

10322

Diagram No. 1286

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-10-14-89
Registry No. ... H-10322

LOCALITY

State Texas
General Locality Corpus Christi Bay
Sublocality Aransas Bay to Port Aransas

19 89-90

CHIEF OF PARTY
LCDR V.D. Ross

LIBRARY & ARCHIVES

DATE August 1, 1990

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

10322

etc. 11313
11312
11314 "A"
11307
11309
11300

H-10322

HYDROGRAPHIC TITLE SHEET

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 10-14-89

State Texas

General locality Corpus Christi Bay

Locality Aransas Bay to Port Aransas

Scale 1:10,000 Date of survey Nov 1989 to April 1990

Instructions dated August 3, 1989 Project No. OPR-K229-AHP

Vessel Launch 0518

Chief of party LCDR V.D. Ross

Surveyed by David Elliot, Thomas Rybarski, Tom Watkins

Soundings taken by echo sounder, hand lead, ~~spot~~

Graphic record scaled by DE, TR, TW

Graphic record checked by DE, TR

Verification by: R.N. Mihailov Automated plot by PMC Xynetics Plotter

Evaluation by: C.R. Davies

Soundings in ~~fathoms~~ feet at ~~MLLW~~ 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.

AWOIS/surf ✓ 8/24/90 SJV

KWW 8/14/90

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10322
(Field No. AHP-10-14-89)
Scale:1:10,000
1989
Atlantic Hydrographic Party Two
Dale Ross, Chief of Party

A. PROJECT ✓

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K229-AHP2, Corpus Christi and Aransas Bay, Texas, dated August 3, 1989 and Change No. 1 dated October 19, 1989, and change No. 2, dated JAN 10, 1990.

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

This survey is designated as sheet "J" in the project sheet layout.

B. AREA SURVEYED

The area surveyed for H-10322 is the entrance to Port Aransas Texas, bounded on the north by Lydia Ann Channel and on the west by longitude 097°04'30". This survey also includes the channel leading to Aransas Pass, Texas.

Per Section 1.8 of the project instructions, main scheme lines were run to the 2-foot depth curve.

This survey was conducted from November 22⁰, 1989 (DN 325) to January 22, 1990 (DN 022). *Additional work was conducted on April 5, 1990 (DN 95).*

C. SOUNDING VESSEL ✓

Vessel 0518 (EDP No. 0518), a 21-foot MonArk, was the only sounding vessel used during this survey. Sounding lines were run at 50- and 100-meter spacing, per Section 4.3 of the hydrographic manual.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS ✓

1. SOUNDING EQUIPMENT

The following Raytheon DE-719-C fathometer was used for this survey:

<u>EDP #</u>	<u>S/N</u>	<u>Days</u>
0518	10744	325,331,334,335,339,340,354 011,016,017,018,022.

Soundings were recorded in feet using the Raytheon DE-719-C fathometers with an assumed speed of sound through water of 4800 ft/sec. Depths encountered in the survey area range from 1 foot to ~~20~~ feet.

78

The digitized soundings matched the fathometer's trace to plus or minus 0.2 foot through constant observation and manipulation of the tide and draft adjustment knob.

2. CORRECTIONS TO ECHO SOUNDINGS ✓

Corrections for the speed of sound through the water column were computed from data obtained with a Digibar speed of sound probe, serial number (s/n) 154. Also used was an Applied Microsystems Laboratory (AML), Model SVP-16 speed of sound profiler serial number 03003. Program "Velocity" was used for determining the speed of sound correctors.

All speed of sound correctors were applied during semi-smooth and final plotting by the HDAPS system.

<u>Table Applied</u>	<u>Cast</u>	<u>Day</u>	<u>Depth</u>	<u>Location</u>	<u>Days</u>
10	1	335	14 meters	27°50'50" N 097°03'30" W	325-334
10	1	335	14 meters	27°50'50" N 097°03'30" W	335-340
10 11	2	342	14 meters	27°50'24" N 097°03'18" W	354
11 12	3	010	21 meters	27°50'40" N 097°03'30" W	011-016
12 13	4	016	20 meters	27°50'40" N 097°03'30" W	017-022

A data quality assurance test (DQA) was performed prior to each speed of sound cast to assure proper working condition of the probe. Speed of sound tables are included in the Separates Following Text.*

Lead line comparisons were performed daily, excluding days of harsh weather, to determine instrument error and to verify static draft. The instrument errors computed varied from +0.4 to -0.2 foot. These instrument corrections were not applied to final field sheet soundings and are included in the Separates * Following Text, along with lead line comparison logs, for reference.

A static draft correction was determined by measurements performed at Redfish Bay Terminal on November 16, 1989 (DN 320). The data were applied to all soundings acquired with the Raytheon DE-719-C echo sounders. The 1.2 feet static draft correction was applied to all sounding data. The offset tables are included with the Separates Following Text.*

Settlement and squat measurements for vessel 0518 were performed on November 13, 1989 (DN 317), at Redfish Bay Terminal, using the NOS prescribed level rod method (Zeiss level s/n 59972). Settlement and squat correctors were determined and applied to all survey data.

Predicted tides corrections to MLLW datum were applied to all soundings using the reference station and correctors designated in the project instructions. The tides in the project area are strongly influenced by weather. Unverified water level correctors were determined from the gauges maintained by AHP-2, and compared to the predicted correctors to identify periods when actual and predicted tides were not in agreement. These differences were monitored and used to determine if sounding disagreements were due to tidal errors.

Approved water levels were requested from the Sea and Lake Levels Branch in a letter dated February 13, 1990. A copy of the letter is included in the Separates Following Text.*

E. HYDROGRAPHIC SHEETS ✓

The survey scale is 1:10,000. All field sheets were produced by AHP-2 employees with the HDAPS using a Bruning ZETA 824 plotter. A list of sheets submitted for H-10322 follows:

<u>Sheet</u>	<u>Scale</u>	<u>Quantity</u>
Boat Sheet	1:10,000	1
Semi-Smooth MS	1:10,000	1
Edited Trackline	1:10,000	1
Final Field Sheet	1:10,000	1
Overlay	1:10,000	1

* Filed with the hydrographic data.

Main scheme hydrography and horizontal control stations used during the survey are plotted on the final field sheet. Channel lines, detached positions, and bottom samples are plotted on the overlay. All soundings on the final field sheet are corrected for draft, predicted tides, settlement and squat, and speed of sound through water.

All survey sheets were submitted with the descriptive report and a journal, labeled "0518" including photographs, to the Pacific Hydrographic Section in Seattle, Washington. *

F. CONTROL STATIONS

The horizontal control datum for this project is the North American Datum of 1983.

All control stations used on this survey were either existing stations or stations set by the Coastal Surveys Unit using third order, class I traverse and intersection methods. The horizontal control report was written within the Coastal Surveys Unit and was forwarded to the Atlantic Hydrographic Section in Norfolk, Virginia.

Geographic positions for all control stations used on this survey are underlined and included with the station list in the Separates Following Text. *Attached to this report*

G. HYDROGRAPHIC POSITION CONTROL ✓

Survey Methods ✓

Hydrographic position control was accomplished using the Mini-Ranger Falcon 484 system which provided accuracy to meet 1:10,000 scale survey requirements. Range/azimuth positioning using one remote station at a time was used during this project. The following Falcon Mini-Ranger equipment was used:

<u>VESNO</u>	<u>Equipment</u>	<u>S/N</u>
0518	RPU	D0017
	R/T	E2965
	R/S	E2979
	R/S	F3293

Fixes which had erratic lines of position indicated by high residuals on the "raw" listing were "smoothed" in post processing. Positions were "smoothed" by dead reckoning between two accurate positions. If more than four consecutive positions had high residuals with an erratic track plot, the data were rejected and later rerun.

