Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

<table>
<thead>
<tr>
<th>Type of Survey</th>
<th>PLANIMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field No.</td>
<td></td>
</tr>
<tr>
<td>Office No.</td>
<td>T-9225</td>
</tr>
</tbody>
</table>

LOCALITY

<table>
<thead>
<tr>
<th>State</th>
<th>TEXAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>General locality</td>
<td>TEXAS &amp; MEXICO GULF COAST</td>
</tr>
<tr>
<td>Locality</td>
<td>MOUTH OF THE RIO GRANDE</td>
</tr>
</tbody>
</table>

1941

CHIEF OF PARTY

George E. Morris, Jr., Chief of Party

Arthur L. Wardwell, Tampa Photogrammetric Office

LIBRARY & ARCHIVES

DATE

MAR 25 1955

Dec 9/11/55 - July 1955
DATA RECORD

Project No. (II): Ph-36(48)F

Field Office (II): Brownsville, Texas
Photogrammetric Office (III): Tampa, Florida
Instructions dated (II) (III): 14 February 1949

Chief of Party: George E. Morris, Jr.
Officer-in-Charge: Arthur L. Wardwell
Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): Graphic
Manuscript Scale (III): 1:20,000
Scale Factor (III): None

Date received in Washington Office (IV): DEC 14 1951
Date reported to Nautical Chart Branch (IV): FEB 27 1952

Applied to Chart No.
Date: 12.2.54

Publication Scale (IV): 1:20,000
Geographic Datum (III): N.A. 1927

MHW Vertical Datum (III): except as follows:
Elevations shown as (2) refer to mean high water
Elevations shown as (D) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): RANGE 1939
Lat.: 25° 57' 49.201 (1514.3m) Long.: 97° 14' 38.604 (1074.0m) Adjusted

Y =
X =

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.
Areas contoured by various personnel
(Show name within area)
(II) (III)
DATA RECORD

Field Inspection by (II): C. A. Navin
C. H. Baldwin

Date: Oct-Nov 1949
    July 1950

Planetary contouring by (II): Inapplicable

Completion Surveys by (II): W. H. Shearouse

Date: 8 April 1952

Storm and
Mean High Water Location (III) (State date and method of location):
Air Photo compilation
Date of Photographs: 28 July 1950

Projection and Grids ruled by (IV): T. L. J. (W.O.)
Date: 25 Sept. 1950

Projection and Grids checked by (IV): H. D. W. (W.O.)
Date: 27 Sept. 1950

Control plotted by (III): I. I. Saperstein
Date: 23 Feb. 1951

Control checked by (III): M. M. Slavney
Date: 9 April 1951

Radial Plotting converted by (III): M. M. Slavney
Date: 8 June 1951

Stereoscopic Instrument compilation (III):
Planimetry Inapplicable
Contours
Date:

Manuscript delineated by (III): R. A. Reese
Date: 19 Oct. 1951

Photogrammetric Office Review by (III): R. R. Wagner
Date: 28 Nov. 1951

Elevations on Manuscript
checked by (III): R. A. Reese
Date: 19 Oct. 1951
Camera (kind or source) (III): Fairchild Cartographic - 6th Metrogon lens, Camera 0

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
</tr>
</thead>
<tbody>
<tr>
<td>48-0-1492</td>
<td>9 Dec. 1948</td>
<td>10:46</td>
<td>1:20,000</td>
<td>0.5</td>
</tr>
<tr>
<td>48-0-2072</td>
<td>10 Dec. 1948</td>
<td>10:08</td>
<td></td>
<td>0.4</td>
</tr>
<tr>
<td>48-0-2082</td>
<td>10 Dec. 1948</td>
<td>10:20</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>48-0-2098</td>
<td>10 Dec. 1948</td>
<td>10:33</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Tide (III)

<table>
<thead>
<tr>
<th>Ratio of Ranges</th>
<th>Mean Range</th>
<th>Diurnal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>0.9</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Reference Station: Galveston, Texas
Subordinate Station: Brazos Santiago

