

10369

Diagram No. 1286-2

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-10-5-91
Registry No. H-10369

LOCALITY

State Texas
General Locality Corpus Christi Bay
Sublocality Indian Reef and Vicinity

19 91

CHIEF OF PARTY
LCDR V.D. Ross

LIBRARY & ARCHIVES

DATE October 7, 1992

10369

EC/G

PRODS

11311

11309

CPS

11307 NC

HYDROGRAPHIC TITLE SHEET

H-10369

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-10-5-91

State Texas

General locality Corpus Christi Bay

Locality Indian Reef and Vicinity

Scale 1:10,000 Date of survey 3/13/91 - 3/22/91

Instructions dated September 14, 1990 Project No. OPR-K229-AHP2

Vessel 0519

Chief of party LCDR V. Dale Ross, NOAA

Surveyed by R.W. Ramsey, Jr.

Soundings taken by echo sounder, hand lead, ~~and~~ Innerspace 448 Echo Sounder

Graphic record scaled by RWR, JB, CM

Graphic record checked by RWR, JB, CM

Verification by: J. Green, I. Almacen Automated plot by PHS Xynetics Plotter

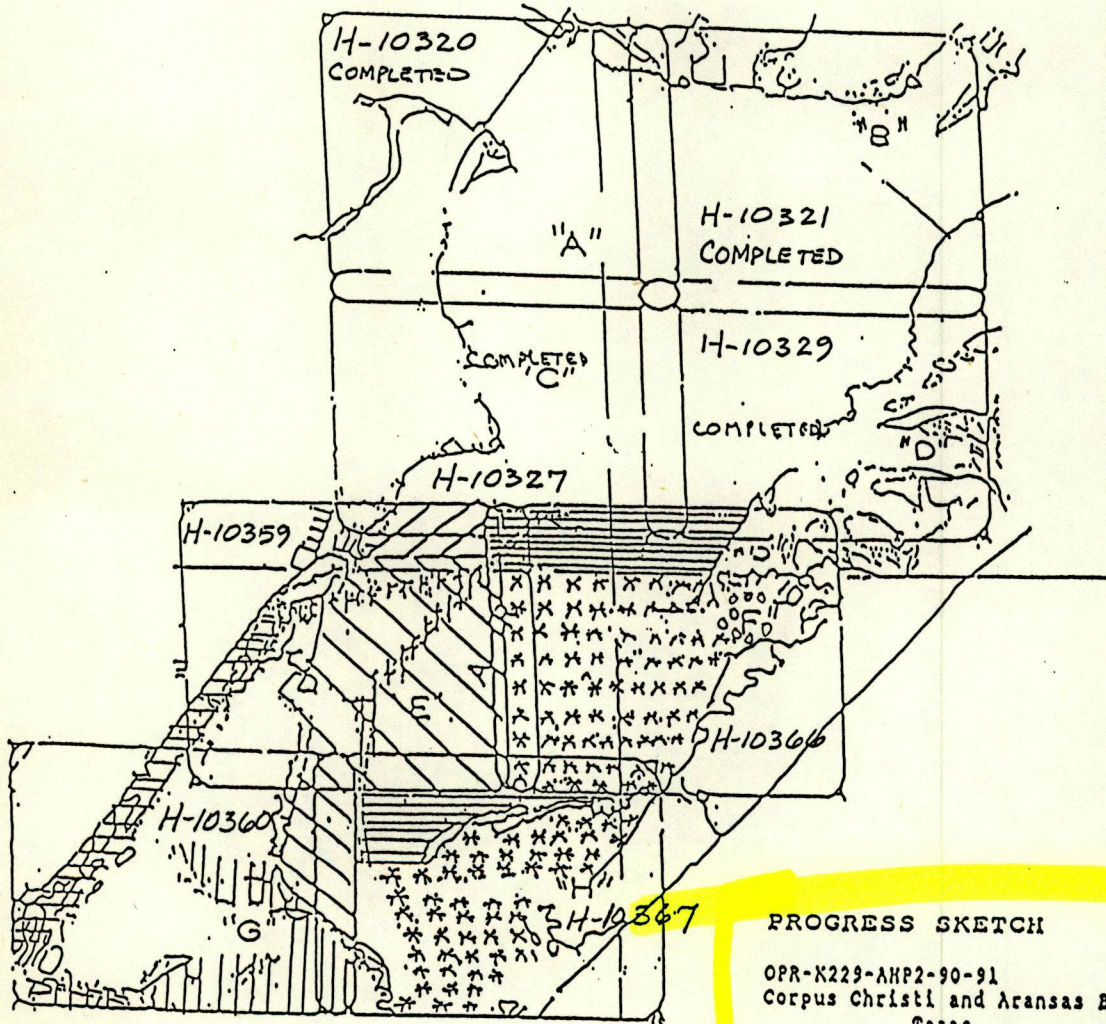
~~Plot checked by~~ Evaluation by: I. Almacen

~~Verification by~~ meters
Soundings in ~~xxxxxx feet~~ at M&W MLLW and decimeters

