

TP- 00228

TP-

TP- 00228

|   |                  |
|---|------------------|
| NOAA FORM 76-35<br>(3-76)   |                  |
| U.S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION<br>NATIONAL OCEAN SURVEY |                  |
| DESCRIPTIVE REPORT  |                  |
| Map No.<br>TP-00228   | Edition No.<br>1 |
| Job No.<br>CM-7702  |                  |
| Map Classification<br>FINAL, FIELD EDITED MAP   |                  |
| Type of Survey<br>SHORELINE   |                  |
| LOCALITY  |                  |
| State<br>TEXAS  |                  |
| General Locality<br>SABINE PASS TO PASS COVELLO   |                  |
| Locality<br>CALVESTON ISLAND EAST BEACH   |                  |
| 19 77 TO 19 79  |                  |
| REGISTRY IN ARCHIVES  |                  |
| DATE  |                  |

NOAA FORM 76-36A  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.

## DESCRIPTIVE REPORT - DATA RECORD

## TYPE OF SURVEY

- ☒ ORIGINAL
- ☐ RESURVEY
- ☐ REVISED

SURVEY TP-00228

MAP EDITION NO. (1)

MAP CLASS FINAL

JOB PH-CM-7702

## PHOTOGRAMMETRIC OFFICE

Coastal Mapping Division  
Atlantic Marine Center, Norfolk, VA

## OFFICER-IN-CHARGE

Roy K. Matsushige

## LAST PRECEDING MAP EDITION

## TYPE OF SURVEY

- ☐ ORIGINAL
- ☐ RESURVEY
- ☐ REVISED

JOB PH-\_\_\_\_\_

MAP CLASS \_\_\_\_\_

SURVEY DATES:

19\_\_ TO 19\_\_

## I. INSTRUCTIONS DATED

## 1. OFFICE

Aerotriangulation May 10, 1977

Aerotriangulation Oct. 03, 1977

Compilation Feb. 17, 1978

Amendment I Mar. 13, 1978

## 2. FIELD

Premarking Feb. 3, 1977

## II. DATUMS

## 1. HORIZONTAL:

☒ 1927 NORTH AMERICAN

OTHER (Specify)

## 2. VERTICAL:

- ☒ MEAN HIGH-WATER
- ☒ MEAN LOW-WATER
- ☐ MEAN LOWER LOW-WATER
- ☐ MEAN SEA LEVEL

OTHER (Specify)

Gulf Coast Low Water Datum

## 3. MAP PROJECTION

Lambert Conformal Conic

## 4. GRID(S)

STATE

Texas

ZONE

South Central

## 5. SCALE

1:20,000

STATE

ZONE

## III. HISTORY OF OFFICE OPERATIONS

| OPERATIONS                                  |                       | NAME               | DATE       |
|---|-----------------------|--------------------|------------|
| 1. AEROTRIANGULATION                        | BY                    | R. Kelly           | Mar 1978   |
| METHOD: Analytic                            | LANDMARKS AND AIDS BY | None               |            |
| 2. CONTROL AND BRIDGE POINTS                | PLOTTED BY            | S. Solbeck         | Feb 1978   |
| METHOD: Coradomat 21                        | CHECKED BY            | S. Solbeck         | Feb 1978   |
| 3. STEREOSCOPIC INSTRUMENT                  | PLANIMETRY BY         | R. Kravitz         | July 1978  |
| COMPILATION                                 | CHECKED BY            | L. Neterer         | July 1978  |
| INSTRUMENT: Wild B-8                        | CONTOURS BY           | NA                 |            |
| SCALE: 1:15,000                             | CHECKED BY            | NA                 |            |
| 4. MANUSCRIPT DELINEATION                   | PLANIMETRY BY         | J. Roderick        | July 1978  |
|   | CHECKED BY            | L. O. Neterer, Jr. | July 1978  |
| METHOD: Smooth Drafted and Graphic          | CONTOURS BY           | NA                 |            |
|   | CHECKED BY            | NA                 |            |
| SCALE: 1:20,000                             | HYDRO SUPPORT DATA BY | NA                 |            |
|   | CHECKED BY            | NA                 |            |
| 5. OFFICE INSPECTION PRIOR TO FIELD EDIT    | BY                    | L. Neterer         | July 1978  |
| 6. APPLICATION OF FIELD EDIT DATA           | BY                    | I. Perkinson       | Sept. 1979 |
|   | CHECKED BY            | C. Blood           | Jan 1980   |
| 7. COMPILATION SECTION REVIEW               | BY                    | C. Blood           | Jan 1980   |
| 8. FINAL REVIEW                             | BY                    | J. Hancock         | Dec. 1980  |
| 9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH | BY                    | J. Hancock         | Feb. 1981  |
| 10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH | BY                    | R. Kelly           | JUNE 1981  |
| 11. MAP REGISTERED - COASTAL SURVEY SECTION | BY                    | R. Kelly           | OCT 1981   |

NOAA FORM 76-36A

SUPERSEDES FORM C&amp;GS 181 SERIES

\* U.S. G.P.O. 1972-769382/582 REG.#6

TP-00228  
COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

|  |             |   |          |   |  |
|--|-------------|---|----------|---|--|
| CAMERA(S) 152.7mm FOCAL LENGTHS 88.47mm<br>Wild R.C. 8"E and R.C. 10"C |             | TYPES OF PHOTOGRAPHY<br>LEGEND                |          | TIME REFERENCE  |  |
| TIDE STAGE REFERENCE   |             | (C) COLOR<br>(P) PANCHROMATIC<br>(I) INFRARED |          | ZONE  |  |
| <input checked="" type="checkbox"/> PREDICTED TIDES *                  |             |   |          | Central   |  |
| <input type="checkbox"/> REFERENCE STATION RECORDS **                  |             |   |          | MERIDIAN  |  |
| <input checked="" type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY **     |             |   |          | 90th  |  |
|  |             |   |          | <input checked="" type="checkbox"/> STANDARD<br><input type="checkbox"/> DAYLIGHT |  |
| NUMBER AND TYPE  | DATE        | TIME (CST)                                    | SCALE    | STAGE OF TIDE   |  |
| 77C(I)2564-2568**  | Mar 7, 1977 | 10:10   | 1:40,000 | At Mean Low Water   |  |
| 77E(P)9599-9609*   | Mar 7, 1977 | 14:53   | 1:30,000 | 1.4 ft. above MLW   |  |
| Alternate photos *   |             |   |          | Range of Tide=2.0 ft.   |  |
| Alternate even numbers**   |             |   |          |   |  |

## REMARKS

There is no tide coordinated M.H.W. infrared photography for this project, and photo hydro support is not required.

## 2. SOURCE OF MEAN HIGH-WATER LINE:

\* The mean high water line was compiled from the above listed compilation photography.

## 3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

\*\* The mean low water line was compiled graphically from the above listed tide coordinated infrared low water photography.

## 4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

| SURVEY NUMBER | DATE(S) | SURVEY COPY USED | SURVEY NUMBER | DATE(S) | SURVEY COPY USED |
|---------------|---------|------------------|---------------|---------|------------------|
|               |         |                  |               |         |                  |

## 5. FINAL JUNCTIONS

| NORTH    | EAST      | SOUTH     | WEST     |
|----------|-----------|-----------|----------|
| TP-00229 | No survey | No survey | TP-00227 |

## REMARKS

TP-00228

## HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

| OPERATION                           | NAME   | DATE      |
|-------------------------------------|--|-----------|
| 1. CHIEF OF FIELD PARTY             | R. Tibbetts  | Feb. 1977 |
| 2. HORIZONTAL CONTROL               | RECOVERED BY R. Tibbetts                             | Feb. 1977 |
|                                     | ESTABLISHED BY None                                  |           |
|                                     | PRE-MARKED OR IDENTIFIED BY D. F.                    | Feb. 1977 |
| 3. VERTICAL CONTROL                 | RECOVERED BY None                                    |           |
|                                     | ESTABLISHED BY None                                  |           |
|                                     | PRE-MARKED OR IDENTIFIED BY None                     |           |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY None           |           |
|                                     | LOCATED (Field Methods) BY None                      |           |
|                                     | IDENTIFIED BY None                                   |           |
| 5. GEOGRAPHIC NAMES INVESTIGATION   | TYPE OF INVESTIGATION                                |           |
|                                     | <input type="checkbox"/> COMPLETE                    |           |
|                                     | <input type="checkbox"/> SPECIFIC NAMES ONLY         |           |
|                                     | <input checked="" type="checkbox"/> NO INVESTIGATION |           |
| 6. PHOTO INSPECTION                 | CLARIFICATION OF DETAILS BY None                     |           |
| 7. BOUNDARIES AND LIMITS            | SURVEYED OR IDENTIFIED BY NA                         |           |

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

NONE

| PHOTO NUMBER | STATION NAME  | PHOTO NUMBER | STATION DESIGNATION |
|--------------|---------------|--------------|---------------------|
| 77E(P)9609   | JACINTO, 1933 |              |                     |

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
|--------------|-------------|--------------|-------------|
|              |             |              |             |

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1-form 76-53, 1-form 277 Tide Observations, 1-form 76-52, Field inspection report.

