSERVED: See Method of Investigation.

POSITION DETERMINED BY: Multiple LOPs, Falcon Mini-ranger.

METHOD OF ITEM INVESTIGATION: A Chain Drag was conducted by LCH.#1292 running parallel to east side of channel at 10-meter spacings, with a width of 50 meters. Nothing was found.

CHARTING RECOMMENDATIONS: The hydrographer recommends that these piling be deleted from the chart.

*Do not censor, inadequate drag coverage.  
Retain as charted, see EVM  
Report, section 7.a*

---

CHART: COMPILATION USE

APPLIED AS:

CHART:#11314

PRE-SURVEY REVIEW ITEM #5209  
PILING

SOURCE:BP1025/54--COE

INVEST. DATE:10/17/90

TIME:143000GMT.

VESSEL:#1292

Chief of Party: LCDR V. Dale Ross

REFERENCE:H-10329 (OPR-K229-AHP)

POSITION:5001-5005

CORRECTORS APPLIED: NONE

GEODETIC POSITION:

LATITUDE (N) (~~NAD27~~) LONGITUDE (W)

CHARTED:

28°03'45.05"N

096°58'18.96"W

OBSERVED:

See Method of Investigation.

POSITION DETERMINED BY:

Multiple LOP, FALCON Mini-Ranger.

METHOD OF ITEM INVESTIGATION: A 100-meter radius circle search  
conducted by divers. Nothing was found.

CHARTING RECOMMENDATIONS: The hydrographer recommend this pile be  
deleted from the chart.

*CMW*

---

COMPILATION USE

CHART:

APPLIED AS:



CHART:#11314

PRE-SURVEY REVIEW ITEM #5211 PILE

SOURCE: BP51025/54 COE

INVEST.DATE: 10/1590

TIME:210000 GMT

VESSEL #0517

Chief of party; LCDR. V. DALE ROSS

REFERENCE: H-10329 (OPR-K229-AHP)

POSITION:3004

CORRECTORS APPLIED: NONE

GEODETIC POSITION:

LATITUDE (N)

LONGITUDE (W)

CHARTED:

28°03'52.50" (NAD27)

096°58'11.00"

OBSERVED:

See Method of Investigation.

POSITION DETERMINED BY:

Multiple LOP, FALCON Mini-Ranger

METHOD OF ITEM INVESTIGATION: A 50-meter circle search was conducted by divers. Nothing was found. *A chain drag was performed in the area also with nothing found. A 100 meter radius search was required to disprove this item. With the diver search and chain drag development, the 100 meter requirement was met to disprove this item.*

CHARTING RECOMMENDATIONS: The hydrographer recommends that these piles be deleted from the chart.

*COMLW*

---

COMPILATION USE

CHART:

APPLIED AS:

..end

CHART:#11314

PRE-SURVEY REVIEW ITEM #5215  
(PILE)

SOURCE: BP1025/54

INVEST.DATE: 10/23/90 (29%) TIME:181900GMT.

VESSEL:#1292

Chief of Party: LCDR. V.D.Ross

REFERENCE:H-10329 (OPR-K229-AHP)

POSITION:#3114

CORRECTORS APPLIED: NONE.

GEODETIC POSITION:                      LATITUDE (N)                      LONGITUDE (W)

CHARTED:                                      28°03'59.00" (N)                      096°58'05.00" (W) (NAD27)

OBSERVED:                                      28°04'00.05" (N)                      096°58'05.96" (W) (NAD83)

POSITION DETERMINED BY:                      Multiple LOPs, FALCON Mini-Ranger.

METHOD OF ITEM INVESTIGATION: Chain Drag operations was conducted  
by LCH.#1292. PILE was found.

CHARTING RECOMMENDATIONS: The hydrographer recommends submerged pile  
be placed on chart.

Retain symbol as charted, update digital position value.

*CONCERN*

COMPILATION USE

CHART:

APPLIED AS:

..end.