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

AWS/SURP ✓ 10/21/92 SJV

RWR



< OCT
 < NOV
 | DEC
 — JAN
 * FEB
 ○ MAR

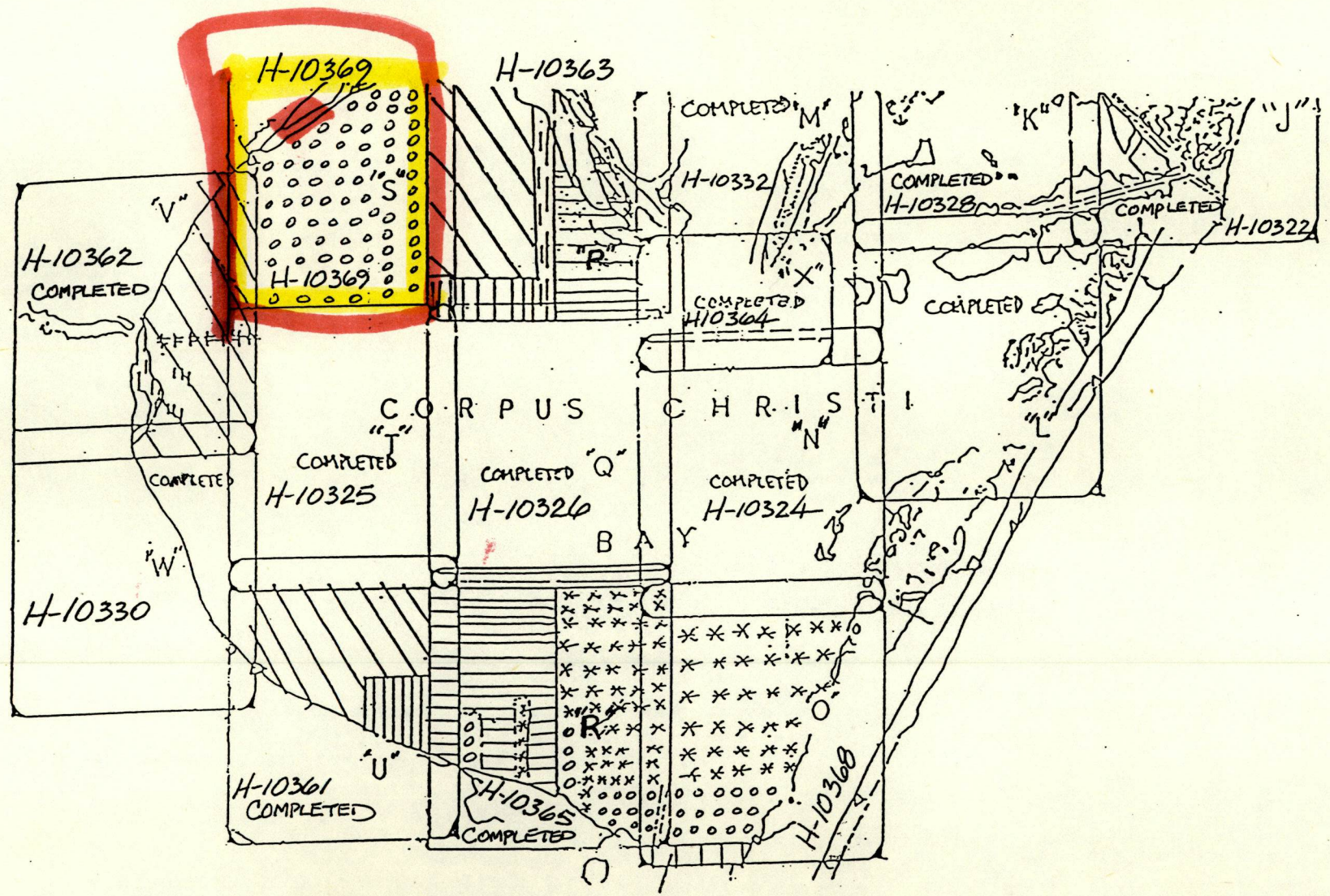
PROGRESS SKETCH

OPR-K229-AHP2-90-91
 Corpus Christi and Aransas Bays
 Texas

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

LEGEND

	OCT	NOV	DEC	JAN	FEB	MAR
SONM SDG	3	22	9	15	16	15
LNMI SDG	63	635	357	376	500	470
LNMI TO/FROM	56	202	224	303	504	400
LNMI MISC	32	152	207	261	266	200
DP/BS	69	238	155	184	102	199
TIDE STA	5	0	0	0	0	5
CONTROL	5	0	0	0	2	0



DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10369
(Field No. AHP-10-05-91)
Scale:1:10,000
1991

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

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-K229-AHP2, Corpus Christi Bay, Texas dated September 14, 1990, and change No. 1, dated 12 February 1991. ✓

The purpose of project OPR-K229-AHP2 is to provide contemporary hydrography for the maintenance of existing charts, and for the compilation of a new inset depicting U.S. Naval Base Port Ingleside. ✓

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

B. AREA SURVEYED (*See EVAL RPT., Sec. 1*)

The area surveyed for H-10369 is Corpus Christi Bay, Indian Reef. The following geographic positions approximate the boundaries of the surveyed area :

SW	27°49.0'N	097°21.3'W
SE	27°49.0'N	097°17.8'W
NW	27°51.0'N	097°21.3'W
NE	27°52.5'N	097°17.8'W

This survey was conducted from March 13, 1991(DN 072) to March 22,1991(DN 081). ✓

C. SOUNDING VESSEL

Vessel 0519 (EDP No. 0519), 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. AUTOMATED DATA ACQUISITION AND PROCESSING

Hewlett-Packard HDAPS Programs:

<u>Program</u>	<u>Version</u>	<u>Date</u>
Survey	4.61	11/01/90
Constat	2.05	11/01/90
Postsur	4.17	11/01/90
Printout	2.23	11/01/90
Baseline	1.02	11/01/90
Backup	1.03	11/01/90
Quick	1.04	11/01/90
Conplot	1.02	11/01/90
Diagnostics	2.50	11/01/90
Compute	2.03	11/01/90
Point	1.20	11/01/90
Install	1.31	11/01/90
Plotall	1.77	11/01/90
Filesys	1.72	11/01/90
ABST	3.05	11/01/90
Loadnew	1.22	11/01/90
Convert	2.36	11/01/90
Inverse	1.21	11/01/90
Listawois	1.10	11/01/90
Reject	1.00	11/01/90
Carto	1.00	11/01/90
Vers	*.**	11/01/90
Backold	1.00	11/01/90
Newcont	1.00	11/01/90
Sifter	*.**	11/01/90
Tplot	*.**	11/01/90
Cellmaker	*.**	11/01/90
Readprojs	*.**	11/01/90
Reapply	*.**	11/01/90
Confile2	1.00	11/01/90
Global	*.**	11/01/90
Makefix	*.**	11/01/90
Bigabst	*.**	11/01/90
Coordut	*.**	11/01/90