Washington Office Review by (IV): C. Hanravich
Final Drafting by (IV): E.D. Hunter
Drafting verified for reproduction by (IV): W. Hallem
Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 14 with 47 south of Rio Grande
Shoreline (More than 200 meters to opposite shore) (III): 43.0
Shoreline (Less than 200 meters to opposite shore) (III): 52.0
Control Leveling - Miles (II): Inapplicable
Number of Triangulation Stations searched for (II): 6
   Recovered: 4
   Identified: 4
Number of BMs searched for (II): 20
   Recovered: 17
   Identified: 14
Number of Recoverable Photo Stations established (III): 1
Number of Temporary Photo Hydro Stations established (III): 0

Remarks:
Project Ph-36(h) consists of fifty-two quadrangles at 1:20,000, each 7.5 minutes in latitude and longitude, covering the Gulf Coast of Texas and the Intracoastal Waterway from Aransas Bay to Brownsville and the Mexican Border. Adjoining the project to the north is a series of shoreline surveys in Part IV of Project Ph-14(h).

Information concerning Ph-36(h) in its broader context will be included in a project completion report to be compiled at the conclusion of the review of all surveys in this project.

Twenty-six of the quadrangles in this project are topographic surveys and are to be published at 1:24,000 scale by the Geological Survey. The other twenty-six quadrangles are planimetric surveys. Of these, nineteen are to be used as bases by the Geological Survey for the compilation of 7.5 minute topographic quadrangles and will not be published as planimetric maps. The remaining seven, T-9175, T-9176, T-9177, T-9181, T-9189, T-9204, and T-9206, will be published as planimetric maps.

Cloth-backed lithographic prints of the original map manuscripts at compilation scale and the descriptive reports for all maps in this project will be filed in the Bureau Archives. Cloth-backed copies of the published topographic quadrangles at 1:24,000 scale will also be filed.

All project reports except the Geog. Names Report will be filed in the Project Completion Report.
2. AREAL FIELD INSPECTION

This quadrangle is located in Cameron County, Texas, on the Rio Grande.

The area covered is largely mud flats; the land area being grass flats with scattered ridges covered with brush, and the beach being sand dunes and shifting sand. A few small areas of the grass flats are under cultivation with cotton being the main crop.

There is but one good road, Texas State Highway No. 4, running east to the Gulf of Mexico.

The photography was of recent date and no difficulty was encountered interpreting the photographs. The photographic tones are from white to black. The white and light gray tones are sand and mud flats; the gray tones are grass flats and some cultivated areas; and the black tone being dense brush and scrub trees. Some of the shallow water also photographed black.

Field inspection is believed to be complete and adequate.

Field inspection was done on 1:20,000 scale single lens, ratio prints Nos. 48-O-2073, 48-O-2086, and 48-O-2099.

3. HORIZONTAL CONTROL

The following third-order traverse station, established by USGS, was recovered: TT STA 3L(USGS) 1929.

Two stations, RP 55(IBC)(USGS), and RIO GRANDE 1939, were reported lost.

Horizontal control was identified on the following single lens, 1:20,000 scale, field photographs: 48-O-2086, 48-O-2099, and 48-O-1490.

4. VERTICAL CONTROL

The following bench mark of the USGS was recovered: TT STA 3L(USGS).

The following are second-order bench marks, established by the C&GS, which were recovered: RANGE TRIANGULATION STATION, RANGE TRIANGULATION STATION RM NO 1, RANGE TRIANGULATION STATION RM NO 2, DEL MAR AZIMUTH STATION, J 50(C.Co.), J 51(C.Co.), J 52(C.Co.), J 53(C.Co.), J 54(C.Co.), C 776, D 776, E 776, and RP 54(IBC).

The following are bench marks established by the Cameron County engineer, accuracy unknown, which were recovered: J 46, J 47, and J 55. Their elevations are on Form 638 submitted for each bench mark.

As this is a planimetric quadrangle, no additional levels were run.
Bench marks were identified on the following 1:20,000 scale, single
lens, field photographs: 48-0-1493, 48-0-2072, 48-0-2086, 48-0-2087,
and 48-0-2099.

5. CONTOURS AND DRAINAGE

The only perennial drainage in the area is the Rio Grande.

No contours were run as this is a planimetric quadrangle.