CHART #11314

PRE-SURVEY REVIEW ITEM 5233, 5234, 5236  
PILES

SOURCE: LNM22/80

INVEST. DATE: 10/11/90

TIME: 193000GMT.

VESSEL: #0517

Chief of Party: LCDR V. Dale Ross

REFERENCE: H-10329 (OPR-K229-AHP)

POSITION: 3003

CORRECTORS APPLIED: None

GEODETIC POSITION:

LATITUDE (N)

LONGITUDE (W)

CHARTED: (Awois 5234) 28° 03' <sup>09.05</sup>~~05.00~~"N 096° 58' <sup>08.95</sup>~~10.00~~"W (NAD 83)

OBSERVED:

See Method of Investigation.

POSITION DETERMINED BY:

Multiple LOPs, Falcon Mini-Rangers

METHOD OF ITEM INVESTIGATION: A 50-meter circle search was conducted by divers. Nothing was found.

CHARTING RECOMMENDATIONS: The hydrographer recommends that these piles be deleted from the chart. *CONCERN for Awois item 5234. Awois items 5233 and 5236 should be retained as charted because of inadequate coverage to disprove. See Enac Report, section 7.a for position values for Awois items 5233 and 5236.*

---

COMPILATION USE

CHART:

APPLIED AS:

CHART: #11314

PRE-SURVEY REVIEW ITEM #5235, 5237, 5238  
PILES

SOURCE: LNM22/80

INVEST. DATE: 10/11/90

TIME: 201000GMT.

VESSEL: #0517

Chief of Party: LCDR V. Dale Ross

REFERENCE: H-10329 (OPR-K229-AHP)

POSITION: #3002

CORRECTORS APPLIED: None

GEODETTIC POSITION:

LATITUDE (N)

LONGITUDE (W)

CHARTED: (Awois 5237) 28° 03' <sup>12.05</sup>~~09.00~~"N 096° 58' <sup>11.95</sup>~~12.50~~"W (NAD83)

OBSERVED:

See Method of Investigation.

POSITION DETERMINED BY:

Multiple LOPs, Falcon Mini-Rangers

METHOD OF ITEM INVESTIGATION: A-50 meter circle search was conducted by divers. Nothing was found.

CHARTING RECOMMENDATIONS: The hydrographer recommends that these piles be deleted from the chart. *Concur for Item 5237. Awois item 5235 and 5238, submpiles, should be retained as charted because of inadequate coverage to disprove. See Enac report section 7a for position values for Awois items 5235 and 5238.*

---

COMPILATION USE

CHART:

APPLIED AS:

CONTROL STATIONS

105	28°04'58.905"	97°00'36.739"	Copano Bay Entrance Lt.2, 1989
108	28°00'49.662"	96°58'12.654"	Sas, 1989
<del>113</del>	<del>28°01'49.582"</del>	<del>97°02'24.586"</del>	<del>Little Bay Tower</del>
114	28°01'27.412"	97°01'14.362"	Nine Mile Point Lt.2, 1990
115	28°04'12.363"	96°57'56.812"	Aransas Bay Lt.25, 1990
<del>124</del>	<del>27°57'07.493"</del>	<del>97°04'21.062"</del>	<del>Traylor</del>
102	28°07'31.119"	96°58'52.436"	Goose

**APPROVAL SHEET**

**ADDITIONAL WORK TO ACCOMPANY BASIC HYDROGRAPHIC SURVEY  
OPR-K229-AHP2  
AHP-10-4-90  
H-10329  
1990**

This work was conducted in accordance with the project instructions for OPR-K229-AHP2, the hydrographic manual, the hydrographic survey guidelines, and the field procedures manual. The survey data and reports were completed under frequent supervision. All boat sheets and final field sheets were reviewed and all supporting records were also checked.

This work, in conjunction with the survey work for H-10329 performed in 1989-1990, form a complete basic hydrographic survey for the area described in section B of this report.