TP-00228

## HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

| OPERATION                           | NAME   | DATE        |
|-------------------------------------|--|-------------|
| 1. CHIEF OF FIELD PARTY             | P. B. WALBOLT  | 14 AUG 1979 |
| 2. HORIZONTAL CONTROL               | RECOVERED BY P. B. WALBOLT   | 14 AUG 1979 |
|                                     | ESTABLISHED BY NONE  |             |
|                                     | PRE-MARKED OR IDENTIFIED BY NONE   |             |
| 3. VERTICAL CONTROL                 | RECOVERED BY NA  |             |
|                                     | ESTABLISHED BY NA  |             |
|                                     | PRE-MARKED OR IDENTIFIED BY NA   |             |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY P. B. WALBOLT  | 14 AUG 1979 |
|                                     | LOCATED (Field Methods) BY P. B. WALBOLT   | 14 AUG 1979 |
|                                     | IDENTIFIED BY P. B. WALBOLT  | 14 AUG 1979 |
| 5. GEOGRAPHIC NAMES INVESTIGATION   | TYPE OF INVESTIGATION<br><input type="checkbox"/> COMPLETE<br><input type="checkbox"/> SPECIFIC NAMES ONLY<br><input checked="" type="checkbox"/> NO INVESTIGATION |             |
| 6. PHOTO INSPECTION                 | CLARIFICATION OF DETAILS BY NA   |             |
| 7. BOUNDARIES AND LIMITS            | SURVEYED OR IDENTIFIED BY NA   |             |

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

| PHOTO NUMBER | STATION NAME | PHOTO NUMBER | STATION DESIGNATION |
|--------------|--------------|--------------|---------------------|
|              |              |              |                     |

3. PHOTO NUMBERS (Clarification of details)

Ratio 77E (P) 9606, 9608

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

P. B. WALBOLT

| PHOTO NUMBER | OBJECT NAME   | PHOTO NUMBER | OBJECT NAME |
|--------------|---|--------------|-------------|
| 79E(P) 9608  | 1-Micro Tower 2-Building<br>3-Building<br>4-Light (Texas City Channel CutA<br>Outer Range Front Light<br>5-Light (Houston Ship Channel<br>Outer Range Rear Light) |              |             |

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

2 chart sections A &amp; B

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

3 Forms 76-53, 7 Forms 76-72, 8 forms 76-86, 2 Forms 76-52, Field edit report, Field Film ozalid.

NOAA FORM 76-36D  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00228  
RECORD OF SURVEY USE

## I. MANUSCRIPT COPIES

| COMPILATION STAGES                         |            |                         | DATE MANUSCRIPT FORWARDED |               |
|--|------------|-------------------------|---------------------------|---------------|
| DATA COMPILED                              | DATE       | REMARKS                 | MARINE CHARTS             | HYDRO SUPPORT |
| Compilation complete<br>pending field edit | July, 1978 | Class III<br>Superseded | Aug 2, 1978               | July 28, 1978 |
| Field edit applied<br>compilation complete | Jan 1980   | Class I                 | Feb 21, 1980              | Feb 13, 1980  |
| Corrections made at final<br>review stage  | Nov. 1980  | Class I (Amended)       | Nov 17, 1980              |               |
| Final Review                               | Dec. 1980  | Final Map               | Feb 27, 1981              |               |

## II. LANDMARKS AND AIDS TO NAVIGATION

## 1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

| NUMBER | CHART LETTER<br>NUMBER ASSIGNED | DATE<br>FORWARDED | REMARKS                            |
|--------|---------------------------------|-------------------|------------------------------------|
| 3      |                                 | Feb 13, 1980      | Landmarks for charts. (Superseded) |
| 1      |                                 | Feb 13, 1980      | Aids for charts (Superseded)       |
|        |                                 |                   |                                    |
| 6      |                                 | Nov 17, 1980      | Landmarks for Charts (Amended)     |
| 1      |                                 | Nov 17, 1980      | Aids for Charts (Amended)          |
|        |                                 |                   |                                    |

2. ☒ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: Feb 13/80, Nov 17/803. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: \_\_\_\_\_

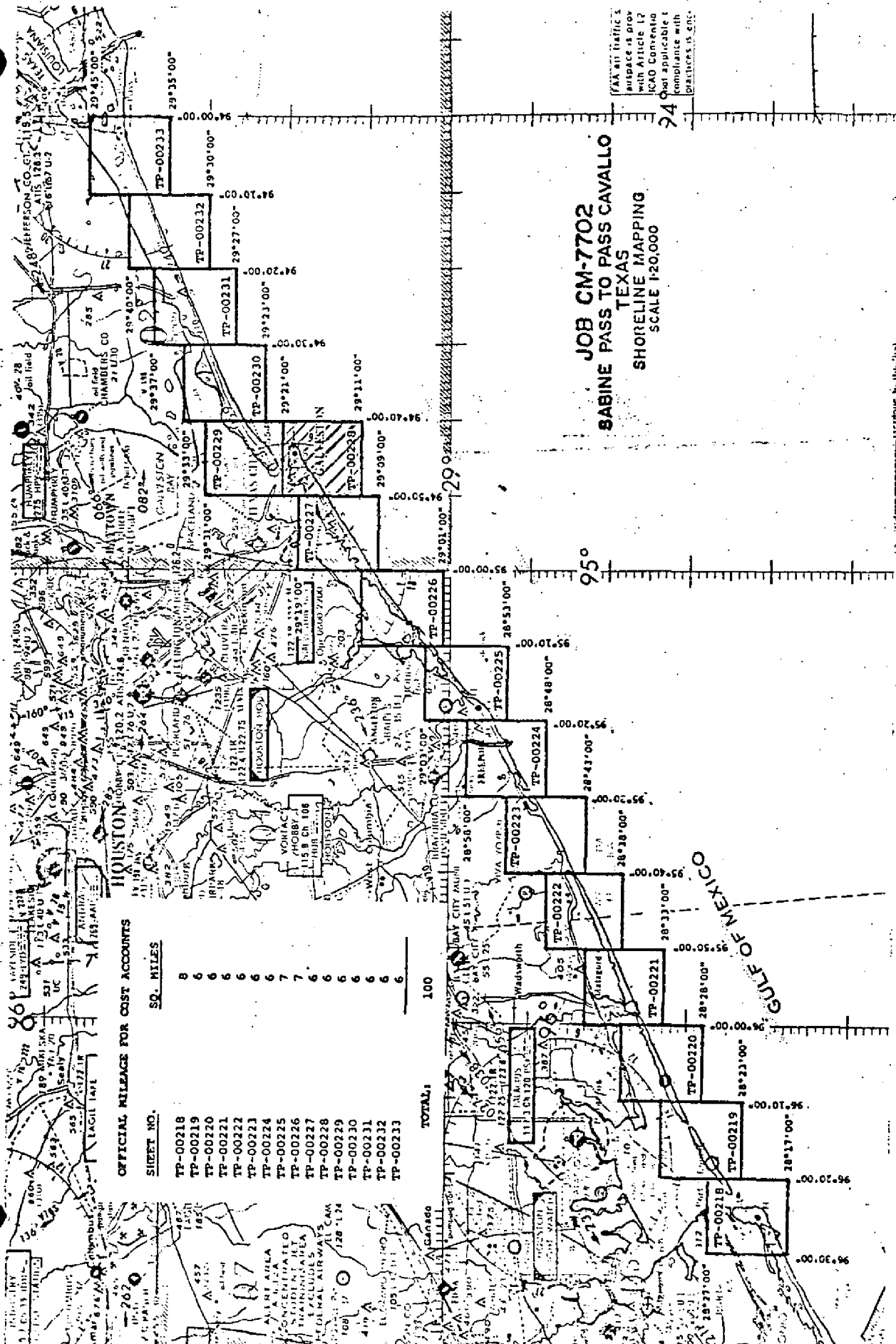
## III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.  
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.  
 3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.  
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: \_\_\_\_\_

## IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

|                   |                                 |                          |   |
|-------------------|---------------------------------|--------------------------|---|
| SECOND<br>EDITION | SURVEY NUMBER<br>TP - _____ (2) | JOB NUMBER<br>PH - _____ | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br><br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                   | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT       |   |
| THIRD<br>EDITION  | SURVEY NUMBER<br>TP - _____ (3) | JOB NUMBER<br>PH - _____ | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br><br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                   | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT       |   |
| FOURTH<br>EDITION | SURVEY NUMBER<br>TP - _____ (4) | JOB NUMBER<br>PH - _____ | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br><br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                   | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT       |   |



OFFICIAL MILEAGE FOR COST ACCOUNTS

| SHEET NO.     | SQ. MILES  |
|---------------|------------|
| TP-00218      | 8          |
| TP-00219      | 6          |
| TP-00220      | 6          |
| TP-00221      | 6          |
| TP-00222      | 6          |
| TP-00223      | 6          |
| TP-00224      | 6          |
| TP-00225      | 6          |
| TP-00226      | 7          |
| TP-00227      | 6          |
| TP-00228      | 6          |
| TP-00229      | 6          |
| TP-00230      | 6          |
| TP-00231      | 6          |
| TP-00232      | 6          |
| TP-00233      | 6          |
| <b>TOTAL:</b> | <b>100</b> |

## SUMMARY TO ACCOMPANY

## DESCRIPTIVE REPORTS

TP-00228

This 1:20,000 shoreline manuscript is one of 16 maps that comprise Project CM-7702 which covers an area from Sabine Pass to Pass Cavallo, Texas. Maps TP-00224 through TP-00233 were field edited and reviewed as Class I. Field edit was cancelled via correspondence letter dated July 2, 1980 from the Chief, Photogrammetry Division for maps TP-00218 through TP-00223; these were reassigned to be reviewed and registered as Class III.