6. WOODLAND COVER

All woodland areas have been classified according to Photogrammetry
Instructions No. 15, dated 16 June 1947.

7. SHORELINE AND ALONGSHORE FEATURES

The MHNL was measured from points of identifiable objects on the
photographs. The MLWL was not shown because of tidal conditions.

8. OFFSHORE FEATURES

There are no offshore features.

9. LANDMARKS AND AIDS

A landmark, TOWER, on chart No. 1288, which is actually in Mexico,
could not be seen from any one of several vantage points. From local
inquiry, this tower has been destroyed. See Form 567.

10. BOUNDARIES, MONUMENTS, AND LINES

See "Special Report, Boundaries, Project Ph-36(48), Baffin Bay to
the Rio Grande."

11. OTHER CONTROL

Two recoverable topographic stations, WOLF, were established and

12. OTHER INTERIOR FEATURES

All roads in this quadrangle are Class 7, except for Texas State
Highway No. 4 which is Class 2. All roads have been classified according
to Photogrammetry Instructions No. 10, dated 14 April 1947, as amended.
Roads in Mexico are not classified.

All buildings have been classified according to Photogrammetry
Instructions No. 29, dated 1 October 1948.
13. GEOGRAPHIC NAMES

See "Special Report, Geographic Names, Project Ph-36(48), Port Mansfield (Red Fish Landing) to the Rio Grande."

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA


Form 567, in triplicate, to be forwarded to Washington Office on letter of transmittal Ph-36 Field 81 at a later date.

Form 567, quadruplicate only, to be forwarded to Baltimore Office on letter of transmittal Ph-36 Field 82 at a later date.

Data, Quadrangle T-9225( ), forwarded to the Baltimore Office on letter of transmittal Ph-36 Field 80, 15 August 1950.

Submitted
7 August 1950

[Signature]
Charles H. Baldwin
Cartographic Survey Aid

Approved
15 August 1950

[Signature]
George E. Morris, Jr.
Chief of Party
PHOTOGRAVMMETRIC PLOT REPORT:

Submitted with T-9220.

31. DELINEATION.

Compiled by graphic method.

The scale and clarity of the photographs used for delineation were good.

The interior field inspection, north of the Mexican border, was adequate. No field inspection was made south of the Rio Grande.

32. CONTROL.

Sufficient control was identified and density and placement were good. Refer to Descriptive Report for T-9220 for listing of control on this map.

33. SUPPLEMENTAL DATA.

None.

34. CONTOURS AND DRAINAGE.

The Rio Grande is the only drainage of any importance. Contours are inapplicable.

35. SHORELINE AND ALONGSHORE DETAILS.

The field inspection of the storm water line, north of the Rio Grande, was inadequate and inconsistent. Stereoscopic examination shows the storm water line to be more nearly in the position shown on the manuscript. A check is requested of the field editor.

36. OFFSHORE DETAILS.

None.
37. **LANDMARKS AND AIDS.**

None.

38. **CONTROL FOR FUTURE SURVEYS.**

One (1) recoverable topographic station is being submitted on Form 524 and is listed under Item 49.

39. **JUNCTIONS.**

Satisfactory junctions have been made as follows:

Survey T-9222 on the north
Survey T-9224 on the west
Project limits are to the east and south.

40. **HORIZONTAL AND VERTICAL ACCURACY.**

No statement.

46. **COMPARISON WITH EXISTING MAPS.**

Comparison was made with U. S. Geological Survey Quadrangle MOUTH OF RIO GRANDE, TEXAS, scale 1:31,680, edition of 1936, reprinted in 1945. No major changes were noted.

47. **COMPARISON WITH NAUTICAL CHARTS.**

Comparison was made with U. S. C. & G. S. Nautical Chart 1288, published September 1941 (3rd edition) and corrected to October 13, 1950. Areas shown north of the RIO GRANDE are comparable and in good agreement.
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY.

None.

ITEMS TO BE CARRIED FORWARD.

None.

Richard A. Reece
Carto. Photo. Aid

APPROVED AND FORWARDED:

Arthur L. Wardwell, Chief of Party
48. GEOGRAPHIC NAME LIST.