**V. Dale Ross  
Lieutenant Commander, NOAA  
Chief, Atlantic Hydrographic Party Two**

# ORIGINAL

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

## TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: July 9, 1990

MARINE CENTER: Pacific

OPR: K229

HYDROGRAPHIC SHEET: H-10329

LOCALITY: Aransas Bay, Long Reef, TX

TIME PERIOD: February 26 - April 23, 1990

TIDE STATION USED: 877-4770 Rockport, TX

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 5.81 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.4 feet

REMARKS: RECOMMENDED ZONING  
Zone direct.

  
CHIEF, TIDAL DATUM QUALITY  
ASSURANCE SECTION

GEOGRAPHIC NAMES

H-10329

Name on Survey  
TEXAS, ARANSAS BAY,  
LONG REEF

A ON CHART NO. 11314  
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  
FTP-01196

Name	A	B	C	D	E	F	G	H	Number
ARANSAS BAY	X		A, B, C					X	1
BIG ISLAND	X		B					X	2
DEADMAN ISLAND	X		B, C					X	3
LONG REEF	X		A, B, C					X	4
PAULS MOTT	X		B					X	5
PAULS MOTT REEF	X		B					X	6
TEXAS (TITLE)	X								7
A - H-5875									8
B - T-9297									9
C - H-5693									10
									11
									12
									13
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									21
									22
									23
									24
									25

Approved:  
*Charles E. Harrington*  
Chief Geographer - N/CG2X5

JUL 19 1990



RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	8
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	4

DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	1				
ENVELOPES	1				
VOLUMES					
CAHIERS					
BOXES					

**SHORELINE DATA** (Hatched area)  
 SHORELINE MAPS (List):  
 PHOTOBATHYMETRIC MAPS (List):  
 NOTES TO THE HYDROGRAPHER (List):  
 SPECIAL REPORTS (List):  
 NAUTICAL CHARTS (List):

**OFFICE PROCESSING ACTIVITIES**  
 The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS			
	VERIFICATION	EVALUATION	TOTALS	
POSITIONS ON SHEET			1271	
POSITIONS REVISED				
SOUNDINGS REVISED				
CONTROL STATIONS REVISED				
	TIME-HOURS			
	VERIFICATION	EVALUATION	TOTALS	
PRE-PROCESSING EXAMINATION				
VERIFICATION OF CONTROL				
VERIFICATION OF POSITIONS	14		14	
VERIFICATION OF SOUNDINGS	22		22	
VERIFICATION OF JUNCTIONS				
APPLICATION OF PHOTOBATHYMETRY				
SHORELINE APPLICATION/VERIFICATION				
COMPILATION OF SMOOTH SHEET	9		9	
COMPARISON WITH PRIOR SURVEYS AND CHARTS		7	7	
EVALUATION OF SIDE SCAN SONAR RECORDS				
EVALUATION OF WIRE DRAGS AND SWEEPS				
EVALUATION REPORT		27	27	
GEOGRAPHIC NAMES				
OTHER* Digitizing		9	9	
*USE OTHER SIDE OF FORM FOR REMARKS	TOTALS	45	34	88

Pre-processing Examination by <b>M. Brown</b>	Beginning Date 6/27/90	Ending Date 7/9/90
Verification of Field Data by <b>C.R. Davies</b>	Time (Hours) 45	Ending Date 7/1/91
Verification Check by <b>J. Green</b>	Time (Hours) 13	Ending Date 6/28/91
Evaluation and Analysis by <b>C.R. Davies</b>	Time (Hours) 34	Ending Date 7/2/91
Inspection by <b>D. Hill</b>	Time (Hours) 6	Ending Date 7/11/91

## **EVALUATION REPORT**

**H-10329**

### **1. INTRODUCTION**

Survey H-10329 is a basic hydrographic survey accomplished by the Atlantic Hydrographic Party 2 under the following Project Instructions.