The purpose of these maps was to provide contemporary shoreline data in the support of hydrographic operations and to furnish data for nautical chart revision.

The contemporary hydrographic operation, K104-MI-78 & 79, consisted of six, 1:20,000 scale smoothsheets that were verified and registered at the time a final comparison with the shoreline maps was made. The hydrographic survey limits originated at Lat.  $29^{\circ}36'$ , Long.  $94^{\circ}15'$  and extended Southwest to Lat.  $29^{\circ}09'$ , Long.  $95^{\circ}02'$ , excluding the inshore area of Galveston Bay Entrance, Bolivar Roads.

The field work prior to compilation was accomplished in March, 1977; this involved the establishment of horizontal and vertical control in order to meet aerotriangulation requirements. During this same period, tide observations were field recorded to assist in obtaining tide-coordinated low water photography.

Photo coverage for compilation and aerotriangulation was flown in March, 1977 with the "E" camera at a scale of 1:20,000 and 1:30,000 with panchromatic film. Tide-coordinated black and white infrared photography was taken at mean low water using the "C" camera at 1:40,000 scale.

Analytic aerotriangulation was adequately provided by the Washington Science Center.

Compilation was performed at the Atlantic Marine Center in July 1978, the field edit operation was completed in August 1979 and field edit data was applied in Jan. 1980.

Final review was performed at the Atlantic Marine Center in Dec. 1980. During this operation, amended data concerning Landmarks and Aids to Navigation for charts was processed and forwarded to the Nautical Data Section; this issue is further discussed in the Review Report.

The original base manuscript and all pertinent data were forwarded to the Washington Science Center for final registration.

Tide coordinated photography for this project was taken March 7, 1977. Tidal datum depicted on this map is Mean Low Water. Reference should be noted in the National Ocean Survey Directive dated November 28, 1977, that Gulf Coast Low Water Datum is defined as Mean Lower Low Water when the type of tide is mixed and Mean Low Water when the type of tide is diurnal. This Directive is superseded by Federal Register/ Vol. 45, No. 207/dated Thursday, October 23, 1980, which changes the name "Gulf Coast Low Water Datum" to "Mean Lower Low Water."

## FIELD INSPECTION

TP-00228

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for the aerotriangulation of the project.

See attached report on paneling of control.

## Job CM-7702

## 3. Assignment

In accordance with advanced copy of field instructions, Job CM-7702 dated 1/24/77; Shoreline Mapping: Sabine Pass to Pass Cavallo, Texas was accomplished during February - March, 1977.

## 5. Horizontal Control

Recovery of horizontal control was limited to those stations needed to meet aerotriangulation requirements; recovery notes have been submitted for only those stations.

All station requirements as per control diagram were met except Circle Nos. 1; 6; 7; 16 and 18.

Circle No. 1. Could not be placed at the south end of the island as indicated on project diagram due to the unstable condition of the point. It was moved approximately three quarters mile northeast of indicated site, however, in the process of determining a position of this panel, a three point fix was taken on the south side of Pass Cavallo on a large concrete platform. The Fix Point (SAL, 1977) was premarked with array No. 3. Station BM 754 (USE) 1934 could not be recovered. A traverse was run from STATION PIERCE, 1931. Obstruction at the panel site made it impossible to turn through the panel site, so TP-03 is the home station for Circle No. 6.

Station BM 692 (USE) 1932 could not be recovered. A traverse was run from STATION McNEEL, 1854 to Panel site. Both traverses were double run.

Permission could not be obtained to place a panel at STATION LONE, 1934. Permission was received from Mr. Van Scoy of Rockville, Maryland to move the panel to SABINE PASS, Southwest Base, 1874. STATION TURN, 1934 was also photo-identified.

## 6. Premarking of Control

All stations were marked as reported on control station identification card (Form 152).

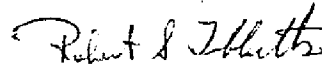
## 8. Tide Observations and Records for Tide-Coordinated Photography

Level connection was made to BM 43, 1957; BM 44, 1957 and BM E 168, 1936, before photography and BM 43, 1957 after photography, and was recorded on NOAA Form 76-77. Tape readings were recorded on Form 277 (NOAA 77-53).

## 13. Report

The field party was instructed by CAM513 to forward data through AMC.

Submitted by,



Robert S. Tibbetts  
Chief, Photo Party 62

Photogrammetric Plot Report  
Sabine Pass To Pass Cavallo, Texas  
Job CM-7702  
March 1978

21. Area Covered

This report covers sixteen 1:20,000 sheet;

|          |          |          |
|----------|----------|----------|
| TP-00218 | TP-00223 | TP-00228 |
| TP-00219 | TP-00224 | TP-00229 |
| TP-00220 | TP-00225 | TP-00230 |
| TP-00221 | TP-00226 | TP-00231 |
| TP-00222 | TP-00227 | TP-00232 |
|          |          | TP-00233 |

of Sabine Pass To Pass Cavallo, Texas.

22. Method

Four strips of 1:30,000 scale and two strips of 1:20,000 scale panchromatic photography taken with the "E" camera were bridged by analytic aerotriangulation methods and adjusted to ground on the Texas Stateplane Coordinate System, South Central Zone.

Alternate exposures were used for bridging where possible, because of the 80 percent endlap. Photographs had to be renumbered for strip adjustment program. Tide-coordinated, black-and-white infrared photography 1:40,000 scale taken with the "C" camera at MLW were tied to the 1:20,000 and 1:30,000 scale bridging photography for shoreline compilation of 1:20,000 scale maps, by means of positioning common points to determine the exact ratios. Tie points were used to augment datum between bridging strips. Ruling of manuscripts and plotting of points were done on the Coradomate and forwarded to AMC.

23. Adequacy of Control

In recovering panel number 16 for station Turn, 1934 panel was found to be out of position. It was not known if panel was moved before or after photographing so three substitute stations were established. The panel and three sub. stations were read in bridging strip number one. It was determined in the adjusting of strip one that the panel had not been moved before photographing. Substitute station one and two were not very good image points, therefore they were very difficult to point on in the instrument. Substitute station number three was a good image point and held in the adjustment.

All other control held within the accuracy required by National Standards of maps at 1:20,000 scale.

Closures on strip number five adjustment were slightly high for a third degree adjustment. This is probably because of the narrow models and minimum amount of control (5 stations) for a strip of 41 models.

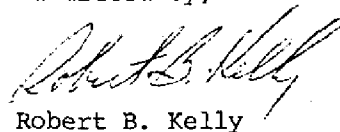
24. Supplemental Data

Local shoreline on U.S. Geological Survey quadrangles were used to provide elevations for vertical adjustments of bridges.

25. Photography

The photography was adequate as to placement of flight lines, consistent quality, definition and absent of haze.