* Filed with the hydrographic data

Critical System Checks ✓

Fixed point system checks were performed on days establishing shore stations or when relocating Mini-Ranger reference stations to different locations. All fixed point checks values were less than 5 meters which is within the required limits in the field procedures manual. Results of these fixed point checks are included in the Separates Following Text. *

Mini-Ranger Falcon Calibrations ✓

Baseline calibrations were performed to the standards of Section 3.1.2.1 of the field procedures manual. The baseline values were incorporated into the Comflex "C-O" table and applied directly to all "on-line" data. All records of these calibrations are included in the Separates Following Text. *

A closing baseline calibration was not performed since the survey was conducted in less than a six month period.

H. SHORELINE ✓ *See Eum Report Section 2*

Shoreline drawn on the final field sheet originates with a 1:10,000 scale photographic enlargement of topographic map 01198 (TP-01198). These shoreline manuscripts were compiled on the NAD 1927 while this survey was run using the NAD 1983. Comparisons of hydrography to shoreline was accomplished using approximate datum shift values provided by N/CG2441.

Shoreline was verified by its junction with hydrographic data and by visual inspection when possible. The extremely gentle slope of the majority of the near shore areas prevented the launch from approaching near enough to shore, to get a hydrographic position along the waterline. In these situations, the shoreline was visually compared to the TP-map for changes. Changes in the shoreline are shown in red ink on the final field sheet. Verified shoreline is shown in black ink on the final field sheet. Shoreline not verified is shown in blue ink.

There was one minor shoreline change inside Turtle Cove where a new pier has replaced a bulkhead. Position no. 1137 at latitude 27°50'24.1" N, longitude 097°03'33.8" W establishes this minor detail and has been transferred to the final field sheet. *Two additional piers have been drawn in Turtle Cove, see smooth sheet and refer to the Eum report Section 2 for positions of the piers.*

I. CROSSLINES

A total of 23 linear nautical miles of longitudinal channel lines were run on H-10322 which serve as crosslines due to the narrow survey area and equals 22% of the main scheme hydrography.

* Filed with the hydrographic data

These soundings agree to within one foot of the main scheme soundings.

COMPLY

J. JUNCTIONS *See EVMC Report section 5*

This sheet junctions with H-10205, 1: 10,000 (1985) to the east. The soundings between this survey and H-10205 agree to within 2 feet and the depth curves between the two surveys junctioned reasonably well considering the currents and tides at the jetty.

K. COMPARISON WITH PRIOR SURVEYS *see EVMC Report section 6*

The present survey was compared to the following prior survey.

T- 9179	1948	1:20,000
T- 9185	1947-48	1:20,000
H-5613	1934	1:10,000

Comparison between the current survey soundings and soundings from survey H-5613 do not agree as extensive dredging has occurred in this area. The hydrographer recommends this survey supersede any and all ^{NOs} surveys in this region. *COMPLY*

The notes to Hydrographer indicate the existance of groins on both sides of the jetty entrance to Port Aransas. During compilation of the Coast Pilot report I was informed of the existance of these features although covered by silt. These groins were originally installed to reduce silting in the channel. After years of dredging in this area the groins only project two to three feet off the bottom and are no danger to navigation. This information was obtained from the Port Aransas Pilots Association. The hydrographer recommends these features be retained. *These groins were transferred to survey H-10322 as submerged groins. Refer to section 6*

The notes to Hydrographer indicate the existance of a wreck on the south side of the jetty at approximately 27°50'05" N latitude, 097°02'30" W longitude. According to the Port Aransas Pilots Association this feature also exists and should be retained for charting. This wreck appears on H-5613 (1934) as visible, however, after years of dredging in this area the feature, much like the aforementioned jetties, has deteriorated to the point where it is no danger to navigation. Because of strong currents, limited visibility, and traffic these items were not investigated by divers. *Wreck was transferred to survey H-10322 as a submerged wreck. H-10205*

L. COMPARISON WITH THE CHART *See EVMC Report section 7*

Comparisons were made with the following largest scale charts covering the present survey area:

<u>Chart No.</u>	<u>Edition</u>	<u>Edition Date</u>
11308	15th	July 9, 1988
11309	29th	November 15, 1986
11309	30th	December 2, 1987
11314	15th	August 15, 1987

In general, the soundings from this survey compared to within 2 feet of the charted soundings.

✓ AWOIS Item 4999 originates from BP 69343-COE 1961, as an obstruction with a 25-foot sounding. After an extensive fathometer search a dive was conducted resulting in position no. 1173. Diver least depth by lead line was 25 feet on concrete and wood pier ruins at latitude $27^{\circ}50'23.4''$ N, longitude $097^{\circ}04'29.5''$ W. Local knowledge confirms this pier is to be rebuilt in 1991. *Delete note "subm obstr PD" and 25 ft depth. Chart subm obstr. with a depth of 24 ft, at MLLW.*

✓ AWOIS Items 5000-5003 originates from BP 65086-COE 1963, as visible piles. Position no. 1174 at latitude $27^{\circ}50'25.1''$ N, longitude $097^{\circ}04'12.8''$ W, and position no. 1175, at latitude $27^{\circ}50'25.7''$ N, longitude $097^{\circ}04'07.3''$ W, confirm the existance of these features at the southern ferry terminal entrance. While position no. 1176, at latitude $27^{\circ}50'33.7''$ N, longitude $097^{\circ}04'12.4''$ W, and position no. 1177, at latitude $27^{\circ}50'34.8''$ N, longitude $097^{\circ}04'09.3''$ W, show the centers of fifty-meter radius circle searches. No evidence of piles were found. Ferry Operations Manager, Mr. Ernest Hinojosa reports no piles have existed since 1976. The hydrographer recommends removing the piles from the northern ferry terminal entrance and retain the southern piles with the new positions specified above. *cancel*

✓ AWOIS Items 5004-5005, originates from CL711-COE permits 1973, as visible piles. ^(not charted) Position no. 1134 at latitude $27^{\circ}50'18.69''$ N, longitude $097^{\circ}03'55.24''$ W, establishes existance of a new pier. Position no. 1135 at latitude $27^{\circ}50'20.3''$ N, longitude $097^{\circ}03'55.4''$ W, establishes the existance of visible piles for boat slips from this point north to a bulkhead. *Chart new pier and row of piles at the above positions*

✓ AWOIS Item 5006 originates from USPS 1975, as a visible wreck. Position no. 1138 at latitude $27^{\circ}50'27.4''$ N, longitude $097^{\circ}03'36.6''$ W, establishes the existance of this feature as an obstruction consisting of a shrimp boat outrigger and not a wreck. The hydrographer recommends this item be charted as an *cancel* obstruction. *Obstruction uncovers 3 ft at MLLW*

✓ AWOIS Item 5007 originates from LNM 1986, 8TH CGD as two concrete piles and a lamppost three feet below the surface. A dive was performed in this area resulting in position no. 1179, at latitude $27^{\circ}50'31.34''$ N, longitude $097^{\circ}03'30.1''$ W. The discovery of two piles in ruins on the face of the pier with a leadline least depth of 26 feet was the only feature of any significance. This is no danger to navigation and need not be charted. The City Manager of Port Aransas, Mr. Gordon Beck *cancel* *Remove the PA obstr. from the chart. Chart piers shown on smooth sheet.*

informed us this item had been removed upon rebuilding of a pier which was partly destroyed by a wayward barge from Harbor Island Terminal.