OPR-K229-AHP2, dated September 14, 1989  
CHANGE NO. 1, dated December 21, 1989  
CHANGE NO. 2, dated January 10, 1990

Survey H-10329 is a two season survey. The field work was started during the winter and spring of 1990 and was completed in the fall of 1990. The two descriptive reports are bound sequentially.

This survey occurred in Texas and covers the western portion of Aransas Bay in the vicinity of Long Reef. The surveyed area extends from latitude 28/00/03N to latitude 28/04/10N, and longitude 96/56/03W to longitude 96/59/30W. Shoreline consists of sand, low lying salt marshes, dredged spoil islands and oyster reefs. A dredged portion of the Intracoastal Waterway is also found within the survey area. The bottom consists of mud, shells and sand. Depths range from 1 to 17 feet.

Predicted tides for Galveston Channel, Texas, were used for the reduction of soundings during field processing. Approved hourly heights zoned from Rockport, Texas, gage 877-4770, were used during office processing.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The TRA, sound velocity and electronic control correctors are adequate. An accompanying computer printout contains the parameters and the correctors.

A digital file has been generated for this survey that includes categories of information required to comply with Hydrographic Survey Guideline No. 53, Standard Digital Data Exchange Format, April 15, 1986. Certain descriptive information, however, may not be in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

### **2. CONTROL AND SHORELINE**

Sections F and G of the hydrographer's report contain adequate discussions of horizontal control and hydrographic positioning. Additional detailed information on horizontal control is in the following.

Geodetic Control Report for CM-8716 and  
Geodetic Control Survey Job-HC-9901

Positions of horizontal control stations used during hydrography are 1989 field and published values based on NAD 83. The smooth sheet and accompanying overlays are annotated with NAD 27 adjustment ticks based on values determined by N/CG121.

Geographic positions based on NAD 27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: 1.061 seconds (32.7 meters)  
Longitude: 0.962 seconds (26.3 meters)

The year of establishment of control stations shown on the smooth sheet originates with the NGS listing and hydrographer's signal list.

The quality of several positions exceeds limits in terms of error circle radius and residual. A review of the data, however, indicates that none of these fixes are used to position dangers to navigation. The soundings located by these fixes are consistent with surroundings. These fixes are considered acceptable.

The following shoreline map applies to this survey.

	<u>Photo Date</u>	<u>Class</u>
TP-01196	Dec. 82, Nov. 83	III

### 3. HYDROGRAPHY

With the exceptions noted below and elsewhere in this report, hydrography is adequate to:

- a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;
- b. reveal there are no significant discrepancies or anomalies requiring further investigation; and
- c. show the survey was properly controlled and soundings are correctly plotted.

The hydrographer was apparently unable to define the zero depth curve due to shallowness which prevented an approach by boat.

### 4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, and the Field Procedures Manual, January 1990 Edition, except as follows.

Ten AWOIS items were not investigated, or were inadequately investigated, during this survey. Refer to section 7 of this report for identification of these features.

Three of the four fixed aids to navigation within the survey area were not located to Third Order Class I specifications. All non-floating aids should be located to third order, unless adequate third order or aerotriangulated positions are available.

### 5. JUNCTIONS

Survey H-10329 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10320	1989/90	10000	Northwest
H-10321	1989/90	10000	Northeast
H-10327	1990	10000	West
H-10366	1991	10000	South

The junction with survey H-10327 is complete.

The junction with surveys H-10320 and H-10321 have not been formally completed since those surveys were previously processed and forwarded for charting. The junction comparison was made using a copy. Soundings are in good agreement. Some soundings have been transferred to survey H-10329 from survey H-10321 to better portray the foreshore area in the common area.

The junction with survey H-10366 can not be completed because this survey is in early stages of office processing. The junction comparison will be addressed in the Evaluation Report for survey H-10366. A comparison between the soundings from the final field sheets and charted data indicates fair agreement.