Submitted by,

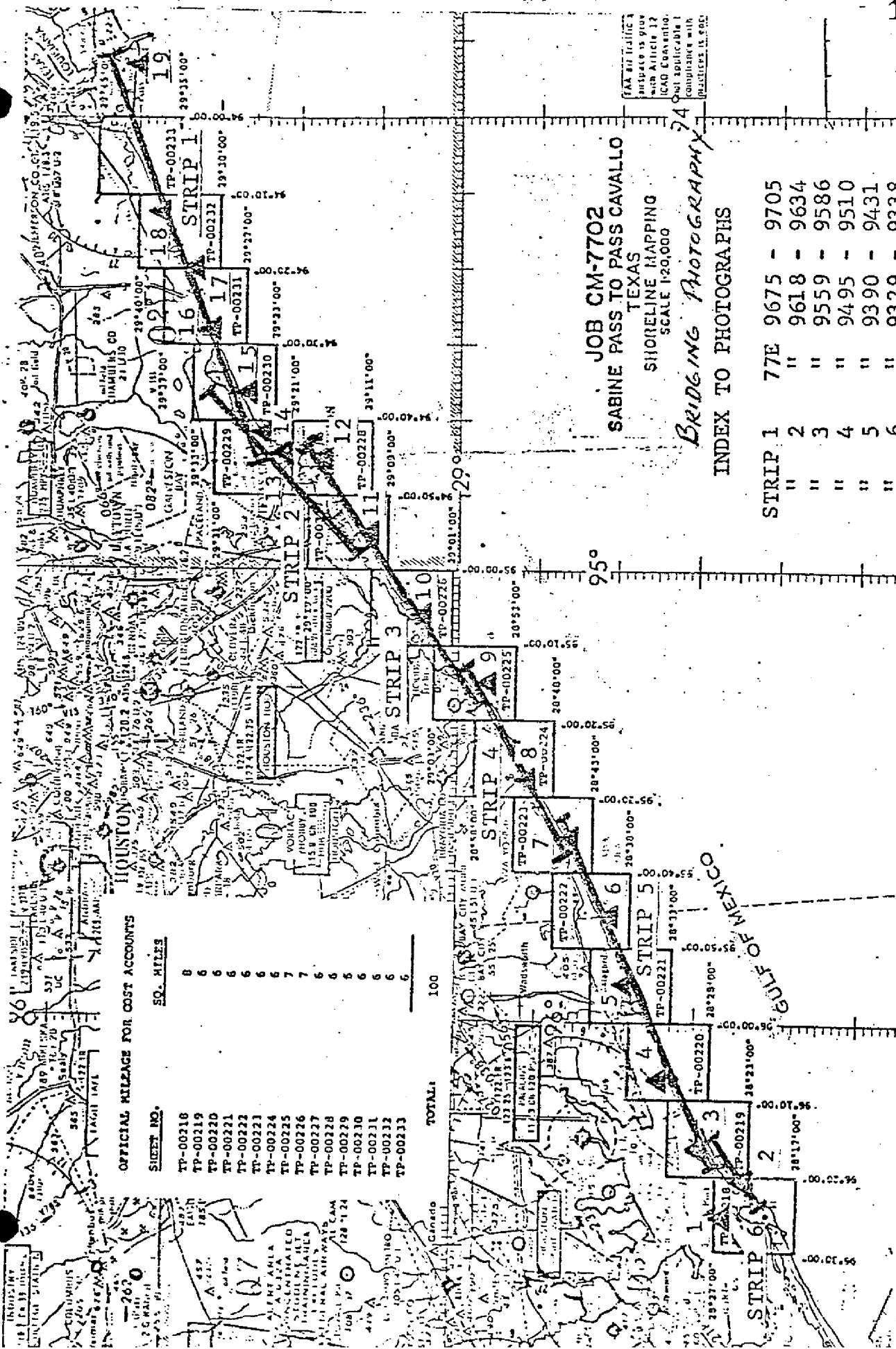


Robert B. Kelly

Approved and forwarded:

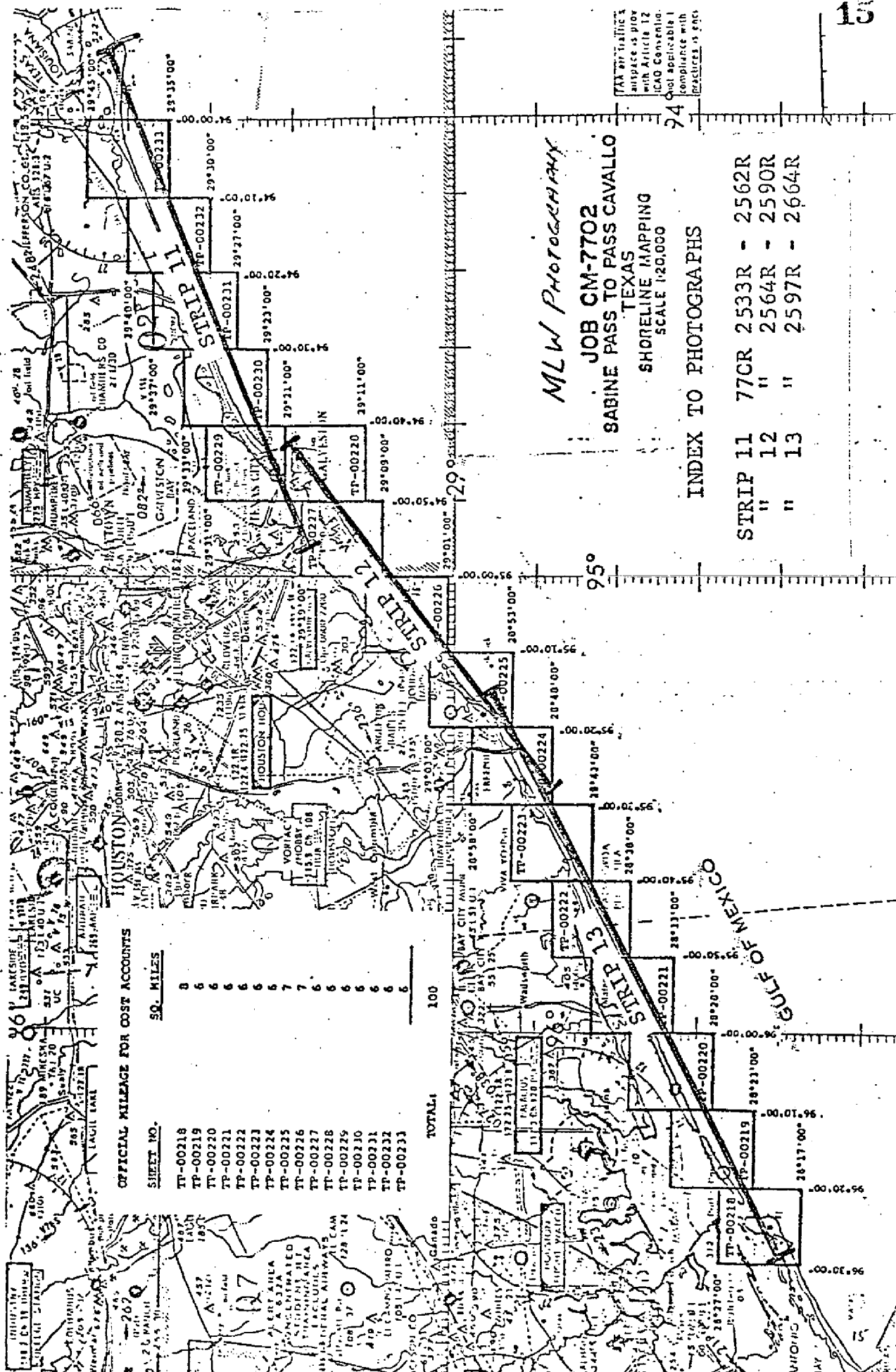


Don O. Norman  
Acting Chief, Aerotriangulation Section



THIS MAP WAS PREPARED BY THE U.S. ARMY CORPS OF ENGINEERS, DISTRICT OF COLUMBIA, AND IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF THE DISTRICT ENGINEER.

GULF OF MEXICO



MLW PHOTOGRAPHY

JOB CM-7702  
SABINE PASS TO PASS CAVALLO  
TEXAS  
SHORELINE MAPPING  
SCALE 1:20,000

INDEX TO PHOTOGRAPHS

STRIP 11 77CR 2533R - 2562R  
" 12 " 2564R - 2590R  
" 13 " 2597R - 2664R

OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO. 50. MILES

|          |     |
|----------|-----|
| TP-00218 | 8   |
| TP-00219 | 6   |
| TP-00220 | 6   |
| TP-00221 | 6   |
| TP-00222 | 6   |
| TP-00223 | 6   |
| TP-00224 | 6   |
| TP-00225 | 7   |
| TP-00226 | 7   |
| TP-00227 | 6   |
| TP-00228 | 6   |
| TP-00229 | 6   |
| TP-00230 | 6   |
| TP-00231 | 6   |
| TP-00232 | 6   |
| TP-00233 | 6   |
| TOTAL:   | 100 |

FAA air traffic  
airspace as prov  
with Article 12  
ICAO Convention  
not applicable  
compliance with  
Procedures in force

24

KEY TO NUMBERED CONTROL  
STATIONS USED IN ADJUSTMENT  
AND CLOSURES

|  |                |
|--|----------------|
| 1 SAL, 1977                                | - .000, - .000 |
| 2 PANEL #1 H-62-01, 1977                   | .000, .000     |
| 3 OSGOOD 2, 1906                           | - .006, - .005 |
| 4 SULA, 1934                               | -4.286, 5.561  |
| 5 CRAB, 1934                               | 3.950, -2.254  |
| 6 EAST POINT, 1883                         | -1.260, -2.740 |
| 7 PIERCE, 1931 (TARGET #6), 1977           | - .430, 2.067  |
| 8 MC NEEL, 1852 (TARGET #7), 1977          | - .000, - .000 |
| 9 WELL (USE) 1912                          | .002, .001     |
| 10 MOTTO, 1933                             | .375, - .549   |
| 11 OSTER, 1933                             | .112, - .105   |
| 12 JACINTO, 1933                           | .598, - .338   |
| 13 TRAVIS, 1933                            | 1.062, -4.842  |
| 14 PARRS GROVE (USE), 1900                 | - .043, .079   |
| 15 PATTON, 1932                            | - .507, - .104 |
| 16 GILCHRIST 2, 1963                       | .448, - .675   |
| 17 TURN, 1934                              | 1.460, 4.103   |
| 18 MEAD RM #3, 1963                        | - .067, .164   |
| 19 SABENE PASS, SOUTH WEST BASE 1874, 1963 | .031, .056     |