AWOIS Item 5008 originates from an unknown source as a submerged pile. Position no. 1180, at latitude $27^{\circ}50'20.8''$ N, longitude $097^{\circ}03'06.7''$ W, establishes the center of a fifty-meter radius circle search by divers with no evidence of the pile existing. The hydrographer recommends this feature be removed from the chart. *concur*

recheck
AWOIS Item 5009 originates from USPS 1972, as visible rocks. After an extensive fathometer search two dives were performed in this area. Position nos. 1181 and 1182 were the centers of seventy-five meter radius circle searches during which no rocks were found. Position no. 1182, at latitude $27^{\circ}50'42.7''$ N, longitude $097^{\circ}03'19.5''$ W, confirms the existence of debris on shore consisting of truck chassis and assorted iron rip-rap that looks like rocks from a distance and is believed to be AWOIS item no. 5009. *Pos. # 1182 - obstr. uncovers 2 ft at MLW. Delete "RKS rep". Chart according to smooth sheet.*

recheck
AWOIS Item 5010 originates from an unknown source as a submerged pile. ^(PO) According to the AWOIS listing this feature has not been seen for a long time. Position no. 1183, at latitude $27^{\circ}51'08.3''$ N, longitude $097^{\circ}03'20.0''$ W, is the center of a one hundred-meter radius circle search performed by divers. A fathometer search was conducted prior to diving. No evidence of a pile was found by fathometer or divers. The hydrographer recommends this feature be removed from the chart. *See additional work DAY 95 attached to this report.*

recheck
AWOIS Item 5011 originates from CL274-COE permit 1960, and USPS 1972, as piling clusters to form a transfer station. A thorough and extensive fathometer search was conducted in this area as well as shoreline walking in chest deep water. The hydrographer recommends this area of shoreline be designated foul with debris along shore. No evidence of any feature being a danger to navigation was found. Position no. 1184, at latitude $27^{\circ}51'04.3''$ N, longitude $097^{\circ}03'40.6''$ W, confirms the existence of an obstruction along shore consisting of two rock piles, awash. The hydrographer recommends this feature be revised to the new position specified. *See Additional work, DAY 95, attached to this report.*

AWOIS Item 5012 originates from LNM 1986, as a shoal. This area was surveyed at fifty-meter line spacing. Main scheme hydrography, from position no. 214 to 276 on DN 331, confirms the fact that shoaling is occurring in this area and the new chart should reflect these changes. Latitude $27^{\circ}51'12''$ N, longitude $097^{\circ}03'13''$ W, is the scaled location for this feature. *Delete note "shoal rap 1986", chart according to the smooth sheet.*

AWOIS Item 5013 originates from photograph rev/1953, 3rd edition of chart 523 in 1952, and USPS 1971, as a wreck. Position no. 1185, at latitude $27^{\circ}51'23.8''$ N, longitude

097°03'26.74" W, is the center of a one hundred-meter radius search. Nothing was found. The hydrographer recommends removing this feature from the chart. *concur*

AWOIS Item 5014 originates from LNM^v 1967, as a submerged wreck. A dive was conducted in this area resulting in position no. 1186, at latitude 27°51'22.94" N, longitude 097°03'25.17" W. This is the location of a sunken fishing vessel with a lead line least depth of 187.0 feet. The vessel is approximately twenty feet long with a six foot beam and projects 2- to 3-feet off the bottom. The hydrographer recommends revising this feature as *concur* specified. *chart the wreck as shown on the smooth sheet.*

AWOIS Item 5015 originates from photograph rev/USC&GS 1967, and USPS 1972 as four submerged piles. Three dives, each a fifty-meter radius circle search, were conducted along the channel. No evidence of the piles were found. Position no. 1199, at latitude 27°51'26.3" N, longitude 097°04'14.1" W, confirms that the pile is in ruins lying on its side between this position and shore. The hydrographer recommends remove these features from chart. *Remove subm. piles between lat. 27°51'33"N, long. 97°04'21"W and lat. 27°51'45"N, long. 97°04'36"W. Chart obstr. uncovers 2ft at MLLW at the above position.*
LHNM 44/1982 and 31/82 (7/28/82)

AWOIS Item 5016 originates from LNM 1982, 8TH CGD 1982 as an obstruction. This feature was recognized while running channel lines and returned to on a later date for positioning. A dive was conducted in this area resulting in position no. 1187, at latitude 27°51'41.6" N, longitude 097°03'05.2" W. This is ~~the location of the southern offshore end of what appears to be a Liberty ship~~ *subm piles* approximately 200-feet long and 12-feet wide with a leadline least depth of 12.2 feet. The hydrographer recommends this feature be revised and charted as a wreck at the prescribed location. *Remove PA obstr. from chart. Chart wreck covered 11 ft at MLLW.* *6/25/01*

AWOIS Items 5017 and 5019 originate from USPS 1974, as ~~pipe and channel markers~~ *subm piles* at the entrance to an abandoned lighthouse. These features were visually searched for in 2- to 3-feet of water. Walking in chest deep water the search encompassed a seventy-five meter radius. Nothing was found. The lighthouse is now active and local inhabitants stated that the piles have been removed. The hydrographer recommends these features be removed from the chart. *Remove subm piles at lat 27°51'47"N, longitude 97°03'18"W*

AWOIS Item 5018 originates from USPS 1973, as a pile. Position no. 1190, at latitude 27°51'44.26" N, longitude 097°02'57.34" W, indicates the offshore center of piles in ruins extending approximately fifteen meters from shore. Concrete and numerous piles foul the area along shore. A photograph of this location is included in the journal for this survey. The hydrographer recommends retaining this feature as charted. *Do not remove*
Delete piles and chart ruins uncovers 4ft at MLLW.

AWOIS Item 5020 originates from T-9185, 1947, as a visible wreck. Position no. 1191, at latitude 27°51'47.25" N, longitude 097°02'59.4" W, confirms the existence of this charted feature. A

photograph of this location is included in the journal for this survey. The hydrographer recommends revising this position on the chart at the specified location. *Chart wreck uncovers 3f at MLLW at the above position.*

AWOIS Item 5034 originates from USPS 1985, as a shoal reported at the north end of Lydia Ann Island. Main scheme hydrography on DN 354, position nos. 876 to 889 indicate shoaling around latitude $27^{\circ}53'28''$ N, longitude $097^{\circ}02'55''$ W is occurring and the revised chart should reflect such. *Delete "shl rep 1985" note and chart according to the smooth sheet.*

AWOIS Item 5092 originates from CL714-COE permit 1983, as a twenty-five foot sounding. See field sheet hydrography on DN 017, from position nos. 1148 to 1156, indicates the existence of this sounding. This survey will reflect such. *Delete "25 ft rep 1983" at lat. $27^{\circ}50'45''$ N, longitude $97^{\circ}04'30''$ W. Chart according to the smooth sheet.*

AWOIS Item 5094 originates from an unknown source as three submerged piles. Position no. 1145, at latitude $27^{\circ}50'18.6''$ N, longitude $097^{\circ}03'03.6''$ W, indicates the offshore end of a pier in ruins. A photograph of this feature is included in the journal for this survey. *Chart ruins at the above position.*

AWOIS Item 5095 originates from an unknown source as a submerged pile. Position no. 1200, at latitude $27^{\circ}50'14.3''$ N, longitude $097^{\circ}02'57.3''$ W, indicates the center of a fifty-meter radius circle search by divers. No evidence of a pile was found. The hydrographer recommends this item be removed from the chart. *Concur*

AWOIS Item 5096 originates from USPS 1977, as rocks. Position no. 1144, at latitude $27^{\circ}50'23.7''$ N, longitude $097^{\circ}03'13.5''$ W, indicates the offshore center of an area foul with rocks and concrete debris which extends for approximately 150 meters in both directions alongshore. *Delete "Rks rep" note, chart area according to the smooth sheet.*

AWOIS Item 5981 originates from a Coast Pilot Inspection, performed in 1961, as a reported four-foot sounding. On DN 016, main scheme hydrography was run inside of the turning basin in Turtle Cove. Although there appears to be some four-foot soundings along shore, the controlling depth appears to be fourteen feet up to the edge of numerous slips for mooring large pleasure craft and working vessels. No evidence of this four-foot sounding has presented itself during the course of this *chart* survey. Although no local inhabitants have been available for comment, it is likely this turning basin has been dredged. The hydrographer recommends this survey's soundings supersede any other reports of soundings in this vicinity. *Concur Delete "4ft rep" note, chart according to the smooth sheet. Depths in the area are between 13ft to 16ft at MLLW.*

M. ADEQUACY OF SURVEY *See ERAC report section 6+7*

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

Concur

N. AIDS TO NAVIGATION *See Enac Report section 7d*

Six floating aids to navigation are located in the survey area.