## 6. COMPARISON WITH PRIOR SURVEYS

H-5693 (1935) 1:20,000  
H-5875 (1935) 1:20,000

Surveys H-5693 and H-5875 cover the area of the present survey. Generally, soundings have deepened by 1 to 2 feet except for isolated shoal areas which have formed since the prior surveys were completed. Shoreline changes are discussed below, under shoreline map T-9297. Additional discussion can be found in section K of the hydrographer's report.

Survey H-10329 is adequate to supersede the above prior surveys within the common areas.

T-9296 (1946-48-49) 1:20,000  
T-9297 (1952) 1:20,000

Shoreline maps T-9296 and T-9297 cover the entire area of the present survey. The shoreline has changed through natural forces. Long Reef, at approximate latitude 28/03/27N, longitude 96/57/21W, has decreased in size and no longer uncovers to the extent it did on the prior shoreline map. Deadman Island at latitude 28/03/57N, longitude 96/57/45W, has changed its shape. The island is in a more north-south orientation than an east-west direction as portrayed on the prior map.

A snag originating from T-9297 at latitude 28/03/09N, longitude 96/58/42W, was not discussed, although the hydrographer did a 200 x 300 meter chain drag development. Nothing was found. This feature is considered disproved.

Survey H-10329 is adequate to supersede the prior shoreline maps as a source for the charting of hydrographic information for the common area.

There are no AWOIS items originating from these prior surveys applicable to the present survey.

## 7. COMPARISON WITH CHART

Chart 11314, 15th edition, dated August 15, 1987; scale 1:40,000 (NAD 27)  
Chart 11314, 16th edition, dated January 20, 1990; scale 1:40,000 (NAD 83)

The two editions of chart 11314 are identical except for revisions to the later edition which includes being on a different horizontal datum, the deletion of a marker (AWOIS item 5197) at latitude 28/03/05N, longitude 96/56/49W and the addition of a PA on a platform at latitude 28/03/13N, longitude 96/58/46W.

### a. Hydrography

Charted hydrography originates with the prior surveys and prior shoreline maps discussed in section 6 of this report and miscellaneous sources and requires no further discussion, except for the following.

Several charted features were not investigated adequately during this survey. These features, listed below, should be retained at their presently charted positions and depicted as shown below.

<u>Feature</u>	<u>Latitude (N)</u>	<u>Longitude (W)(NAD27)</u>	<u>AWOIS</u>
subm pile	28/02/33	96/59/20	5188 ✓
subm pile	28/02/50	96/59/04	5193 ✓
subm pile	28/02/57	96/58/58	5194 ✓
subm pile	28/03/05	96/58/51	5198 ✓
subm pile	28/03/20.5	96/58/38	5203 ✓
subm pile	28/03/28.5	96/58/32	5206 ✓
piles PA	28/03/05	96/58/10	5233 ✓
piles PA	28/03/09	96/58/12.5	5235 ✓
piles PA	28/03/10	96/58/06	5236 ✓
piles PA	28/03/12	96/58/08	5238 ✓

Aransas Bay Light 31, charted at latitude 28/03/13N, longitude 97/58/46W, was located during this survey 300 meters to the southwest. The chart indicates that this light was located on a platform. The hydrographer investigated this charted feature by a chain drag. Nothing was found. This feature is considered disproved and should be removed from the chart following the addition of the light at its new location.

Except for the features listed previously in this section, survey H-10329 is adequate to supersede charted hydrography within the common area.

### b. AWOIS

All AWOIS items within the survey area originate with miscellaneous sources. Refer to the hydrographer's report and section 7.a of this report for discussion and disposition of these features. AWOIS items 5216 and 5217 fall within the junction area of surveys H-10321 and H-10329. They are addressed in the Evaluation Report and the Descriptive Report for survey H-10321.