## DESCRIPTIVE REPORT CONTROL RECORD

| MAP NO.  | JOB NO.                  | STATION NAME | SOURCE OF INFORMATION (Index) | AEROTRI-ANGULATION POINT NUMBER | GEODETTIC DATUM  |  | ORIGINATING ACTIVITY             |  | REMARKS |
|--|--------------------------|--------------|-------------------------------|---------------------------------|--|--|----------------------------------|--|---------|
|  |                          |              |                               |                                 | COORDINATES IN FEET<br>STATE TEXAS<br>ZONE South Central | GEOGRAPHIC POSITION<br>φ LATITUDE<br>λ LONGITUDE | Coastal Mapping Div, Norfolk, VA |  |         |
| TP-00228 ✓   | CM-7702 ✓                |              |                               |                                 |  |  |                                  |  |         |
| ✓ San, 1933  | 290943 ✓<br>page 1025    |              | 55 ✓                          |                                 | φ 29°18'52.703" ✓<br>λ 94°45'51.081" ✓                   |  |                                  | 1622.6' (224.7) ✓<br>1378.4' (240.6) ✓ |         |
| ✓ Galveston Coast Guard,<br>Radio Mast, 1960                                 | " ✓<br>page 1063         |              | 40 ✓                          |                                 | φ 29°20'01.985" ✓<br>λ 94°46'05.559" ✓                   |  |                                  | 61.1' (1786.2) ✓<br>150.0' (1468.8) ✓  |         |
| ✓ Galveston Municipal<br>Water Tank, 1960 ✓                                  | " ✓<br>Page 1083 ✓       |              | 583110 ✓                      |                                 | φ 29°18'49.349" ✓<br>λ 94°46'23.510" ✓                   |  |                                  | 1519.4' (327.9) ✓<br>634.4' (984.6) ✓  |         |
| ✓ Wall, 1933 ✓   | " ✓<br>Page 1028 ✓       |              | 56 ✓                          |                                 | φ 29°17'51.065" ✓<br>λ 94°46'40.247" ✓                   |  |                                  | 1572.2' (275.1) ✓<br>1086.2' (533.1) ✓ |         |
| ✓ Buccaneer, 1933 ✓  | " ✓<br>Page 1004 ✓       |              | 57 ✓                          |                                 | φ 29°17'24.598" ✓<br>λ 94°47'17.079" ✓                   |  |                                  | 757.3' (1090.0) ✓<br>461.0' (1158.2) ✓ |         |
| ✓ Galveston, Ice and Cold<br>Storage Company<br>Stack, 1933 ✓                | " ✓<br>Page 1081 ✓       |              | 58 ✓                          |                                 | φ 29°18'30.427" ✓<br>λ 94°47'29.705" ✓                   |  |                                  | 936.8' (910.5) ✓<br>801.6' (817.5) ✓   |         |
| ✓ Galveston, U.S. National<br>Bank Building, Light 1933 ✓                    | " ✓<br>Page 1087 ✓       |              | 58 ✓                          |                                 | φ 29°18'18.769" ✓<br>λ 94°47'33.080" ✓                   |  |                                  | 577.9' (1269.4) ✓<br>892.7' (726.5) ✓  |         |
| ✓ South Jetty Light, 1933<br>(Lt has been destroyed<br>but platform remains) | 290943 ✓<br>page         |              |                               |                                 | φ 29°19'39.258" ✓<br>λ 94°41'32.887" ✓                   |  |                                  | 1208.7' (638.6) ✓<br>887.3' (731.6) ✓  |         |
| ✓ East Beach(USE), 1932 ✓  | 290 943 ✓<br>Page 1058 ✓ |              | 46 ✓                          |                                 | φ 29°19'57.771" ✓<br>λ 94°44'09.509" ✓                   |  |                                  | 1778.7' (68.6) ✓<br>256.6' (1362.2) ✓  |         |
| ✓ Texas City Channel,<br>Cut A, Outer Range<br>Rear Light, 1963 ✓            | " ✓<br>Page 1105 ✓       |              | 47 ✓                          |                                 | φ 29°19'55.804" ✓<br>λ 94°44'45.322" ✓                   |  |                                  | 1718.1' (129.2) ✓<br>1222.8' (396.0) ✓ |         |
| COMPUTED BY  | A. C. Rauck, Jr. ✓       |              | DATE 4/12/78 ✓                | COMPUTATION CHECKED BY          | J. Moler ✓   |  | DATE 4/14/78 ✓                   |  |         |
| LISTED BY  | A. C. Rauck, Jr. ✓       |              | DATE 3/30/78 ✓                | LISTING CHECKED BY              | J. Moler ✓   |  | DATE 4/12/78 ✓                   |  |         |
| HAND PLOTTING BY   | J. Roderick ✓            |              | DATE 7/14/78 ✓                | HAND PLOTTING CHECKED BY        | F. Margiotta ✓   |  | DATE 7/14/78 ✓                   |  |         |

## DESCRIPTIVE REPORT CONTROL RECORD

| MAP NO.   | JOB NO. | SOURCE OF INFORMATION<br>(Index) | AEROTRI-<br>ANGULATION<br>POINT<br>NUMBER | GEODETTIC DATUM  |  | ORIGINATING ACTIVITY                     |  |
|---|---------|----------------------------------|---|--|--|--|--|
|   |         |                                  |   | COORDINATES IN FEET<br>STATE TEXAS<br>ZONE South Central | GEOGRAPHIC POSITION<br>φ LATITUDE<br>λ LONGITUDE | Coastal Mapping Div Norfolk, VA          |  |
| TP-00228  | CM-7702 | 290943 ✓<br>Page 1015 ✓          | 584100 ✓                                  | x= 29°20'03.945" ✓<br>y= λ 94°45'09.213" ✓               | φ 29°20'03.945" ✓<br>λ 94°45'09.213" ✓           | 121.5 ✓ (1725.8) ✓<br>248.6 ✓ (1370.2) ✓ |  |
| ✓ Jacinto, 1933 ✓   |         | 290943 ✓<br>Page 1088 ✓          | 628141 ✓                                  | x= 29°18'19.254" ✓<br>y= λ 94°48'28.897" ✓               | φ 29°18'19.254" ✓<br>λ 94°48'28.897" ✓           | 592.8 ✓ (1254.5) ✓<br>779.8 ✓ (839.4) ✓  |  |
| ✓ Houston Ship Channel<br>Outer Range Front Light, 1963 ✓ |         | " ✓<br>Page 1092 ✓               | 56 ✓<br>625156 ✓                          | x= 29°20'08.34" ✓<br>y= λ 94°46'11.10" ✓                 | φ 29°20'08.34" ✓<br>λ 94°46'11.10" ✓             | 256.8 ✓ (1590.5) ✓<br>299.5 ✓ (1319.3) ✓ |  |
| Galveston Wharf Co. Pier<br>40 Water Tank, 1933           |         | " ✓<br>Page 1089 ✓               | 59 ✓                                      | x= 29°18'16.358" ✓<br>y= λ 94°48'53.974" ✓               | φ 29°18'16.358" ✓<br>λ 94°48'53.974" ✓           | 503.6 ✓ (1343.7) ✓<br>1456.6 ✓ (162.6) ✓ |  |
| Galveston Moodys Press ✓<br>Water Tank, 1933              |         | " ✓<br>Page 1082 ✓               | 629141 ✓                                  | x= 29°17'34.041" ✓<br>y= λ 94°49'16.628" ✓               | φ 29°17'34.041" ✓<br>λ 94°49'16.628" ✓           | 1048.1 ✓ (799.2) ✓<br>448.8 ✓ (1170.7) ✓ |  |
|   |         |                                  |   | x= φ<br>y= λ   | φ<br>λ   |  |  |
|   |         |                                  |   | x= φ<br>y= λ   | φ<br>λ   |  |  |
|   |         |                                  |   | x= φ<br>y= λ   | φ<br>λ   |  |  |
|   |         |                                  |   | x= φ<br>y= λ   | φ<br>λ   |  |  |
|   |         |                                  |   | x= φ<br>y= λ   | φ<br>λ   |  |  |
|   |         |                                  |   | x= φ<br>y= λ   | φ<br>λ   |  |  |
|   |         |                                  |   | x= φ<br>y= λ   | φ<br>λ   |  |  |
| COMPUTED BY A. C. Rauck, Jr. ✓                            |         |                                  | DATE 4/14/78 ✓                            | COMPUTATION CHECKED BY J. Moler ✓                        |  | DATE 4/14/78 ✓                           |  |
| LISTED BY A. C. Rauck, Jr. ✓                              |         |                                  | DATE 3/30/78 ✓                            | LISTING CHECKED BY J. Moler ✓                            |  | DATE 4/12/78 ✓                           |  |
| HAND PLOTTING BY J. Roderick ✓                            |         |                                  | DATE 7/14/78 ✓                            | HAND PLOTTING CHECKED BY F. Margiotta ✓                  |  | DATE 7/14/78 ✓                           |  |



## COMPILATION REPORT

TP-Q0228

31. DELINEATION

Delineation was by the Wild B-8 stereoplotter. The mean low water line was compiled graphically from tide coordinated infrared low water photography. Control of this photography was by the selection of Shoreline pass points common to these photos and to the compilation photography. Photo hydro-support data was not required, nor prepared.

32. CONTROL:

See the attached Photogrammetric Plot Report, dated March, 1978.

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours are not applicable to the project.

35. SHORELINE AND ALONGSHORE DETAILS:

Alongshore details were delineated by the Wild B-8 stereoplotter and by office inspection of the ratioed photographs.

The mean high water line was office edited and refined from the ratioed photographs after being compiled on the stereo-plotter.

36. OFFSHORE DETAILS:

There was not adequate photographic coverage to completely compile the north jetty at Galveston Entrance. Field data will be furnished during the edit survey to compile this feature.

TP-Q0228

37. LANDMARKS AND AIDS:

Compilation office prepared work copies of Forms 76-40 were forwarded to the field editor for verification, location and/or deletion. Within the mapped area of this manuscript, there are three charted aids and four landmarks. Only one of the aids could not be compiled and it will require verification and location by the field editor.

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

See the attached form 76-36B, item 5 of the Descriptive Report concerning junctions.

40. HORIZONTAL AND VERTICAL ACCURACY

Refere to the Photogrammetric Report, dated March, 1978.

46. COMPARISON WITH EXISTING MAPS

A comparison was made with the following U.S. Geological Survey Quadrangles:

Galveston, Tex. Scale 1:24,000, 1954 photorevised 1969  
The Jetties, Texas Scale 1:24,000, 1954 photorevised 1969

47. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following National Ocean Survey chart No. 11325, scale 1:25,000, 10th edition, Dated September 4, 1976.