There are sixteen non-floating aids to navigation located in the survey area. Eleven of the non-floating aids are lights. One non-floating aid is a Coast Guard tower and one is a tank. There were no 1989 or 1990 Volume 4 Light Lists available to check for positions on these lights. However, all these fixes were compared to the TP-map and found to be in good agreement.

The surveyed positions of these lights are listed below.

<u>Non-Floating Aid</u>	<u>Survey Position</u>	<u>Light List Position</u>	<u>Name and No.</u>
Lydia Ann Channel Lt. # 83	27°54'00" N 097°02'58" W	Aransas Bay Light 85	36240
Lydia Ann Channel Lt. # 85	27°52'44" N 097°02'38" W	Aransas Bay Light 85	36255
Lydia Ann Channel Lt. # 87	27°51'49" N 097°02'59" W	Aransas Bay Light 87	36257
Harbor ID R Rng Lt.	27°50'54" N 097°03'56" W	Harbor Island Range Rear Light	26940
Harbor ID F Rng Lt.	27°50'45" N 097°03'41" W	Harbor Island Range Front Light	26935
Corpus Christi AE Rng F Lt.	27°50'41" N 097°03'17" W		27090
Corpus Christi AE Rng R Lt.	27°50'46" N 097°02'49" W	Same as ARANSAS PASS Light	26925 27095
Aransas Channel Daybeacon # 2	27°51'02" N 097°02'47" W	Aransas Channel Light 2	26895
Aransas Channel Daybeacon # 3	27°51'38" N 097°04'36" W	Aransas Channel Light 3	27000
Aransas Channel Daybeacon # 4	27°51'41" N 097°04'32" W		27005
Aransas Pass Lighthouse, 1905	27°51'51" N 097°03'23" W	Lydia Ann Channel Light	26258
Port Aransas Tank	27°49'48" N 097°03'49" W		

<u>Non-Floating Aid</u>	<u>Survey Position</u>	<u>Light List Position</u>	<u>Unrecorded No.</u>
Port Aransas Coast Guard Lt. Tower	27°50'18" N 097°03'33" W		
Turtle Cove Daybeacon # 2	27°50'30" N 097°03'45" W	Port Aransas Harbor Daybeacon 2	27100
Turtle Cove Daybeacon # 3	27°50'30" N 097°03'42" W	Port Aransas Harbor Light 3	27105
Turtle Cove Daybeacon # 4	27°50'28" N 097°03'39" W	Port Aransas Harbor Daybeacon 4	27110

There were several charted submarine cables, but no pipelines nor overhead cables in the survey area. These features were visually verified and noted on the final field sheet.

A state operated ferry exists as charted and runs twenty-four hours a day free of charge.

O. STATISTICS ✓

<u>Description</u>	<u>VESNO</u>
	<u>0520</u>
Total Positions	1202
Detached Positions	37
Duplicate Positions	1
Total Nautical Miles of Hydro	95.0
Sq. Nautical Miles of Hydrography	3
Bottom Samples	20
AML and Digibar casts	4
Days of Production	13

P. MISCELLANEOUS ✓

Bottom samples were taken and submitted to the Smithsonian Institution as directed in Section 6.7 of the project instructions. Twenty bottom samples were transmitted on January 31, 1990. Bottom sample positions are plotted on the overlay and are listed on the Oceanographic Log Sheet-M, NOAA Form 75-44, which may be found in the Separates Following Text.

No anomalous currents were observed in the survey area. *Filed with the hydrographic data.*

The tides in the coastal bend regions of Texas are dramatically effected by prevailing winds which create extremely low tides at certain times of the year. During the course of the survey some lines of hydrography were inhibited by this occurrence.

Q. RECOMMENDATIONS ✓

Recommendations may be found in sections H, K, L, and N of this report. *See EVAL Report section 9*

R. AUTOMATED DATA PROCESSING ✓

The HDAPS system utilizing software provided by N/CG24 was the only system used to acquire and process data for this survey.

The following non-HDAPS computer programs were used:

	<u>Version</u>	<u>Date</u>
VELOCITY Velocity Computations (IBM PC)	1.0 extended	9/89
MTEN3 with enhancements Geodetic Computations (IBM PC)		6/88

S. REFERRAL TO REPORTS ✓

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report To Accompany Survey H-10322	Pacific Hydrographic Section N/CG245 Seattle, WA
Horizontal Control Report for OPR-K229-AHP2	Field Photogrammetry Section N/CG233 Norfolk, VA
Chart Sales Agent Report	Chart Distribution Branch N/CG33 Rockville, MD
User Evaluation Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA
Chart Inspection Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA
Coast Pilot Report	Coast Pilot Section Mapping and Charting Branch N/CG223 Rockville, MD

Submitted by:

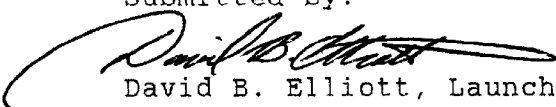

David B. Elliott, Launch Hydrographer in Charge

CHART: 11309 29th ED. NOV. 86

AWOIS: 5010

ITEM DESCRIPTION: Subm. Pile (PD)

SOURCE: UNKNOWN !1943 & CL1695/73--USPS

DATE	DN	POSITIONS	TIME	VESNO	
4/5/90	095	5010	1507	0518	
GEODETTIC POSITION		LATITUDE N	LONGITUDE W	POS.	
CHARTED:	(MAP 27)	27/51/00.0	097/03/ ²⁴ 12.0		
Observed:	(MAP 83)	27/51/01.2 Buoy Drop	097/03/24.5		

POSITION DETERMINED BY:

Range/ Azimuth - Manual w/ HDAPS

METHOD OF INVESTIGATION:

A one hundred meter radius circle search by divers in the center of scaled location. Investigation performed at slack tide in four to six foot visibility of water for thirty minutes with nothing being found.

CHARTING RECOMMENDATION:

The hydrographer recommends remove from chart.

CONCUR

CHART: 11309 29th ED. NOV.86

AWOIS: 5011

ITEM DESCRIPTION: Piling clusters for Transfer Station

SOURCE: CL274/60 COE Permit, CL1815/72 USPS & TP01198/86

DATE	DN	POSITIONS	TIME	VESNO
4/5/90	095	5011 - 5014	1622-1747	0518
GEODETTIC POSITION		LATITUDE N	LONGITUDE W	POS.
CHARTED:	(NA 27)	27/51/07.0	097/03/37.0	
Observed:	(NA 83)	27/51/00.8	097/03/39.4	5011 Buoy A
		27/51/01.8	097/03/36.0	5012 Buoy B
		27/51/15.0	097/03/29.1	5013 Buoy C
		27/51/16.1	097/03/29.7	5014 Obstr.

POSITION DETERMINED BY:

Range / Azimuth - Manual w/ HDAPS

METHOD OF INVESTIGATION:

The buoy drop locations of A, B & C were established to provide divers with the offshore limits of the charted feature. The divers then descended down upon buoy A and swam a compass bearing to B and ascended. After a new compass bearing was taken divers then descended down on buoy B and swam to buoy C. Two passes were made and a detailed drawing is attached.