PC-DAS program, NOAAEXE directory, Version 3.6 was 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)	1.11	3/9/90
MTEN3 with enhancements (IBM PC)		6/88
Geodetic computations		
WordPerfect	5.1	1989
Volkswriter	***	****

E. SONAR EQUIPMENT

Not applicable.

F. SOUNDING EQUIPMENT

Per Section 1.8 of the project instructions, main scheme lines were attempted to the 0.7-meter isobath. However, termination of lines inshore were at breaking surf, therefore, soundings varied from 0.6 meter to 1.6 meters (Fx:1213 inside pier ruins). ✓

The following Innerspace 448 echo sounder was used for this survey:

<u>EDP #</u>	<u>S/N</u>	<u>Days</u>
0519	186	072,073,077, 078,080,081.

Soundings were recorded in meters, with an assumed speed of sound through water of 1500 m/sec. Depths encountered in the survey area range from 0. $\frac{6}{5}$ meter to 4. $\frac{6}{8}$ meters. ✓

The digitized soundings from the Innerspace 448 (s/n 186) matched the echo sounders trace. The only manipulation of this instrument was in the gain operating in a gated setting. The utilization of this sounding instrument reduced both acquisition and processing time by several days over the length of the survey.

G. CORRECTIONS TO ECHO SOUNDINGS

Corrections for the speed of sound through the water column were computed from data obtained with an Odom Digibar speed of sound probe serial number 154. Program "Velocity" was used for determining the speed of sound correctors.

Speed of sound correctors were applied during semi-smooth and final plotting using the HDAPS.

Speed of sound tables are included in the Separates* Following Survey Data.

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 0.00 to -0.01 meter. These instrument corrections were not applied to final field sheet soundings and are included in the Separates Following Survey Data, along with lead line comparison logs, for reference. The lead line used for survey H-10369 was layed out alongside a steel tape on 08 November 1990. The lead line has no corrector.

* Filed with the hydrographic data.

Static draft corrections were applied to all soundings acquired with the Innerspace 448 echo sounder. A 0.34 meter static draft correction was applied through offset table number 2 to all sounding data acquired with EDP No.0519, while on-line. A copy of offset table number 2 is included with the Separates* Following Survey Data. ✓

Settlement and squat measurements for vessel 0519, were performed on 08 November 1990 at Jewel Fulton Channel, Ingleside, Texas using Zeiss level No.08764. These values were applied during all data acquisition. ✓

Predicted tide corrections to MLLW datum were applied to all soundings during data processing on the HDAPS using the reference station and correctors designated in the project instructions. 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 25 March 1991. * A copy of the letter is included in the descriptive report appendices.

H. 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. One exception, station "NIMROD", was established as a non-recoverable mark. 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 descriptive report. ~~appendices.~~

Geographic positions based on NAD 27 were plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections: ✓

Latitude: $1.0\overset{9}{\cancel{2}}''$
Longitude: $0.97''$

* Filed with the hydrographic data.

I. HYDROGRAPHIC POSITION CONTROL

Hydrographic position control was accomplished using the Mini-Ranger Falcon 484 system which provided accuracy to meet 1:10,000 scale survey requirements. Range/range positioning was used during this project.

The following Falcon Mini-Ranger equipment was used:

<u>VESNO</u>	<u>Equipment</u>	<u>S/N</u>	
0519	RPU	E0160	
	R/T	F3389	
	R/S	C2067	CD# 1
	R/S	C2058	CD# 2
	R/S	E2906	CD# 3
	R/S	F3298	CD# 5

Note: CD# = code number

Fixes which had erratic lines of position indicated by high residuals on the "raw" listing were "smoothed" during data processing. Positions were "smoothed" by dead reckoning between two accurate positions.

Fixed-point system checks were performed on days when shore stations were established. All fixed-point checks values were less than 5 meters, which is within the required limits as stated in the field procedures manual. Results of these fixed-point checks are included in the Separates Following Survey Data.*

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 Complex "C-O" table #2 for application directly to all on-line data. All records of these calibrations are included in the Separates* Following Survey Data.

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

J. SHORELINE (See EVAL RPT., Sec 2)

Shoreline for H-10369 was traced from TP-01613, a 1:20,000 scale that was enlarged to 1:10,000 scale; and TP-01612, a 1:20,000 scale that was enlarged to 1:10,000 scale. Predominantly, this shoreline was found to agree. Items found not agreeing were noted on the field sheets.

* Filed with the hydrographic data.

All shoreline changes on the final field sheet appear in red ink. All verified shoreline appears on the final field sheet in black ink. *(See EVAL RPT., Sec 2)*

Remarks can also be found on the field sheets.