TP-00228

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

*Joanne Roderick*  
Joanne Roderick  
Cartographer

Date: July 20, 1978

Approved:

*Jim Byrd for*Albert C. Rauck, Jr.  
Chief, Coastal Mapping Section

## ADDENDUM TO THE COMPILATION REPORT

TP-00228

Field edit was adequate.

The Nautical Data Section in Rockville furnished positions for two additional Landmarks, Loran Tower and Radio Tower, Galveston 296 KHZ.

The last 7000 ft. of the North Jetty, not included in the photo coverage, was delineated from five fixed positions submitted by the field editor.

Two piles were field located by photo intersection in the vicinity of Lat.  $29^{\circ}17.4'$  and Long.  $94^{\circ}47.2'$ , and the area inland from these piles is considered foul with piling. Although this area could not be verified on the photography, it was recommended to include the foul limit.

9/19/80

## GEOGRAPHIC NAMES

## FINAL NAME SHEET

CM-7702 (Sabine Pass to Pass Cavallo, Texas)

TP-00228

Bolivar Roads

East Beach

Fort Crockett

Galveston

Galveston Island

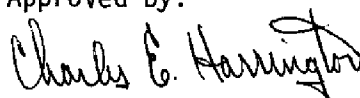
Gulf of Mexico

North Jetty

South Jetty

Stewart Beach

Approved by:

Charles E. Harrington  
Chief Geographer, C3x5

**PHOTOGRAMMETRIC OFFICE PRE-HYDRO AND FIELD EDIT REVIEW**

**25**

TP-00228

|  |  |   |  |
|--|--|---|--|
| 1. PROJECTION AND GRIDS<br>L.O.N.J.                            | 2. TITLE<br>L.O.N.J.                             | 5. HORIZONTAL CONTROL<br>L.O.N.J.           | 11. DETAIL POINTS AND PASS POINTS<br>L.O.N.J.                  |
| 12. SHORELINE<br>L.O.N.J.                                      | 13. LOW-WATER LINE<br>L.O.N.J.                   | 14. ROCKS, SHOALS, ETC.<br>L.O.N.J.         | 20. WATER FEATURES   |
| 15. BRIDGES<br>N.A.  | 16. AIDS TO NAVIGATION<br>L.O.N.J.               | 17. LANDMARKS<br>L.O.N.J.                   | 18. and 26. ALONGSHORE AND OTHER PHYSICAL FEATURES<br>L.O.N.J. |
| 19. and 30. ALONGSHORE AND OTHER CULTURAL FEATURES<br>L.O.N.J. | PROCESSED RATIOS<br>N.A.                         | 27. ROADS<br>L.O.N.J.                       | 28. BUILDINGS<br>L.O.N.J.                                      |
| 29. RAILROADS<br>N.A.  | 23. and 25. CONTOURS AND SPOT ELEVATIONS<br>N.A. | 33. GEOGRAPHIC NAMES<br>L.O.N.J.            | 34. JUNCTIONS<br>L.O.N.J.                                      |
| 35. LEGIBILITY OF THE MANUSCRIPT<br>L.O.N.J.                   | 36. FIELD EDIT OZALID<br>L.O.N.J.                | 10. PHOTOGRAMMETRIC PLOT REPORT<br>L.O.N.J. | 37. COMPILATION REPORT<br>L.O.N.J.                             |
| 40. REVIEWER<br>Lowell O. Neterer, Jr. July 26, 1978           |  | SUPERVISOR<br>Albert C. Rauck, Jr.          |  |

|             |
|-------------|
| 41. REMARKS |
|-------------|

**PHOTOGRAMMETRIC OFFICE POST-HYDRO AND FIELD EDIT REVIEW**

|  |                                      |   |                                 |
|--|--------------------------------------|---|---------------------------------|
| 3. MANUSCRIPT NUMBERS                            | FORMAT STICK-UP<br>C.B.              | 4. MANUSCRIPT SIZE<br>C.E.B.            | 5. HORIZONTAL CONTROL<br>C.B.   |
| 7. PHOTO HYDRO STATIONS<br>C.B.                  | 9. PLOTTING OF SEXTANT FIXES<br>C.B. | 12. SHORELINE<br>C.E.B.                 | 13. LOW-WATER LINE<br>C.B.      |
| 14. ROCKS, SHOALS, ETC.<br>C.B.                  | 15. BRIDGES<br>C.B.                  | 16. AIDS TO NAVIGATION<br>C.B.          | 17. LANDMARKS<br>C.E.B.         |
| 18. PHYSICAL FEATURES<br>C.B.                    | 19. CULTURAL FEATURES<br>C.B.        | 20. WATER FEATURES<br>C.B.              | PIPELINES, CABLES, ETC.<br>C.B. |
| 24. and 25. CONTOURS AND SPOT ELEVATIONS<br>C.B. | 27. ROADS<br>C.B.                    | 28. BUILDINGS<br>C.B.                   | 29. RAILROADS<br>C.B.           |
| 33. GEOGRAPHIC NAMES<br>C.B.                     | 34. JUNCTIONS<br>RANGE LINE?         | 38. FIELD EDIT PHOTOGRAPHS<br>C.B.      | 36. FIELD EDIT OZALID<br>C.B.   |
| 37. FIELD EDIT REPORT<br>C.B.                    | GEOGRAPHIC FIX POSITIONS<br>C.B.     | 39. FIELD FORMS<br>C.B.                 | APPROVED TIDES<br>C.B.          |
| COMPILER<br>I. Perkinson Sept. 26, 1979          | DATE                                 | 40. REVIEWER<br>Charles Blood Jan. 1980 | DATE                            |
|  |                                      | SUPERVISOR<br>Albert C. Rauck           |                                 |

|             |
|-------------|
| 43. REMARKS |
|-------------|

FIELD EDIT REPORT, Map TP - 00228  
JOB CM - 7702, Sabine Pass to Pass Cavallo

51. METHODS

This edit was done by inspection from skiff, by Government Truck, and by foot.

CSI cards 28-01, 02, and 03 show the position of two (2) outside piles of an area foul with piles.

All questions were investigated and answered.

Five (5) fixes were observed along the North Jetty as requested, and one (1) fix was taken to position a wreck that is adjacent to the Jetty.

52. ADEQUACY OF COMPILATION

The compilation appears very good, and will be complete and adequate upon application of this edit.

54. RECOMMENDATIONS

All objects called "outfalls" on this Map should be "stairs"; please refer to report for Map TP - 00227.

56. GEOGRAPHIC NAMES

No new names were discovered during this investigation.

57. LANDMARKS AND AIDS TO NAVIGATION

Landmarks and Aids were inspected from seaward by the cooperation of Captain James S. Midgley, Commanding Officer, NOAA Ship MT. Mitchell.

Several recommendations on the interior side of this Map are shown by Chart Sections A and B. One Landmark Building is recommended for Charting, as it is of benefit when entering the harbor from seaward. Objects that do not show well from seaward are so indicated on the Map.

Texas City Channel, Cut A, Outer Range Front Light new position was determined by intersection, and the rear light was verified by intersection. The new location of Houston Ship Channel Outer Range Rear Light was determined by intersection. Both of the above new locations are also shown on photo 9608. It will be possible to determine the azimuth of each range by inverse method.

The lights at the end of both the North and South Jetties were located by intersection.

58. FIELD EDITOR

Field Edit was done by Philip B. Walbolt and Ralph  
A. Harrell.

14 August 1979

Submitted by:

*Philip B. Walbolt*

Philip B. Walbolt  
Chief, Photo Party 63

[illegible]

| RESPONSIBLE PERSONNEL   |  |
|---|--|
| TYPE OF ACTION  | NAME   |
| OBJECTS INSPECTED FROM SEAWARD  | P. WALBOLT   |
| POSITIONS DETERMINED AND/OR VERIFIED  | P. WALBOLT   |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW   | I. PERKINSON   |
| ACTIVITIES  | J. HANCOCK (FINAL REVIEW)  |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  |  |
| (Consult Photogrammetric Instructions No. 64.)  |  |
| <b>OFFICE</b><br><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b><br>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.<br>EXAMPLE: 75E(C)6042<br>8-12-75  | <b>FIELD (Cont'd)</b><br><b>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.</b><br>EXAMPLE: P-8-V<br>8-12-75<br>74L(C)2982   |
| <b>FIELD</b><br><b>1. NEW POSITION DETERMINED OR VERIFIED</b><br>Enter the applicable data by symbols as follows:<br>F - Field                      P - Photogrammetric<br>L - Located                    Vis - Visually<br>V - Verified<br>1 - Triangulation            5 - Field identified<br>2 - Traverse                6 - Theodolite<br>3 - Intersection            7 - Planetable<br>4 - Resection                8 - Sextant<br><br>A. Field positions* require entry of method of location and date of field work.<br>EXAMPLE: F-2-6-L<br>8-12-75 | <b>11. TRIANGULATION STATION RECOVERED</b><br>When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.<br>EXAMPLE: Triang. Rec.<br>8-12-75<br><br><b>111. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b><br>Enter 'V-Vis.' and date.<br>EXAMPLE: V-Vis.<br>8-12-75<br><br>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods. |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.  |  |