Filed with the hydrographic data

CHARTING RECOMMENDATION:

The hydrographer recommends the subm. pile symbols be removed and a dashed foul line be established on the offshore limits as well as an obstr. at position number 5014. *Concur Chart according the smooth sheet.*



Signal list

<u>Station #</u>	<u>Station Name</u>	<u>Station #</u>	<u>Station Name</u>
1	ALLYN	53	DONNEL 1933
2	TALLEY	54	LA QUINTA CHAN
3	LIGHT 13		INNER RNG F LT
4	TRACK 1934	55	LA QUINTA CHAN
5	TRAYLOR		INNER RNG R LT
6	SKIFF 2	56	QUINTANA
7	SAM	57	WILCUT
8	CONN	58	SHAM
9	ARANSAS PASS WATER TANK	59	INDIAN
10	DRAW	60	PORTLAND 2 1973
11	LIGHT 83	61	TURTLE
12	LYDIA	62	COVE
13	BULB		
14	ARANSAS PASS LIGHTHOUSE		LYDIA MAIN CHANNEL LIGHT
15	BASE		
16	SALT 1934		
17	NEED		
18	TANG		
19	HARBOR ID R RNG LT		
20	HARBOR ID F RNG LT		
21	JUNCTION		
22	CORPUS CHR CHAN AE RNG FT LT		
23	CORPUS CHR CHAN AE RNG R LT		ARANSAS PASS LT.
24	TIDAL 7		
25	25 USE		
26	GUN USE 1948		
27	GUN ECC (DO NOT USE!!!)		
28	PORT ARANSAS CG LT TOWER		ARANSAS PASS RADIO BEACON
29	PORT ARANSAS TANK		
30	KNOLL 1934		
31	PORT ARANSAS MUSTANG TANK		
32	PIPER 1933		
33	WALBOLT 1968		
34	FLAT 2		
35	CRANE 1933		
36	DEMIT 1912		
37	CORPUS CHRISTI NAS WATER TANK		
38	CALLO 2 1963		
39	SWATNER		
40	DODDRIDGE		
41	SPOIL LIMIT 1 USE AZ MK		
42	SPOIL LIMIT 1 USE		
43	CORPUS CHR CHAN CUT BW RNG F		
44	CORPUS CHR HARBOR CUT F RNG LT		
45	CORPUS CHR HARBOR CUT R RNG LT		
46	CORPUS CHR CHAN CUT AW RNG R		
47	CORPUS CHR CHAN CUT AW RNG F		
48	CORPUS CHR CHAN BE RNG F LT		
49	LA QUINTA CHAN OUTER RNG R LT		
50	LA QUINTA CHAN OUTER RNG F LT		
51	CORPUS CHR CHAN BE RNG R LT		
52	PORT SAT		

* STATIONS marked in green were used during this survey *

CONTROL STATIONS

No	Type	Latitude	Longitude	H	Cart	Freq	Uel Code	MM/DD/YY
001	F	027:59:23.706	096:58:52.815	0	250	0.0	0.0	11/09/89
002	F	027:58:29.535	097:04:10.149	0	250	0.0	0.0	11/09/89
003	F	027:58:04.172	097:05:17.395	0	250	0.0	0.0	11/09/89
004	F	027:57:04.646	097:06:32.476	0	250	0.0	0.0	11/09/89
005	F	027:57:07.493	097:04:21.062	0	250	0.0	0.0	11/09/89
006	F	027:55:59.444	097:02:35.781	0	250	0.0	0.0	11/09/89
007	F	027:55:28.634	097:07:27.771	0	250	0.0	0.0	11/09/89
008	F	027:54:28.873	097:07:57.049	0	250	0.0	0.0	11/09/89
009	F	027:54:07.962	097:08:37.958	0	250	0.0	0.0	11/09/89
010	F	027:53:27.057	097:06:40.209	0	250	0.0	0.0	11/09/89
011	F	027:54:00.350	097:02:58.382	0	250	0.0	0.0	11/09/89
012	F	027:53:35.460	097:02:36.464	0	250	0.0	0.0	11/09/89
013	F	027:52:53.534	097:02:59.352	0	250	0.0	0.0	11/09/89
014	F	027:51:50.992	097:03:22.978	0	250	0.0	0.0	11/09/89
015	F	027:51:57.536	097:08:03.817	0	250	0.0	0.0	11/09/89
016	F	027:52:13.989	097:09:38.108	0	250	0.0	0.0	11/09/89
017	F	027:50:14.295	097:07:24.517	0	250	0.0	0.0	11/09/89
018	F	027:49:51.528	097:06:18.582	0	250	0.0	0.0	7 11/09/89
019	F	027:50:53.636	097:03:56.573	0	250	0.0	0.0	11/09/89
020	F	027:50:45.343	097:03:41.174	0	250	0.0	0.0	11/09/89
021	F	027:50:46.290	097:03:17.424	0	250	0.0	0.0	11/09/89
022	F	027:50:41.222	097:03:16.971	0	250	0.0	0.0	11/09/89
023	F	027:50:46.351	097:02:49.217	0	250	0.0	0.0	11/09/89
024	F	027:50:18.364	097:03:05.660	0	250	0.0	0.0	11/09/89
025	F	027:50:05.552	097:02:42.749	0	250	0.0	0.0	11/09/89
026	F	027:50:05.288	097:03:12.941	0	250	0.0	0.0	11/09/89
028	F	027:50:18.234	097:03:32.884	0	250	0.0	0.0	11/09/89
029	F	027:49:47.749	097:03:49.421	0	250	0.0	0.0	11/09/89
030	F	027:47:33.070	097:05:14.862	0	250	0.0	0.0	2 11/09/89
031	F	027:45:06.747	097:07:29.192	0	250	0.0	0.0	11/09/89
030	F	027:43:11.688	097:08:24.994	0	250	0.0	0.0	11/09/89
033	F	027:41:34.291	097:09:46.274	0	250	0.0	0.0	11/09/89
034	F	027:41:41.796	097:11:01.545	0	250	0.0	0.0	11/09/89
035	F	027:39:15.663	097:10:57.432	0	250	0.0	0.0	11/09/89
036	F	027:41:37.285	097:15:02.810	0	250	0.0	0.0	11/09/89
037	F	027:41:38.941	097:16:06.724	0	250	0.0	0.0	11/09/89
038	F	027:42:40.782	097:18:48.182	0	250	0.0	0.0	4 11/09/89
039	F	027:43:43.325	097:21:08.634	0	250	0.0	0.0	11/09/89
040	F	027:44:42.927	097:22:21.160	0	250	0.0	0.0	11/09/89
041	F	027:48:00.368	097:23:27.629	0	250	0.0	0.0	11/09/89
042	F	027:48:18.952	097:23:31.350	0	250	0.0	0.0	11/09/89
043	F	027:48:37.012	097:23:33.859	0	250	0.0	0.0	11/09/89
044	F	027:48:28.020	097:22:03.321	0	250	0.0	0.0	11/09/89
045	F	027:48:26.106	097:21:52.434	0	250	0.0	0.0	11/09/89
046	F	027:48:18.064	097:16:05.640	0	250	0.0	0.0	11/09/89
047	F	027:48:30.168	097:15:00.922	0	250	0.0	0.0	11/09/89
048	F	027:48:38.784	097:13:40.998	0	250	0.0	0.0	11/09/89
049	F	027:48:20.498	097:13:00.008	0	250	0.0	0.0	1 11/09/89
050	F	027:48:44.552	097:13:11.552	0	250	0.0	0.0	11/09/89
051	F	027:48:39.235	097:11:41.427	0	250	0.0	0.0	11/09/89
052	F	027:49:19.865	097:12:56.768	0	250	0.0	0.0	11/09/89
053	F	027:51:33.800	097:14:28.383	0	250	0.0	0.0	11/09/89
054	F	027:52:31.870	097:15:00.964	0	250	0.0	0.0	11/09/89
055	F	027:53:30.187	097:15:29.076	0	250	0.0	0.0	11/09/89
056	F	027:52:55.315	097:16:57.522	0	250	0.0	0.0	11/09/89
057	F	027:44:18.951	097:08:19.954	0	250	0.0	0.0	5 11/13/89
058	F	027:45:14.605	097:10:27.938	0	250	0.0	0.0	3 11/13/89
059	F	027:51:02.658	097:21:17.960	0	250	0.0	0.0	11/13/89
060	F	027:53:23.367	097:20:09.429	0	250	0.0	0.0	11/13/89
061	F	027:59:24.830	097:04:00.780	0	250	0.0	0.0	11/14/89
062	F	027:59:13.578	097:04:23.910	0	250	0.0	0.0	11/14/89