K. CROSSLINES

A total of 17.0 linear nautical miles of crosslines were run on H-10369 which serve as a comparison with the main scheme soundings. The number of linear nautical miles of crosslines equals 9% of the main scheme hydrography. Crossline soundings varied from main scheme soundings to within 0.3 meter. This was due largely to the sea state encountered during data acquisition. This could not be avoided due to local weather conditions, strong winds, during this time of year. ✓

L. JUNCTIONS *(See EVAL RPT., Sec. 5)*

This sheet junctions with H-10363, 1:10,000 (1990) to the east; H-10362, 1:10,000 (1990) to the west; and H-10325, 1:10,000 (1989) to the south. The soundings between this survey, H-10363, and H-10362 agree well, as do the isobaths. The soundings between this survey and H-10325 vary by 0.5 meter. The soundings from H-10369 are deeper. There are no common isobaths for comparison between these two surveys. Note: H-10325 was acquired in feet and converted by a factor of 3.28. H-10325 was acquired with a DE-719C Raytheon echo sounder. The difference may be attributed to tides, and differing echo sounder instrumentation. ✓

M. COMPARISON WITH PRIOR SURVEYS *(See EVAL RPT., Sec. 6)*

The present survey was compared to the following prior surveys:

<u>SURVEY NO.</u>	<u>SCALE</u>	<u>YEAR</u>
H-5694	1:20,000	1934-35
H-5612	1:10,000	1934
T-9183	1:20,000	1948-50
T-9177	1:20,000	1948-50

 ✓

T-9183 was found to represent no significant value and is superseded by TP-01613 and TP-01612 with one exception, that being the pier ruins shown on T-9183 which do not appear on TP-01612. The surveying hydrographer recommends removal of T-9177 from future comparisons noting the above exception.

H-5612 shoreline at Indian Point has changed, and has receded by 100 meters at the point itself in comparison to sounding data acquired during H-10369. The shoreline portrayed by H5612 is superseded by TP-01612, with note to the change shown in red ink on ✓

the final field sheet for H-10369. The bottom samples agree well between the surveys. Soundings acquired during H-10369 were found to be generally 1 meter deeper in most areas. Soundings over Indian Reef are $2_{1.5}$ meters deeper than on the prior survey. The surveying hydrographer recommends that H-10369 supersede H-5612 in all respects. *Concur.* ✓

H-5694 shoreline changes are the same as noted on H-5612. Bottom samples agree well. Soundings differ by 1 meter along the 2 meter isobath. The present survey soundings are deeper. However, the soundings agree well over the rest of the surveyed area. The surveying hydrographer recommends that H-10369 supersede H-5694 in all respects. *Concur.* ✓

N. COMPARISON WITH THE CHART (*See EVAL RPT., Sec. 7*)

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

<u>Chart No.</u>	<u>Edition</u>	<u>Edition Date</u>
11309	30th	December 2, 1989

The following discrepancies were noted regarding chart 11309, the source of the chart enlargement:

a) Soundings presently charted were found to be 1 to 2 meters shallower than those acquired during H-10369.

b) Piles charted at $27^{\circ}51'57''N$ and $097^{\circ}19'26''W$ do not exist. (*See EVAL RPT., Sec. 6*)
Row of

c) Charted pier at Indian Point does not exist, however the city of Portland, Texas is presently building a new concrete pier and boat ramp at this location. Refer to AWOIS number 5982 documentation. (*See EVAL RPT., Sec. 7b*)

All AWOIS items, totaling four, were addressed. AWOIS items appear on the overlay sheet and are filed in the Separates Following Survey Data. Photographs are filed in the Separates Following Survey Data.*

O. ADEQUACY OF SURVEY

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

Concur, with the exceptions noted in sections 6 and 7 of the Evaluation report.

* Filed with the hydrographic data.

P. AIDS TO NAVIGATION

There were no aids to navigation located within the surveyed area. ✓

There are no charted submarine cable crossing nor pipeline crossings located within the surveyed area. ✓

Q. STATISTICS

<u>Description</u>	<u>Quantities</u>
Rejected Positions	0
Total Positions	1243
Detached Positions	9
Duplicate Positions	5
Omitted Positions	0
Total Nautical Miles of Hydrography	184
Sq. Nautical Miles of Hydrography	9
Bottom Samples	30
Days of Production	6

R. MISCELLANEOUS

Bottom samples were taken in accordance with Section 6.7 of the project instructions. The bottom samples were mailed to the Smithsonian Institution on 25 March 1991. Bottom sample positions and descriptions 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 Survey Data. * ✓

No anomalous currents were observed in the survey area.

Tides in the vicinity are greatly effected by weather conditions. Sustained high winds, in excess of 15 knots, caused higher water levels when blowing from the south.

S. RECOMMENDATIONS

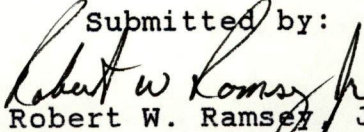
Not applicable.

* Filed with the hydrographic data.

T. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report To Accompany Survey H-10362	Pacific Hydrographic Section N/CG2451, Seattle, WA
Descriptive Report To Accompany Survey H-10363	Pacific Hydrographic Section N/CG2451, Seattle, WA
Descriptive Report To Accompany Survey H-10325	Pacific Hydrographic Section N/CG2451, 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:

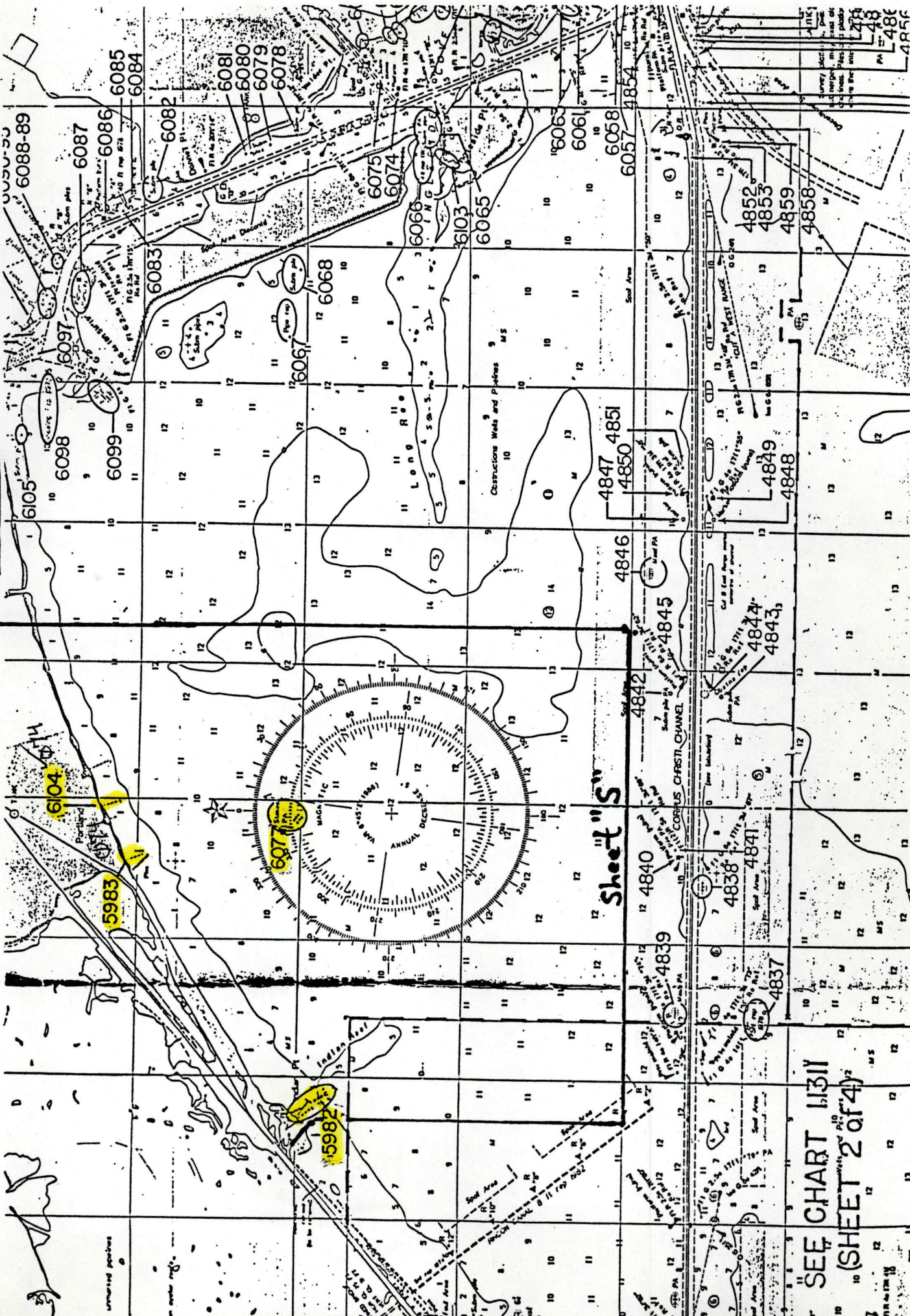

Robert W. Ramsey, Jr.

Launch Hydrographer in Charge

<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	<u>59</u>	<u>INDIAN</u>
10	DRAW	60	PORTLAND 2 1973
11	LIGHT 83	61	TURTLE
12	LYDIA	62	COVE
13	BULB	63	WAREHOUSE
14	ARANSAS PASS LIGHTHOUSE	64	CORPUS CHR BAY
15	BASE		SPOIL BANK LT A
16	SALT 1934	<u>65</u>	<u>NIMROD</u>
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		
24	TIDAL 7		
25	25 USE		
26	GUN USE 1948		
27	GUN ECC (DO NOT USE!!!)		
28	PORT ARANSAS CG LT TOWER		
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		
<u>45</u>	<u>CORPUS CHR HARBOR CUT R RNG LT</u>		
<u>46</u>	<u>CORPUS CHR CHAN CUT AW RNG R</u>		
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		

<u>NO.</u>	<u>TYPE</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>H</u>	<u>CART</u>	<u>FREQ</u>	<u>VOL CODE</u>	<u>MM/DD/YY</u>
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	027:57:04.645	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	19	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	027:49:51.523	097:06:18.582	0	250	0.0	0.0	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	11/09/89
031	F	027:45:06.747	097:07:29.192	0	250	0.0	0.0	11/09/89
032	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	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	6 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	21	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	10	250	0.0	0.0	1 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	11/13/89
058	F	027:45:14.605	097:10:27.938	0	250	0.0	0.0	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
063	F	027:52:23.387	097:09:34.837	10	250	0.0	0.0	02/12/90
064	F	027:44:01.556	097:16:32.909	0	250	0.0	0.0	02/04/91
065	F	027:51:32.263	097:14:45.984	0	250	0.0	0.0	02/05/91

AWOIS ITEMS



SEE CHART 11311
 (SHEET 2 of 4)

Sheet "S"

5982
 5983
 6104
 6097

AWOIS # 5982

DATE: 25 March 1991

CHART # 11309, 30th Ed, Dec 2/89

LAUNCH # 0519

ITEM DESCRIPTION: Extent of piers

SOURCE: Unknown

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	27DGR 51'01.09"N	097DGR 21'16.97"W	NAD83
OBSERVATIONS:	NONE		

POSITION DETERMINED BY: N/A

METHOD OF INVESTIGATION: Contact with City of Portland Engineers.