| RESPONSIBLE PERSONNEL   |  |
|---|--|
| TYPE OF ACTION  | NAME   |
| OBJECTS INSPECTED FROM SEAWARD  | Building was Not Inspected from Seaward and was Not intended to be listed as a Landmark.<br>TANKS were inspected from Seaward and recommended for deletion by Photo Party and Hydro Party.   |
| POSITIONS DETERMINED AND/OR VERIFIED  | P. WALBOLT   |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW   | I. PERKINSON   |
| ACTIVITIES  | J. HANCOCK (FINAL REVIEW)<br>(Consult Photogrammetric Instructions No. 64.)  |
| INSTRUCTIONS FOR ENTRIES UNDER METHOD AND DATE OF LOCATION:   |  |
| <b>OFFICE</b><br><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b><br>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.<br>EXAMPLE: 75E(C)6042<br>8-12-75  | <b>FIELD (Cont'd)</b><br><b>B. Photogrammetric field positions** require</b><br>entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.<br>EXAMPLE: P-8-V<br>8-12-75<br>74L(C)2982   |
| <b>FIELD</b><br><b>I. NEW POSITION DETERMINED OR VERIFIED</b><br>Enter the applicable data by symbols as follows:<br>F - Field<br>L - Located<br>V - Verified<br>1 - Triangulation<br>2 - Traverse<br>3 - Intersection<br>4 - Resection<br>P - Photogrammetric<br>Vis - Visually<br>5 - Field Identified<br>6 - Theodolite<br>7 - Planetable<br>8 - Sextant<br>A. Field positions* require entry of method of location and date of field work.<br>EXAMPLE: F-2-6-L<br>8-12-75 | <b>II. TRIANGULATION STATION RECOVERED</b><br>When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.<br>EXAMPLE: Triang. Rec.<br>8-12-75<br><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b><br>Enter 'V-Vis.' and date.<br>EXAMPLE: V-Vis.<br>8-12-75<br><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent</b><br>entirely, or in part, upon control established by photogrammetric methods. |
| <b>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b>   |  |

[illegible]

| RESPONSIBLE PERSONNEL   |   |
|---|---|
| TYPE OF ACTION  | NAME  |
| OBJECTS INSPECTED FROM SEAWARD  | These previously charted landmarks were field inspected only as physically existing in their charted position.  |
| POSITIONS DETERMINED AND/OR VERIFIED  | P. WALBOLT<br>I. PERKINSON  |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW   | FIELD ACTIVITY REPRESENTATIVE<br>OFFICE ACTIVITY REPRESENTATIVE   |
| ACTIVITIES  | <div> <div> <b>OFFICE</b><br/> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b><br/> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.<br/> EXAMPLE: 75E(C)6042<br/>8-12-75 </div> <div> <b>FIELD (Cont'd)</b><br/> <b>B. Photogrammetric field positions*</b> require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.<br/> EXAMPLE: P-8-V<br/>8-12-75<br/>74L(C)2982 </div> </div> <div> <b>FIELD</b><br/> <b>I. NEW POSITION DETERMINED OR VERIFIED</b><br/> Enter the applicable data by symbols as follows:<br/> F - Field                      P - Photogrammetric<br/> L - Located                  Vis - Visually<br/> V - Verified<br/> 1 - Triangulation            5 - Field identified<br/> 2 - Traverse                6 - Theodolite<br/> 3 - Intersection            7 - Planetable<br/> 4 - Resection               8 - Sextant<br/> <br/> A. Field positions* require entry of method of location and date of field work.<br/> EXAMPLE: F-2-6-1<br/>8-12-75 </div> <div> <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b><br/> Enter 'V-Vis.' and date.<br/> EXAMPLE: V-Vis.<br/>8-12-75 </div> |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  |   |
| (Consult Photogrammetric Instructions No. 64.)  |   |
| <div> <div> <b>PHOTO FIELD PARTY</b><br/> <input checked="" type="checkbox"/> PHOTO FIELD PARTY<br/> <input type="checkbox"/> HYDROGRAPHIC PARTY<br/> <input type="checkbox"/> GEODETIC PARTY<br/> <input type="checkbox"/> OTHER (Specify) </div> <div> <b>FIELD ACTIVITY REPRESENTATIVE</b><br/> <input checked="" type="checkbox"/> REVIEWER<br/> <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE </div> </div> |   |

| NOAA FORM 76-40<br>(8-74)<br>Replaces C&GS Form 567. |   |                   |                   | U.S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION |        |   |                                      | LANDMARKS FOR CHARTS  |    |  |  | ORIGINATING ACTIVITY |  |  |  |
|--|---|-------------------|-------------------|--|--------|---|--------------------------------------|---|----|--|--|----------------------|--|--|--|
| REPORTING UNIT<br>(Field Party, Ship or Office)      |   | STATE             |                   | LOCALITY   |        | DATE  |                                      | <input type="checkbox"/> HYDROGRAPHIC PARTY<br><input type="checkbox"/> GEODETIC PARTY<br><input type="checkbox"/> PHOTO FIELD PARTY<br><input type="checkbox"/> COMPILATION ACTIVITY<br><input checked="" type="checkbox"/> FINAL REVIEWER<br><input type="checkbox"/> QUALITY CONTROL & REVIEW GRP.<br><input type="checkbox"/> COAST PILOT BRANCH<br>(See reverse for responsible personnel) |    |  |  |                      |  |  |  |
| TO BE CHARTED  |   | TO BE REVISED     |                   | TO BE DELETED  |        | The following objects HAVE <input type="checkbox"/> HAVE NOT <input checked="" type="checkbox"/> been inspected from seaward to determine their value as landmarks. |                                      |   |    |  |  |                      |  |  |  |
| OPR PROJECT NO.                                      |   | JOB NUMBER        |                   | SURVEY NUMBER  |        | DATUM   |                                      | METHOD AND DATE OF LOCATION<br>(See instructions on reverse side)   |    |  |  |                      |  |  |  |
| K - 104  |   | CM-7702           |                   | TP-00228   |        | N.A. 1927   |                                      |   |    |  |  |                      |  |  |  |
| CHARTING NAME  | DESCRIPTION<br>(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.) | LATITUDE          |                   | LONGITUDE  |        | OFFICE  | FIELD                                | CHARTS AFFECTED   |    |  |  |                      |  |  |  |
|  |   | ° / ' D.M. Meters | ° / ' D.P. Meters |  |        |   |                                      |   |    |  |  |                      |  |  |  |
| TOWER  | Galveston Inner Bar North Side Dredging Range Front Daybeacon   | 29-20             | 29.1              | 94-46  | 57.2   | 77C(I) 2566<br>7 Mar. 1977  | F-V-Vis<br>17 July 1979              | 11323 -<br>11325  |    |  |  |                      |  |  |  |
| TOWER  | Galveston Inner Bar South Side Dredging Range Front Daybeacon   | 29-20             | 25.1              | 94-46  | 54.0   | "   | "                                    | "   |    |  |  |                      |  |  |  |
| RADIO TOWER  | North one of two  | 29-18             | 53.6              | 94-48  | 16.8   | 77C(I) 2567<br>7 Mar. 1977  | "                                    | "   |    |  |  |                      |  |  |  |
| RADIO TOWER  | South one of two  | 29-18             | 51.4              | 94-48  | 19.0   | "   | "                                    | "   |    |  |  |                      |  |  |  |
| RADIO TOWER  | (Galveston Coast Guard, Radio Mast, 1960)   | 29-20             | 01.985            | 94 46  | 05.559 | 77C(I) 2566<br>7 Mar. 1977  | Triangulation Recovered<br>Aug. 1979 | "   |    |  |  |                      |  |  |  |
| LORAN * TOWER  | Formerly Galveston Light, Light discontinued May 1979   | 29-19             | 44.12             | 94-44  | 09.64  | "   | F-V-Vis<br>17 July 1979              | "   |    |  |  |                      |  |  |  |
| RADIO * TOWER  | Galveston 296 KHz   | 29-19             | 40.57             | 94-44  | 20.19  | "   | "                                    | "   |    |  |  |                      |  |  |  |
| AERO RBN   |   | 29-20             | 01.6              | 94-45  | 21.8   | "   | "                                    | "   |    |  |  |                      |  |  |  |
| MICRO TOWER  | South West one of two   | 29-19             | 24.5              | 94-47  | 14.0   | "   | "                                    | "   |    |  |  |                      |  |  |  |
| * These positions from Mr. Daily (C-322)             |   |                   |                   |  |        |   |                                      |   | 31 |  |  |                      |  |  |  |

| RESPONSIBLE PERSONNEL   |   |
|---|---|
| TYPE OF ACTION  | NAME  |
| OBJECTS INSPECTED FROM SEAWARD  | These previously charted Landmarks were field inspected only as physically existing in their charted position.  |
| POSITIONS DETERMINED AND/OR VERIFIED  | P. MARBOLT  |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES  | I. PERKINSON  |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  |   |
| (Consult Photogrammetric Instructions No. 64.)  |   |
| OFFICE  | FIELD (Cont'd)  |
| <p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b></p> <p>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.</p> <p>EXAMPLE: 75E(C)6042<br/>8-12-75</p>   | <p><b>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.</b></p> <p>EXAMPLE: P-8-V<br/>8-12-75<br/>74L(C)2982</p>                         |
| <p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b></p> <p>Enter the applicable data by symbols as follows:</p> <p>F - Field                      P - Photogrammetric</p> <p>L - Located                    Vis - Visually</p> <p>V - Verified</p> <p>1 - Triangulation            5 - Field identified</p> <p>2 - Traverse                6 - Theodolite</p> <p>3 - Intersection            7 - Planetable</p> <p>4 - Resection                8 - Sextant</p> <p>A. Field positions* require entry of method of location and date of field work.</p> <p>EXAMPLE: F-2-6-L<br/>8-12-75</p> | <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b></p> <p>Enter 'V-Vis.' and date.</p> <p>EXAMPLE: V-Vis.<br/>8-12-75</p> <p><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b></p> |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.  |   |