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

TO BE CHARTED
 TO BE REVISED
 TO BE DELETED

REPORTING UNIT
(Field Party, Ship or Office)

AHP #2

STATE

Texas

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

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

LOCALITY

Aransas Bay to
Port Aransas

DATE

2/20/90

ORIGINATING ACTIVITY

- HYDROGRAPHIC PARTY
- GEODETIC PARTY
- PHOTO FIELD PARTY
- COMPILATION ACTIVITY
- FINAL REVIEWER
- QUALITY CONTROL & REVIEW GRP.
- COAST PILOT BRANCH

(See reverse for responsible personnel)

The following objects HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS.

OPR PROJECT NO.

K-229

JOB NUMBER

AHP -10-14-89

HAVE NOT

been inspected from seaward to determine their value as landmarks.

DATUM

NAD 1983

POSITION

LATITUDE

LONGITUDE

° / ' " D.M. Meters

° / ' " D.P. Meters

METHOD AND DATE OF LOCATION
(See instructions on reverse side)

OFFICE

FIELD

CHARTS
AFFECTED

CHARTING
NAME

DESCRIPTION
(Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses)

Aband(LH)
Tower

Lydia Ann Channel Light *
Relighted 7/4/88
(No longer abandoned)
Aransas Pass Radio Beacon **

27 51 50.992097 0322.978

F-3-6-L
1989

11307
11309
11314

Tower

27 50 18.234097 0332.884

F-3-6-L
1989

"

Light

27 50 46.351097 0249.217

F-3-6-L
1989

"

* Named Aransas Pass Lighthouse
on Signal List.

** Named Port Aransas C.G. Lt.
Tower on Signal List.

*** Light moved from C.G. Tower
to AE Rear Range.

Aransas Bay Light 05
L.L.# 36255

27 52 43.38 097.02 88.32

Hydro

11309
11314

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Atlantic Hydrographic Party # 2
POSITIONS DETERMINED AND/OR-VERIFIED	D. Elliott, T. Rybarski
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	

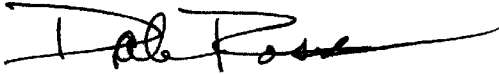
<p>INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)</p> <p>OFFICE</p> <p>I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p> <p>FIELD</p> <p>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</p> <p>A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p>ORIGINATOR</p> <p><input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)</p> <p>FIELD ACTIVITY REPRESENTATIVE</p> <p>OFFICE ACTIVITY REPRESENTATIVE</p> <p><input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE</p> <p>FIELD (Cont'd)</p> <p>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</p> <p>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</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>
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APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-K229-AHP
AHP-10-14-89
H-10322
1989

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-K229-AHP, the hydrographic manual, the hydrographic survey guidelines, and the field procedures manual. The survey data and reports were completed under daily supervision. All boat sheets and final field sheets were 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 M of this report.



V. Dale Ross
Lt. Cdr. NOAA
Chief, Atlantic Hydrographic Party Two

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: April 12, 1990

MARINE CENTER: Pacific

OPR: K229

HYDROGRAPHIC SHEET: H-10322

LOCALITY: Port Aransas, TX

TIME PERIOD: November 20, 1989 - Jan 22, 1990

TIDE STATION(S) USED: 877-5870 Bob Hall Pier, TX
877-5238 Port Aransas, TX

PLANE OF REFERENCE (MEAN LOWER LOW WATER):
877-5870 20.58 ft
877-5238 4.64 ft

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:
877-5870 1.6 ft
877-5238 1.2 ft

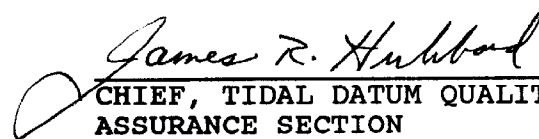
REMARKS: RECOMMENDED ZONING

PRELIMINARY

1. In the Gulf of Mexico and in Aransas Pass east of $97^{\circ}02.6'W$, zone direct on 877 5870.
2. In Aransas Pass west of $97^{\circ}02.6'W$ to $97^{\circ}03.3'W$, apply a 0.83 range ratio to all heights on 877 5870.
3. In Corpus Christi and Aransas Channels, zone direct on 877 5238.

4. In Lydia Ann Channel

- a. south of $27^{\circ}51.6'N$, zone direct on 877 5238.
- b. north of $27^{\circ}51.6'N$ to $27^{\circ}52.8'N$, apply a 0.82 range ratio to all heights and a +0 hr 30 min time correction on 877 5238.
- c. north of $27^{\circ}52.8'N$, apply a 0.61 range ratio to all heights and a +1 hr 0 min time correction on 877 5238.


CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

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 SHEETS: H-10320, 10321, 10322, 10323, and
10324

REMARKS: The above tide notes of April 12 and 14, 1990 are
final.


CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

H-10322

GEOGRAPHIC NAMES

Name on Survey
PORT ARANSAS
ARANSAS BAY TO
PORT ARANSAS

ON CHART NO. 11313
ON PREVIOUS SURVEY NO. 11314
ON U.S. QUADRANGLE MAPS
FROM LOCAL INFORMATION
ON LOCAL MAPS
P.O. GUIDE OR MAP
GRAND McNALLY ATLAS
U.S. LIGHT LIST
FTP 01198

	A	B	C	D	E	F	G	H		
ARANSAS CHANNEL	X							X	X	1
ARANSAS PASS	X							X	X	2
CLINE HARBOR	X								X	3
CLINE POINT	X								X	4
CORPUS CHRISTI CHANNEL	X							X	X	5
HARBOR ISLAND	X							X	X	6
HUMBLE BASIN	X							X	X	7
INNER BASIN	X								X	8
LYDIA ANN CHANNEL	X								X	9
LYDIA ANN ISLAND	X								X	10
PORT ARANSAS	X								X	11
SAN JOSE ISLAND	X							X	X	12
TEXAS (TITLE)	X								X	13
TURTLE COVE	X								X	14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25

Approved:

[Handwritten Signature]

Chief Geographer - N/CG2x5

APR 11 1990

HYDROGRAPHIC SURVEY STATISTICS

H-10322

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS., ARC, EXCESS		7
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS		2
DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	1				
ENVELOPES					
VOLUMES	1				
CAHIERS					
BOXES					

SHORELINE DATA

- 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			1202	
POSITIONS REVISED				
SOUNDINGS REVISED				
CONTROL STATIONS REVISED				
	TIME-HOURS			
	VERIFICATION	EVALUATION	TOTALS	
PRE-PROCESSING EXAMINATION				
VERIFICATION OF CONTROL				
VERIFICATION OF POSITIONS	62		62	
VERIFICATION OF SOUNDINGS	107		107	
VERIFICATION OF JUNCTIONS				
APPLICATION OF PHOTOBATHYMETRY				
SHORELINE APPLICATION/VERIFICATION				
COMPILATION OF SMOOTH SHEET	36		36	
COMPARISON WITH PRIOR SURVEYS AND CHARTS		6	6	
EVALUATION OF SIDE SCAN SONAR RECORDS				
EVALUATION OF WIRE DRAGS AND SWEEPS				
EVALUATION REPORT		49	49	
GEOGRAPHIC NAMES				
OTHER*				
*USE OTHER SIDE OF FORM FOR REMARKS				
	TOTALS	205	55	260