FINDINGS: All pier ruins are scheduled for removal during new pier construction begining July 1991. Refer to letter dated 25 March 1991, from Mr. John B. Russo(512-883-1984). (Attached)

DIVE INVESTIGATION :	YES	NO
DIVERS:		
SEARCH RADIUS:		
WATER VISIBILITY:		
MAX DEPTH:	BOTTOM TIME:	LEAST DEPTH:

FINDINGS:

CHARTING RECOMMENDATIONS: Remove presently charted feature from charts, and revise with new pier layout upon completion at a later date. Do not concur. See EVAL RPT., Sec 7(a) & 7(b)

SMITH AND RUSSO, INC.
ASSOCIATED
ARCHITECT AND ENGINEERS

VERNON SMITH ARCHITECT A.I.A.
JOHN B. RUSSO, P.E. CIVIL-STRUCTURAL
PHILIP CASTANEDA REG. PUBLIC SURVEYOR

OLD NUECES CO. COURTHOUSE-ANNEX BUILDING
1123 NORTH MESQUITE STREET
CORPUS CHRISTI, TEXAS 78401
PHONE AC 512 - 883-1984

ref. to Awois# 5982

March 25, 1991

Mr. Bob Ramsey
P. O. Box 1299
Aransas Pass, Texas 78336

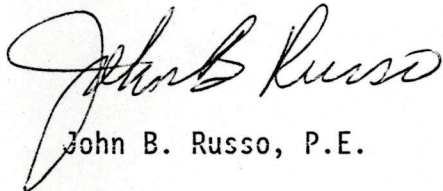
Dear Bob,

This is to inform you that the City of Portland will be constructing a new reinforced concrete fishing pier 750 feet long with a "T" Head 300 feet long. The location will be approximately in the same location as the timber pilings from the old pier. We intend to remove all of the old timber pilings when we construct the new pier. Our tentative schedule is to start construction July or August of 1991.

If you need any additional information, please call me.

Sincerely,

SMITH and RUSSO, INC



John B. Russo, P.E.

JBR/k

AWOIS # 5983

DATE: 3/14/91(073)

CHART # 11309, 30th Ed, Dec 2/89

LAUNCH # 0519

ITEM DESCRIPTION: Extent of piers

SOURCE: Unknown

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	27DGR 52'01.08"N	097DGR 19'24.96"W	NAD83
OBSERVATIONS:	27DGR 51'58.65"N	097DGR ^{9 24.58} 17'55.12"W	FX:485

POSITION DETERMINED BY: R/R

METHOD OF INVESTIGATION: Visual ~~id~~entification with item described.

FINDINGS: pier ruins, offshore-most pile bares 1 meter.

DIVE INVESTIGATION :	YES	NO
DIVERS:		
SEARCH RADIUS:		
WATER VISIBILITY:		
MAX DEPTH:	BOTTOM TIME:	LEAST DEPTH:

FINDINGS:

CHARTING RECOMMENDATIONS: Retain as charted ^{ruins} with offshore-most pile being at the g.p. for position #485. See photographs No.'s 7 & 8 for detail. Axis

LIES 350° COMPASS FROM g.p. (See EVAL RPT. Sec. 4)
 Chart as shown on the smooth sheet.

AWOIS # 6077

DATE: 3/22/91(081)

CHART # 11309, 30th Ed, Dec 2/89

LAUNCH # 0519

ITEM DESCRIPTION: Stakes PA

SOURCE: CL253/81----USPS

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	27DGR 51'02.09"N	097DGR 19'07.96"W	NAD83
OBSERVATIONS:	27DGR 51'04.60"N ✓	097DGR 19'05.38 ⁹ "W	1240
	51'00.03"N ✓	19'05.30"W ✓	1241
	51'04.69"N ✓	19'11.32"W ✓	1242
	50'59.88"N ✓	19'11.07 ⁸ "W	1243

POSITION DETERMINED BY: R/R

METHOD OF INVESTIGATION: Visual, sounder, and dive investigations.

FINDINGS: No contacts, or snags, or visual sighting were encountered within the searched areas.

DIVE INVESTIGATION : YES ~~NOXX~~

DIVERS: RWR, DBE, CP

SEARCH RADIUS: 100m circle searches

WATER VISIBILITY: 1-2m

MAX DEPTH: 4m BOTTOM TIME: 20,22,18,25 LEAST DEPTH:

FINDINGS: No snags or visual contacts.

CHARTING RECOMMENDATIONS: Removal from charts of presently charted features.

Concur.

AWOIS # 6104

DATE: 3/14/91(073)

CHART # 11309, 30th Ed, Dec 2/89

LAUNCH # 0519

ITEM DESCRIPTION: Extent of piers

SOURCE: Unknown

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	27DGR 52'11.08"N	097DGR 19'02.96"W	NAD83
OBSERVATIONS:	27DGR 52'08.44"N	097DGR 19'02.60"W	370

POSITION DETERMINED BY: R/R

METHOD OF INVESTIGATION: visual ~~i~~dentification to described item.

FINDINGS: offshore-most end of pier ruins.

DIVE INVESTIGATION :	YES	NO
DIVERS:		
SEARCH RADIUS:		
WATER VISIBILITY:		
MAX DEPTH:	BOTTOM TIME:	LEAST DEPTH:

FINDINGS:

CHARTING RECOMMENDATIONS: Retain as charted with offshore-most end of ruins at g.p. for position 370. See photographs No.'s 4 & 5 for detail. Axis

LIES 355° COMPASS FROM G.P. (See EVAL RPT., Sec 4)
Chart as shown on the smooth sheet.

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-K229-AHP2
AHP-10-05-91
H-10369
1991

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. All boat sheets and final field sheets were reviewed and all supporting records were checked.

This survey is 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: Jun 11, 1991

MARINE CENTER: Pacific

OPR: K229

HYDROGRAPHIC SHEET: H-10369

LOCALITY: Indian Reef, Corpus Christi Bay, TX

TIME PERIOD: March 13 - 22, 1991

TIDE STATIONS USED: 877-5283 Port Ingleside, TX
27°49.2'N 97°12.0'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.40 feet

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.6 feet

REMARKS: RECOMMENDED ZONING

Apply a + 30 min time correction.