**c. Controlling Depths**

The depths found during this survey are consistent with or deeper than the charted controlling depth for the Intracoastal Waterway, the only controlling depth applicable to this survey.

**d. Aids to Navigation**

There are four fixed and seven floating aids located within the survey area. These aids were located and serve their intended purpose. Three of the four fixed aids were located to less than 3rd order class I specifications. They are listed in section N of the hydrographer's report.

**e. Geographic Names**

Names appearing on the smooth sheet and in the survey title have been approved by the Chief Geographer.

**f. Dangers to Navigation**

The hydrographer reported a change to the location of an aid to navigation to the USCG and N/CG221. A copy of this report is attached. No additional dangers were discovered during office processing.

**8. COMPLIANCE WITH INSTRUCTIONS**

Survey H-10329 adequately complies with the Project Instructions, except were noted in sections 4 and 7.

**9. ADDITIONAL FIELD WORK**

This is an adequate hydrographic survey. Additional field work is recommended to verify or disprove the charted features mentioned in section 7.a of this report.

*Charles R. Davies*  
Charles R. Davies  
Cartographer

APPROVAL SHEET  
H-10329

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The digital data have been completed and all revisions and processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts have been made and are included with the survey records. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.



Date: 7-11-91

Dennis J. Hill  
Chief, Hydrographic Processing Unit  
Pacific 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.



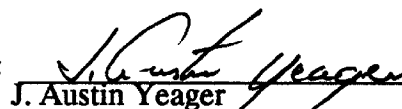
Date: 7/18/91

Commander Pamela Chelgren-Koterba, NOAA  
Chief, Pacific Hydrographic Section

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Final Approval

Approved:



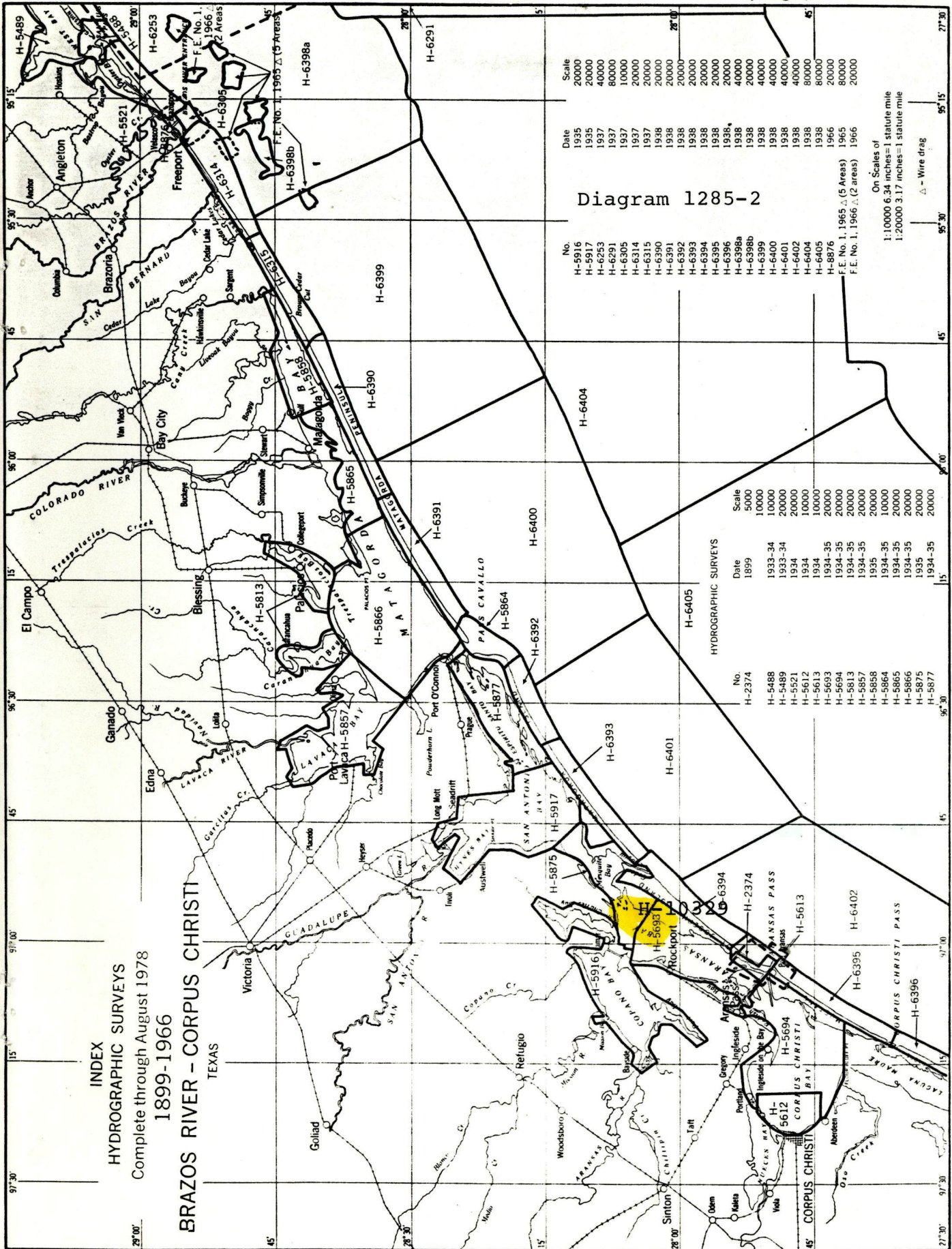
Date: Aug 14, 1991

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. 90 C



INDEX  
HYDROGRAPHIC SURVEYS  
Complete through August 1978  
1899-1966  
BRAZOS RIVER - CORPUS CHRISTI  
TEXAS

Diagram 1285-2

No.	Date	Scale
H-5916	1935	20000
H-5917	1935	20000
H-6253	1937	40000
H-6291	1937	80000
H-6305	1937	10000
H-6314	1937	20000
H-6315	1937	20000
H-6390	1938	20000
H-6391	1938	20000
H-6392	1938	20000
H-6393	1938	20000
H-6394	1938	20000
H-6395	1938	20000
H-6396	1938	20000
H-6398a	1938	40000
H-6398b	1938	20000
H-6399	1938	40000
H-6400	1938	40000
H-6401	1938	40000
H-6402	1938	40000
H-6404	1938	80000
H-6405	1938	80000
H-8876	1966	20000
F.E. No. 1, 1965, (5 Areas)	1965	80000
F.E. No. 1, 1966, (2 areas)	1966	20000

HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-2374	1899	5000
H-5488	1933-34	10000
H-5489	1933-34	20000
H-5521	1934	20000
H-5612	1934	10000
H-5613	1934	10000
H-5693	1934-35	20000
H-5694	1934-35	20000
H-5813	1934-35	20000
H-5857	1934-35	20000
H-5858	1935	20000
H-5864	1934-35	10000
H-5865	1934-35	20000
H-5866	1934-35	20000
H-5875	1935	20000
H-5877	1934-35	20000

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



MARINE CHART BRANCH  
**RECORD OF APPLICATION TO CHARTS**

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10329

**INSTRUCTIONS**

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
11314	5-31-91	<i>Russ Davis</i>	<del>Full Part Before</del> After Marine Center Approval Signed Via <i>Partial application</i> Drawing No. <i>of sndgs from field sheet</i>
11300	6-10-91	<i>ALMAGEN</i>	<del>Full Part Before</del> After Marine Center Approval Signed Via <i>EXAMINED NO</i> Drawing No. <i>SNDGS OR CORRS APPLIED</i>
11300	6-10-92	<i>KR. Foster</i>	<del>Full Part Before</del> After Marine Center Approval Signed Via Drawing No. <i>45 Exam-n/c-no coverage.</i>
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