- BOCA CHICA
- BOCA CHICA BAY
- BOCA CHICA BEACH
- BOCA CHICA ROAD
- BRAZOS ISLAND
- CAMERON COUNTY

COMMISSIONERS PRECINCT NO. 2

- GULF OF MEXICO

- LAGUNA MADRE
- LOMA DE LA ESTRELLA
- LOMA DE LA LENA SECA
- LOMA DE LA PITA
- LOMA DE LAS VACAS
- LOMA DE LOS EBANITOS
- LOMA DE LOS TEQUIOS
- LOMA DEL BURO
- LOMA FELONA
- LOMA PLATA
- LOS MONTES
- MESA DEL GAVILAN
- MEXICO
- MOUTH OF RIO GRANDE

PORT ISABEL PUMPING STATION

RIO GRANDE

STATE NO. 4

STELL-LIND BANCO NO. 128

TAMAULIPAS

TEXAS

UNITED STATES

VERDOLAGA LAKE

WHITE RANCH (not White Raven)

Names underlined in red are approved 8-16-52.
L. Hecf

Precincts were not mapped on this project in accordance with USES instructions.

(Names are to be applied here) (Project Name Report applies name at the position).

for all of these Spanish names, use lower case d and 1 unless the name is printed entirely in capital letters.
49. **NOTES FOR THE HYDROGRAPHER:**

The following is a topographic station that may be of use to the hydrographer:

**WOLF 1950**

*Del Mar Azmk (1939), 1950*
# TIDE COMPUTATION

**Project No. Ph-36(48)T- 9225**

**Time and date of exposure:** 10:08 10 Dec. '48  
**Reference station:** Galveston, Texas  
**Date of field inspection:** 3 August 1950  
**Subordinate station:** Brazos Santiago  
**Mean range:** 0.9  
**Ratio of ranges:** 0.9

<table>
<thead>
<tr>
<th>Time</th>
<th>Height</th>
<th>Height x Ratio of ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>High tide</td>
<td>13 00</td>
<td>7 05</td>
</tr>
<tr>
<td>Low tide</td>
<td>0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>Duration of rise or fall</td>
<td>5 55</td>
<td>0.45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time at Ref. Sta.</th>
<th>Time difference</th>
<th>Corrected time at Subordinate station</th>
</tr>
</thead>
<tbody>
<tr>
<td>High tide</td>
<td>13 00</td>
<td>12 20</td>
</tr>
<tr>
<td>Low tide</td>
<td>7 05</td>
<td>6 25</td>
</tr>
<tr>
<td>Time difference</td>
<td>0 40</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12 20</td>
<td>10 08</td>
<td>2 12</td>
<td>0.5</td>
<td>Stage of tide above MLW</td>
<td>Feature bares</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.1</td>
<td>Stage of tide above MLW</td>
<td>Feature above MLW</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.4</td>
<td>Stage of tide above MLW</td>
<td>Feature above MLW</td>
</tr>
</tbody>
</table>

**Computed by:** Richard A. Reece  
**Checked by:** Robert R. Wagner
PHOTOGRAMMETRIC OFFICE REVIEW

T-9225


CONTROL STATIONS


ALONGSHORE AREAS
(Nautical Chart Data)


PHYSICAL FEATURES


CULTURAL FEATURES


BOUNDARIES

31. Boundary lines R.R.W.

MISCELLANEOUS


40. William A. Hustard
   Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler

Supervisor

M-2623-12

43. Remarks:
Field Edit Report, T-9225

51. **Methods.**—All roads were travelled by truck to check their classification and to answer questions asked by the reviewer. All other features were verified as to their classification and existence. In areas inaccessible by roads driving was done cross-country in a Jeep.

Additions, corrections, deletions and all field edit information will be found on the Discrepancy Print, Field Edit Sheet and photographs 48-O-2073, 2086 and 2099.

Violet ink was used for additions and corrections; green for deletions.

52. **Adequacy of compilation.**—Delineation of the map details is adequately done and will be complete after application of field edit information.

53. **Map accuracy.**—No testing was done.

54. **Recommendations.**—None offered.