Pre-processing Examination by M. Brown	Beginning Date 3/1/90	Ending Date 3/19/90
Verification of Field Data by R.N. Mihailov	Time (Hours) 205	Ending Date 6/20/90
Verification Check by J.S. Green	Time (Hours) 27	Ending Date 6/11/90
Evaluation and Analysis by C.R. Davies	Time (Hours) 55	Ending Date 6/26/90
Inspection by D.J. Hill	Time (Hours) 5	Ending Date 7-6-90

EVALUATION REPORT

H-10322

1. INTRODUCTION

Survey H-10322 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

This survey occurred in Texas and covers the entrance to Aransas Pass, portions of Corpus Christi, Aransas and Lydia Ann Channels and Humble Basin and Turtle Cove. The surveyed area extends from latitude 27°49'30"N to latitude 27°54'00"N and longitude 97°01'30"W to longitude 97°04'35"W. The surveyed area includes Aransas Pass, a dredged entrance from the Gulf of Mexico. This entrance is the principal approach from the Gulf of Mexico to Aransas and Corpus Christi Bays and their tributaries. Corpus Christi, Aransas and Lydia Ann Channels are maintained dredged channels. Shoreline consists of sand, low lying salt marshes, dredged spoil islands and small harbors and marinas on Harbor and Mustang Islands. The bottom consists of sand. Depths range from 1 to 78 feet.

Additional work, diver investigations, were performed per request from N/CG245 on day 95 for AWOIS Items 5010 and 5011. The results of these item investigations are attached to this report.

Predicted tides for Galveston Channel, Texas, were used for the reduction of soundings during field processing. Approved hourly heights zoned from Bob Hall Pier and Port Aransas, gages 877-5879 and 877-5238, 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 and sound velocity correctors are adequate. An accompanying computer printout contains the parameters and the correctors. The electronic control correctors have been determined according to the established procedures and are adequate.

A digital file has been generated for this survey as required by N/CG2 Hydrographic Survey Guideline No. 23, Completion of Digital Hydrographic Surveys, September 7, 1983 and conforming to the specifications contained in Hydrographic Survey Guideline No. 52, Standard Digital Data Exchange Format, April 15, 1986. The file, however, is incomplete. Certain feature descriptive

information, all line type data and miscellaneous isolated features are not in the digital record due to the present lack of digitizing resources. The user should refer to the smooth sheet for complete depiction of survey data.

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 located in the following.

Geodetic Control Report for CM-8716 and
Geodetic Control Survey Job-HC-9902

Positions of horizontal control stations used during hydrography are 1989 field values based on NAD 83. These values were used during office processing for the computation of positions. 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: 1.073 seconds (33.0 meters)
Longitude: 0.974 seconds (26.7 meters)

The year of establishment of control stations shown on the smooth sheet originates with the 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 features or soundings located by these fixes are consistent with surroundings. These fixes are considered acceptable.

The following positions were acquired by the hydrographer as "see field sheet" fixes (SFS). These fixes were manually transferred from the final field sheet.

<u>Position Numbers</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>
1149-1153	27°50'16"	97°03'12"
1154-1156	27°50'38"	97°04'33"

The following shoreline map applies to this survey.

	<u>Photo Date</u>	<u>Class</u>
TP-01198	Dec. 82, Nov. 83	III

The following shoreline changes are depicted in red on the smooth sheet and are supported with positional information.

They are adequate to supersede the common photogrammetrically delineated shoreline.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)NAD 83</u>
pier	27°50'20"	97°04'03"
pier	27°50'25"	97°03'34"
pier	27°50'17"	97°03'55"

3. HYDROGRAPHY

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.

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, except as follows.

Nine aids to navigation were positioned to less than third order class one accuracy. All non-floating aids should be located to third order, unless adequate third order or aerotriangulated positions are available.

The hydrographer did not compare with all prior surveys required by the project instructions. The prior shoreline maps listed in the project instructions should have been addressed.

5. JUNCTIONS

Survey H-10322 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10205	1985	20,000	East
H-10328	1990	10,000	West

The junction with survey H-10205 has not been formally completed since that survey was previously processed and forwarded for charting. The junction comparison was made using a copy. Soundings are in good agreement. Portions of the depth curves on survey H-10205 should be adjusted to conform with those on survey H-10322.

The junction with survey H-10328 could not be accomplished because this survey is still in the field. The junction comparison will be addressed in the Evaluation Report for survey H-10328.

6. COMPARISON WITH PRIOR SURVEYS

H-5613 (1934) 1:10,000
T-9179(1948) 1:20,000
T-9185(1947-48) 1:20,000

Survey H-5613 covers the entire survey area of the present survey. Extensive dredging and cultural development alongshore has occurred since the prior survey was accomplished. Discrepancies between the two surveys are discussed in section K of the hydrographer's report.

The following features have been transferred to survey H-10322 from prior survey H-5613.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u> NAD 83
Subm groin	27°50'13"	97°02'24"
Subm groin	27°50'10"	97°02'18"
Subm groin	27°50'08"	97°02'12"
Subm groin	27°50'04"	97°02'07"
Subm wreck	27°50'03"	97°02'31"

Shoreline maps T-9179 and T-9185 cover the entire survey area of the present survey. The shoreline has changed either through man-made or natural forces. Murray Shoal, at approximate latitude 27°54'00"N, longitude 97°03'00"W, has decreased in size and no longer uncovers within the limits of this survey. A channel no longer exists to the east of Lydia Ann Island, it is now marsh.

AWOIS item 5020 originates with shoreline map T-9185. Refer to section L of the hydrographer's report for the disposition of this item.

With the transfer of the above features from H-5613, this survey is adequate to supersede the prior surveys within the common area.

7. COMPARISON WITH CHART

Chart 11308, 15th edition, dated July 9, 1988;
scale 1:40,000
Chart 11309, 29th edition, dated November 15, 1986;
scale 1:40,000
Chart 11309, 30th edition, dated December 2, 1989;
scale 1:40,000
Chart 11314 15th edition, dated August 15, 1987;
scale 1:40,000

The 29th edition and 30th edition of chart 11309 are identical except for being on different datums, some minor revisions to the shoreline and added notations for new aids to navigation.

a. Hydrography

Charted hydrography originates with prior surveys H-5613, T-9179, T-9185 and miscellaneous sources.

The note "Shoaling reported 1987" on the 30th edition of chart 11309 at latitude 27°52'48"N, longitude 97°02'36"W (NAD 83) should be removed from the chart. Depths in the survey area are between 2 to 6 feet at MLLW. There is no longer a channel behind Lydia Ann Island, latitude 27°53'15"N, longitude 97°02'21"W. Chart area according to this survey.

Shoreline changes on chart 11314, 15th edition should be brought into agreement with chart 11309, 30th edition especially along Lydia Ann Channel.

Survey H-10322 is adequate to supersede charted hydrography within the common area with the following exceptions.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u> NAD 83
groin	27°49'52"	97°02'17"
groin	27°49'48"	97°02'11"

These features should be retained as charted.

b. AWOIS

All AWOIS positions listed in the hydrographer's report have been converted to NAD 83.

Refer to section L of the hydrographer's report and the additional work attached to the same report for the disposition of AWOIS items.

c. Controlling Depths

The soundings obtained by this survey are consistent with the charted controlling depths found on the charts 11308, 11309 and 11314.

Soundings obtained by this survey are shoaler than the charted note "45 ft reported 1982-83" for the area centered at latitude 27°50'27"N, longitude 97°04'45"W, on chart 11314. However, even shoaler depths may exist west of the survey limits. Refer to survey H-10328 for additional information.

d. Aids to Navigation

There are sixteen fixed and six floating aids located within the area of this survey. These aids were located and serve their

intended purpose. The following fixed aids to navigation were not located to 3rd order class I specifications.