Note: Times are tabulated in Local Standard Time.


CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

GEOGRAPHIC NAMES

Name on Survey	ON CHART NO. 11309											
	A	B	C	D	E	F	G	H	K			
	ON PREVIOUS SURVEY NO.											
	CON U.S. QUADRANGLE MAPS											
	FROM LOCAL INFORMATION											
	ON LOCAL MAPS											
	P.O. GUIDE OR MAP											
	GRAND McNALLY ATLAS											
	U.S. LIGHT LIST											
CORPUS CHRISTI BAY	X											1
INDIAN POINT	X											2
INDIAN REEF	X											3
PORTLAND	X											4
TEXAS (TITLE)	X											5
												6
												7
												8
												9
												10
												11
												12
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												24
												25

Approved:

Charles E. Harrington

Chief Geographer - N/C62x5

JUN 17 1991

HYDROGRAPHIC SURVEY STATISTICS

H-10369

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS., ARC, EXCESS		4
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS		3
DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	1				
ENVELOPES					
VOLUMES					
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			1246
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	15.0		15.0
VERIFICATION OF SOUNDINGS	53.0		53.0
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	20.0		20.0
COMPARISON WITH PRIOR SURVEYS AND CHARTS		4.0	4.0
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		27.5	27.5
GEOGRAPHIC NAMES			
OTHER* Digitizing	5.0		5.0
*USE OTHER SIDE OF FORM FOR REMARKS			
	TOTALS	31.50	124.5

Pre-processing Examination by M. Brown	Beginning Date 4/19/91	Ending Date 5/13/91
Verification of Field Data by J. Green, I. Almacen	Time (Hours) 93.0	Ending Date 6/8/92
Verification Check by J. Green, B. Olmstead	Time (Hours) 34.0	Ending Date 7/22/92
Evaluation and Analysis by I. Almacen	Time (Hours) 31.50	Ending Date 7/24/92
Inspection by D. Hill	Time (Hours) 4	Ending Date 9-21-92

EVALUATION REPORT H-10369

1. INTRODUCTION

Survey H-10369 is a basic hydrographic survey accomplished by the Atlantic Hydrographic Party 2 under the following Project Instructions.

OPR-K229-AHP2, dated September 14, 1990
CHANGE NO. 1, dated February 12, 1991

This survey was conducted in Texas covering the northern portion of Corpus Christi Bay, in the vicinity of Indian Reef. The survey area extends from the north shore of Corpus Christi Bay to latitude 27/49/02N and stretches from longitude 97/17/48W to longitude 97/21/18W. The coast consists of gently sloping sandy beaches. The bottom generally consists of mud. Depths range from 0.5 to 4.8 meters.

Predicted tides for Galveston Channel, Texas, were used for the reduction of soundings during field processing. Approved hourly heights zoned from Port Ingleside, Texas, gage 877-5283, 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. Sound velocity table 11 was updated to provide zero correctors for depths up to 4.2 meters, which had been omitted in the correction table generated in the field. The TRA 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 as required by the specifications contained in Hydrographic Survey Guideline No. 52, 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 depiction of survey data.

2. CONTROL AND SHORELINE

Sections H and I of the hydrographer's report contain adequate discussions of horizontal control and hydrographic positioning. Additional detailed information on horizontal control is contained in the following reports.

Geodetic Control Report CM-8716, dated April 12, 1989, and
Geodetic Control Survey Job-HC-9901, dated December 29, 1989.

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

Latitude: 1.093 seconds (33.660 meters)
Longitude: 0.969 seconds (26.524 meters)

The year of establishment of control stations shown on the smooth sheet originates with the NGS listing and the previously referenced horizontal control report.

A few of the fixes during this survey exceeded the specification in terms of the maximum allowable limits of error circle radius (ECR) and residual values or have angles of intersection less than 30 degrees or more than 150 degrees. However, a review of the data indicates that the soundings located by these fixes were consistent with the surrounding areas and none of these fixes are used to locate dangers to navigation. The data obtained at these particular areas have been accepted, as the effect of larger ECR and residual values appear to be within the acceptable accuracy.

The following shoreline maps were compiled on NAD 83 and apply to this survey.

	<u>Photo Date</u>	<u>Class</u>	<u>Scale</u>
TP-01612	February 1989	III	1:20,000
TP-01613	February 1989	III	1:20,000

Changes to the shoreline were noted in the vicinity of Indian Point at latitude 27/51/09N, longitude 97/21/14W, and depicted as dashed red lines on the smooth sheet. These changes have been transferred directly from the field sheet without positional information and are considered approximate.

The following shoreline features shown as dashed red lines on the smooth sheet were located during this survey. Orientation of these features was based on one offshore detached position supplemented by a compass bearing toward shore, the charted position of the piers and photographs taken during this survey. An adequate graphic portrayal of these pier ruins was not provided on the final field sheet.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>
Pier ruins	27/52/00	97/19/37
Pier ruins	27/52/03	97/19/27
Pier ruins	27/52/12	97/19/04

3. HYDROGRAPHY

With the exceptions noted below, 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 unable to acquire data and define the zero depth curve due to the shallow approaches to the beach by boat.

A 3-meter supplemental depth curve in brown was drawn on the smooth sheet to depict the present configuration of Indian Reef. Brown curves were also used to show some significant shoal soundings that could not be delineated by standard depth curves.