55. **Examination of proof copy.**—It is recommended that the proof copy of the map be sent to Mr. F. L. Rockwell for examination. He is Engineer for the City of Brownsville, a life-long resident, intimately acquainted with the area and believed to be qualified to make the examination. His address is City Hall, Brownsville, Texas.

No discrepancies were noted in charted names. They were verified by personnel of the office of the Corps of Engineers, Brownsville.

Respectfully submitted,
8 April 1952

William H. Shearouse
William H. Shearouse, Cartographer
I recommend that the following objects which have (have not) been inspected from seaward to determine their value as landmarks be shown on (deleted from) the charts indicated.

The positions given have been checked after listing by C. H.

G. E. Morris
Chief of Party.

<table>
<thead>
<tr>
<th>STATE</th>
<th>CHARTING NAME</th>
<th>DESCRIPTION</th>
<th>SIGNAL NAME</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DATUM</th>
<th>METHOD OF LOCATION AND SURVEY NO.</th>
<th>DATE OF LOCATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tower</td>
<td>Tower</td>
<td></td>
<td></td>
<td>25 56.3</td>
<td>97 12.7</td>
<td>NA 1927</td>
<td></td>
<td></td>
<td>1288</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be compiled for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
REVIEW REPORT
Planimetric Map T-9225
16 August 1952

62. **Comparison with Registered Topographic Surveys:**

- T-453 (1854) 1:20,000
- T-6706b (1939) 1:20,000

The old topographic surveys are superseded by the new map (T-9225) for nautical charting.

63. **Comparison with Maps of Other Agencies:**


64. **Comparison with Contemporary Hydrographic Surveys:**

None

65. **Comparison with Nautical Charts:**

Chart No. 1288, 15 January 1951, 1:80,000

The approximate coast shoreline indicated on this chart between latitudes 25° 50' and 25° 53' is not in agreement with the delineated shoreline on the new map (part two of two, which is an extension of sheet T-9225).

66. **Adequacy of Results and Future Surveys:**

The compiled portion of the map, which lies north of the Rio Grande River (in the U.S.) complies with the National Map Accuracy Standards. A definite statement on the accuracy of the map south of the Rio Grande River cannot be made; however, it is believed to be satisfactory. For additional information refer to the Descriptive Report for T-9220, page 13, side heading 23. No field inspection or field edit of the area south of the Rio Grande (in Mexico) was made; this is in accordance with the instructions.

In the Laguna Madre and similar areas, the water stages vary widely with meteorological conditions. In view of this, it was decided to omit the high-water line where it is indefinite and unmarked by visible evidence on the ground, and in its place to indicate by a broken line symbol the approximate limits of areas which were subject to inundation. This decision was arrived at mainly for these reasons:
(1) The difficulty found in identifying the MHW line from photographs of this as well as other similar areas throughout the project.

(2) It was considered impractical to resolve this problem by extensive leveling.

For a more detailed study and investigation of this matter, refer to the correspondence and sundry reports to be attached to the completion report which will be submitted when the reviews of all the surveys in this project are completed.

The reasons and the decision reached in adopting the special treatment accorded to the shoreline delineation are discussed in the pages of correspondence and instructions attached to the Descriptive Report for T-9214.

Reviewed by:

Charles Hanavich

Approved:

L.C. Land 13 Oct 1954
Chief, Review Section
Division of Photogrammetry

H. Draper
Chief, Nautical Chart Branch
Division of Charts

C. D. Houghton
Chief, Div. Photogrammetry

W. C. Houston
Chief, Div. Coastal Surveys
NAUTICAL CHARTS BRANCH

SURVEY NO. 9225

Record of Application to Charts

<table>
<thead>
<tr>
<th>DATE</th>
<th>CHART</th>
<th>CARTOGRAPHER</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-19-59</td>
<td>1288</td>
<td>A.J. Hoffman</td>
<td>Before After Verification and Review Partially Applied</td>
</tr>
<tr>
<td>3/13/67</td>
<td>1288</td>
<td>C.R. Hallman</td>
<td>Before After Verification and Review Partial in South Bay to Tie-in with CH-898</td>
</tr>
</tbody>
</table>

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.