[illegible]

| RESPONSIBLE PERSONNEL  |   |
|--|---|
| TYPE OF ACTION   | NAME  |
| OBJECTS INSPECTED FROM SEAWARD   | These previously charted landmarks were field inspected only as physically existing in their charted position.  |
| POSITIONS DETERMINED AND/OR VERIFIED   | P. WOLBOLT  |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES   | I. PERKINSON  |
| J. HANCOCK (FINAL REVIEW)  |   |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'   |   |
| (Consult Photogrammetric Instructions No. 64.)   |   |
| OFFICE   | FIELD (Cont'd)  |
| 1. OFFICE IDENTIFIED AND LOCATED OBJECTS<br>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.<br>EXAMPLE: 75E(C)6042<br>8-12-75   | 8. 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.<br>EXAMPLE: P-8-V<br>8-12-75<br>74L(C)2982 |
| FIELD  | 11. TRIANGULATION STATION RECOVERED<br>When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.<br>EXAMPLE: Triang. Rec.<br>8-12-75                           |
| 1. NEW POSITION DETERMINED OR VERIFIED<br>Enter the applicable data by symbols as follows:<br>F - Field<br>L - Located<br>V - Verified<br>1 - Triangulation<br>2 - Traverse<br>3 - Intersection<br>4 - Resection<br>P - Photogrammetric<br>Vis - Visually<br>5 - Field identified<br>6 - Theodolite<br>7 - Planetable<br>8 - Sextant<br>A. Field positions* require entry of method of location and date of field work.<br>EXAMPLE: F-2-6-L<br>8-12-75 | 111. POSITION VERIFIED VISUALLY ON PHOTOGRAPH<br>Enter 'V-Vis.' and date.<br>EXAMPLE: V-Vis.<br>8-12-75   |
| **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.   |   |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.   |   |

[illegible]

| RESPONSIBLE PERSONNEL  |   |
|--|---|
| TYPE OF ACTION   | NAME  |
| OBJECTS INSPECTED FROM SEAWARD   | Elevators were not inspected from seaward but were verified as physically existing at the charted position.   |
| POSITIONS DETERMINED AND/OR VERIFIED   | P. WALBOLT<br>I. PERKINSON  |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES   | I. HANCOCK (FINAL REVIEW)<br>(Consult Photogrammetric Instructions No. 64.)   |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'   |   |
| OFFICE   | FIELD (Cont'd)  |
| <p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b></p> <p>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.</p> <p>EXAMPLE: 75E(C)6042<br/>8-12-75</p>  | <p><b>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.</b></p> <p>EXAMPLE: P-8-V<br/>8-12-75<br/>74L(C)2982</p> |
| <p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b></p> <p>Enter the applicable data by symbols as follows:</p> <p>F - Field                      P - Photogrammetric<br/>L - Located                  Vis - Visually<br/>V - Verified<br/>1 - Triangulation            5 - Field identified<br/>2 - Traverse                6 - Theodolite<br/>3 - Intersection            7 - Planetable<br/>4 - Resection               8 - Sextant</p> <p>A. Field positions* require entry of method of location and date of field work.</p> <p>EXAMPLE: F-2-6-L<br/>8-12-75</p> | <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b></p> <p>Enter 'V-Vis.' and date.</p> <p>EXAMPLE: V-Vis.<br/>8-12-75</p>  |
| <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>  |   |



| RESPONSIBLE PERSONNEL   |  | ORIGINATOR  |  |
|---|--|---|--|
| TYPE OF ACTION  | NAME                                       |   |  |
| OBJECTS INSPECTED FROM SEAWARD  | NOAA Ship Mt. Mitchell, CAPT. J.S. Midgley | <input type="checkbox"/> PHOTO FIELD PARTY  | <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY |
|   | CAPT. J. Midgley                           | <input type="checkbox"/> GEODETIC PARTY   | <input type="checkbox"/> OTHER (Specify)               |
| POSITIONS DETERMINED AND/OR VERIFIED  | B. Kravitz                                 | FIELD ACTIVITY REPRESENTATIVE   |  |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES  | I. Hancock, (Final Review)                 | <input checked="" type="checkbox"/> REVIEWER  | OFFICE ACTIVITY REPRESENTATIVE                         |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  |  | <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE  |  |
| (Consult Photogrammetric Instructions No. 64.)  |  |   |  |
| <b>OFFICE</b><br><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b><br>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.<br>EXAMPLE: 75E(C)6042<br>8-12-75  |  | <b>FIELD (Cont'd)</b><br><b>B. Photogrammetric field positions** require</b><br>entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.<br>EXAMPLE: P-8-V<br>8-12-75<br>74L(C)2982  |  |
| <b>FIELD</b><br><b>I. NEW POSITION DETERMINED OR VERIFIED</b><br>Enter the applicable data by symbols as follows:<br>F - Field<br>L - Located<br>V - Verified<br>1 - Triangulation<br>2 - Traverse<br>3 - Intersection<br>4 - Resection<br>P - Photogrammetric<br>Vis - Visually<br>5 - Field Identified<br>6 - Theodolite<br>7 - Planetable<br>8 - Sextant<br>A. Field positions* require entry of method of location and date of field work.<br>EXAMPLE: F-2-6-L<br>8-12-75 |  | <b>II. TRIANGULATION STATION RECOVERED</b><br>When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.<br>EXAMPLE: Triang. Rec.<br>8-12-75<br><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b><br>Enter 'V-Vis.' and date.<br>EXAMPLE: V-Vis.<br>8-12-75<br><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent</b><br><b>entirely, or in part, upon control established</b><br><b>by photogrammetric methods.</b> |  |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.  |  |   |  |

## REVIEW REPORT TP-00228

## SHORELINE

61. GENERAL STATEMENT:

See the Summary included in this Descriptive Report for general information.

A specific problem encountered during compilation was defining the limits for mapping and investigating Landmarks and Aids to Navigation in the Galveston Bay Entrance area. Varied interpretations of the project instructions, at different compilation stages and during field edit, caused unverified and inaccurate data to be forwarded to Nautical Charts. This problem was discovered during final review and amended data was submitted to the Nautical Data Section. This data consisted of a Chart Letter dated 11/14/80, a set of revised 76-40 forms and a revised Class I maintenance print.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A comparison was made with the aforementioned U.S.G.S. quadrangles listed in item #46 of the Compilation Report. No significant differences were noted.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Contemporary hydrographic survey OPR-K104-MI-78 excluded the inshore area of Galveston Bay Entrance, Bolivar Roads from Lat.  $29^{\circ}26'$ , Long.  $94^{\circ}40'$  to Lat.  $29^{\circ}16'$ , Long.  $94^{\circ}50'$ . However, a Coast Pilot and Chart Corrections Report was performed in the area in Sept. 1979; this operation only pertained to updating Landmarks and Aids to Navigation and did not include any pertinent shoreline information.

65. COMPARISON WITH NAUTICAL CHARTS:

A comparison with Chart 11324, 1:25,000 scale, 18th Ed., Aug. 30/80 revealed several omissions. Four areas in the foreshore and one area extending from a groin (see list of approximate positions) are charted as submerged groins or ruins. These features were not compiled nor field investigated.

Approximate positions of offshore features not accounted for:

| Lat.                | Long.               |
|---------------------|---------------------|
| $29^{\circ}17'50''$ | $94^{\circ}46'39''$ |
| $29^{\circ}17'01''$ | $94^{\circ}47'47''$ |
| $29^{\circ}16'52''$ | $94^{\circ}48'01''$ |

| Lat.      | Long.     |
|-----------|-----------|
| 29°16'43" | 94°48'14" |
| 29°16'43" | 94°48'03" |

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This map complies with Project instructions, and meets the requirements for Bureau Standards and National Standards of Map Accuracy.

Submitted by:

*Jerry Hancock*  
Jerry Hancock  
Final Reviewer

Approved for forwarding:

*Billy H. Barnes*  
Billy Barnes  
Chief, Photogrammetric Branch, AMC

Approved:

*John D. Perrow Jr.*  
for John D. Perrow Jr.  
Chief, Photogrammetric Branch, Rockville

Approved:

*Walter S. Simmons*  
Walter S. Simmons  
Chief, Photogrammetry Division



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

DATE: Nov. 14, 1980

TO: Jim Daily, C-322

FROM: Jerry Hancock, CAM 52x1

SUBJECT: Amended 76-40 Forms for Proj. K-104,  
Job CM-7702, Sabine Pass to Pass Cavallo, Texas

Attached is a completed set of 76-40 Forms (Nonfloating Aids or Landmarks for Charts) for TP-00228, Galveston Island. This supersedes the previous forms dated Sept. 18 and 19, 1979. At the final review stage several errors concerning omissions, classification, and field activity were discovered that changed the status for some of the Landmarks. This revised data should account for the Landmarks within this Class I manuscript.