An area limits of ruins at latitude 27/52/05N, longitude 97/19/25W, was shown in dashed black and a pier ruins extension at latitude 27/52/15N, longitude 97/18/46W, was shown as

dashed red on the smooth sheet without supporting positional information other than from the photographs submitted by the hydrographer.

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, April 1990 Edition, except as follows.

The hydrographer's determination of the changes in the shoreline during this survey is inadequate. Detached positions should have been taken along the HWL to adequately verify the actual changes in the shoreline configuration of the area.

The compass bearings observed by the hydrographer during field investigations differ by approximately 15 degrees from the presently charted orientation of the pier ruins with respect to the shoreline. The general orientation of charted pier ruins are confirmed by the shoreline manuscripts for this survey.

The pier ruins and obstructions located during this survey were not graphically portrayed on the final field sheet. This presented the office processor with the problem of determining the proper orientation, extent and shape of the features.

The charted pier ruins at latitude 27/52/09N, longitude 97/19/09W, were not addressed in the hydrographer's report or in the field records.

The hydrographer provides no information as to the type of search conducted to disprove the existence of the charted row of piles at latitude 27/51/57N, longitude 97/19/26W, mentioned not to exist in section N of his report.

Portland Central Municipal Tank, depicted on shoreline map TP-01613, plots within the survey limits. This landmark was not addressed in the hydrographer's report.

The zero corrector for depths up to 4.2 meters was inadvertently omitted on the sound velocity correction table 11 generated by the field party.

The separates attached to the descriptive report were of poor quality which caused difficulty in reading them.

5. JUNCTIONS

Survey H-10397 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10325	1989	1:10,000	South
H-10362	1990	1:10,000	West
H-10363	1990	1:10,000	East

The junctions with surveys H-10362 and H-10363 are complete. Comparison reveals satisfactory agreement with the present survey.

The junction with survey H-10325 has not been formally completed since this survey was previously forwarded for charting. Comparison was made using a copy of the survey

compiled in feet. Soundings are generally in satisfactory agreement. Some soundings have been transferred to survey H-10369 to portray shoaler information within the junction area.

6. COMPARISON WITH PRIOR SURVEYS

H-5612(1934) 1:20,000

H-5694(1934-35) 1:20,000

Survey H-5612 provides the basic coverage for the western portion of this survey. Comparison with this prior survey shows that the shoreline at Indian Point has receded up to approximately 100 meters since the 1934 survey and the 6-foot depth curve has shifted inshore by about 100 to 150 meters. The depths obtained from survey H-10369 are generally deeper by 0.4 to 1.0 meter, except around the area of Indian Reef where the soundings are now deeper by about 1.5 meters than the prior survey. Additional information can be found in section M of the hydrographer's report.

Survey H-5694 provides the basic coverage for the eastern portion of this survey. The present survey is generally deeper by about one meter in most areas. The 6-foot depth curve on this prior survey has moved further inshore by as much as 140 meters.

The existence of the row of piles originating from survey H-5694 at latitude 27/52/00N, longitude 97/19/28W, were not adequately disproven during this survey. This feature was carried forward on the smooth sheet as submerged row of piles.

With the transfer of the features noted above, survey H-10369 is adequate to supersede surveys H-5612 and H-5694 within the common area.

T-9177(1948-50) 1:20,000

T-9183(1948-50) 1:20,000

Shoreline maps T-9177 and T-9183 cover the area of the present survey. With the exception of the pier ruins depicted on T-9183 at latitude 27/52/09N, longitude 97/19/09W, which has been carried forward to the smooth sheet in violet, survey H-10369 is adequate to supersede these prior shoreline maps as the source of charted hydrography.

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

7. COMPARISON WITH CHART

Chart 11309, 29th edition, dated November 15, 1986; scale 1:40,000

Chart 11309, 30th edition, dated December 2, 1991; 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

The charted hydrography originates mostly with the prior surveys and the rest from miscellaneous sources.

With the exception of the pier ruins mentioned in the next section of this report (AWOIS Item 5982), survey H-10369 is adequate to supersede charted hydrography within the common area.

b. AWOIS

Four (4) AWOIS items within this survey area originate with miscellaneous sources. Discussion and disposition of each of these items are included in the separates that accompany the hydrographer's report.

AWOIS Item 5982 was not adequately investigated during this survey. The old pier and ruins charted in the vicinity of Indian Point at latitude 27/51/01.1N, longitude 97/21/16.9W, were not found. These features are believed to have been included in the proposal to remove old ruins around the area in preparation for the construction of a new concrete fishing pier. A letter (copy attached) from Smith and Ruzzo, Inc., mentioned that the contractor intended to clear the area of all old timber pilings prior to the start of the project. It is recommended that the charted pier be retained as ruins with the rest of the charted ruins in the area, until such time that confirmation of removal has been obtained. In addition, the proposed 750-foot "T" pier and boat ramp referenced in the attached letter should be applied to the chart upon completion of the project.

c. Controlling Depths

There are no charted channels with controlling depths within the area of this survey.

d. Aids to Navigation

There are no fixed or floating aids located within the area of this survey.

A charted landmark originating from shoreline map TP-01613 is shown on the smooth sheet, but has not been verified from seaward.

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 field or office processing.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10369 adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. However, additional field work may be required on a non-priority basis to determine the status of the charted pier ruins, submerged row of piles and the construction of the reinforced concrete fishing pier and boat ramp at Indian Point mentioned in sections 6, 7(a) and 7(b) of this report.


Isagani A. Almacen
Cartographer

APPROVAL SHEET
H-10369

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 disproof 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: 9-21-92

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.

Douglas G. Hennick

Date: 9/22/92

Commander Douglas G. Hennick, NOAA
Chief, Pacific Hydrographic Section

Final Approval

Approved:

J. Austin Yeager

Date: 12-6-94

for 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. 91 C