<u>Light List Name</u>	<u>Latitude(N)</u>	<u>Longitude(W)NAD 83</u>
Aransas Bay Light 85	27°52'43.98"	97°02'38.32"
Aransas Bay Light 87	27°51'49.25"	97°02'59.00"
Aransas Channel light 2	27°51'02.04"	97°03.47.10"
Aransas Channel light 3	27°51'37.78"	97°04'35.88"
Port Aransas Harbor Light 3	27°50'30.45"	97°03'42.62"
Aransas Pass Light 11	27°50'30.97"	97°03'23.67"
Port Aransas Harbor Daybeacon 2	27°50'30.34"	97°03'45.29"
Port Aransas Harbor Daybeacon 4	27°50'27.68"	97°03'39.28"
Aransas Channel Daybeacon 4	27°51'41.19"	97°04'32.41"

Aransas Pass Light was moved to the same structure as Corpus Christi Channel Cut A East Range Rear Light. Refer to the 76-40 form which is attached to this report for the field position. Chart 11314, 15th edition should be brought into agreement with chart 11309, 30th edition.

Aransas Bay Light 85, Light List number 36255, was located during this survey 200 meters south of its charted position. Its present position is latitude 27°52'43.98"N, longitude 97°02'38.32"W (NAD 83).

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


No reports of dangers to navigation were generated during the survey or office processing.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10322 adequately complies with the Project Instructions, except as noted in section 4 of this report.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. Additional field work is recommended on a low priority basis to locate the submerged groins and submerged wreck which were transferred to this survey.


Charles R. Davies
Cartographer

APPROVAL SHEET

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.

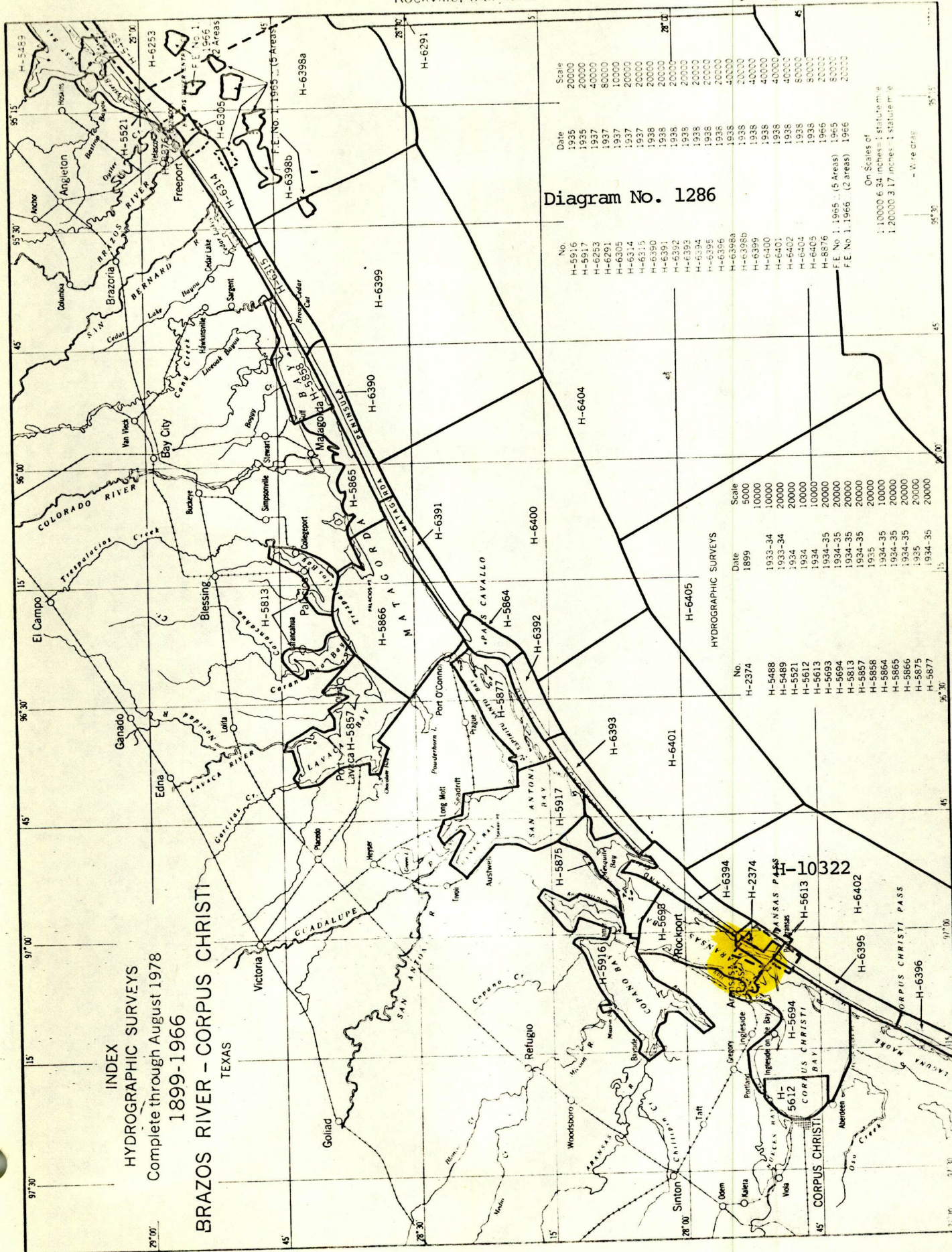
Dennis Hill Date: 7-6-90
Dennis J. Hill
Chief, Hydrographic Processing Unit
Pacific Hydrographic Section

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.

Pamela Chelgren-Koterba Date: 7/10/90
Commander Pamela Chelgren-Koterba, NOAA
Chief, Pacific Hydrographic Section

Final Approval

Approved: *Wesley V. Hull* Date: 8/10/90
Wesley V. Hull
Rear Admiral, NOAA
Director, Charting and Geodetic Services



INDEX
HYDROGRAPHIC SURVEYS
Complete through August 1978
1899-1966

BRAZOS RIVER - CORPUS CHRISTI
TEXAS

Diagram No. 1286

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	40000
H-6405	1938	50000
H-6406	1938	50000
H-6407	1938	50000
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H-6409	1938	50000
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H-6495	1938	50000
H-6496	1938	50000
H-6497	1938	50000
H-6498	1938	50000
H-6499	1938	50000
H-6500	1938	50000

HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-2374	1899	5000
H-5488	1933-34	10000
H-5489	1933-34	10000
H-5521	1934	20000
H-5612	1934	20000
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	1934-35	20000
H-5859	1934-35	20000
H-5860	1934-35	20000
H-5861	1934-35	20000
H-5862	1934-35	20000
H-5863	1934-35	20000
H-5864	1934-35	20000
H-5865	1934-35	20000
H-5866	1934-35	20000
H-5867	1934-35	20000
H-5868	1934-35	20000
H-5869	1934-35	20000
H-5870	1934-35	20000
H-5871	1934-35	20000
H-5872	1934-35	20000
H-5873	1934-35	20000
H-5874	1934-35	20000
H-5875	1934-35	20000
H-5876	1934-35	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 grid

MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10322

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
11309	3-28-91	John Pierce	Full Part Before After Marine Center Approval Signed Via Drawing No. 50
11314	4-11-91	Betty Szatkowski	
11314	4-11-91	Betty Szatkowski	Full Part Before After Marine Center Approval Signed Via Drawing No.
11313	1-29-92	Kenn Foster	Full Part Before After Marine Center Approval Signed Via Drawing No. 39 thru 11309
11307	2-21	Betty Szatkowski	Full Part Before After Marine Center Approval Signed Via Drawing No. 41 Applied thru 11309
11312	10-28-96	Travis Neuma	Full Part Before After Marine Center Approval Signed Via Drawing No. 2
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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