## U.S. Coast and Geodetic Survey

### Descriptive Report

**Type of Survey**: Topographic  
**Field No.**: Ph-36(48)E  
**Office No:** T-9212

### Locality

- **State**: Texas  
- **General Locality**: Laguna Madre  
- **Locality**: Padre Island, - Kennedy and Willacy Counties

**Chief of Party**:  
C. E. Morris, Jr., Chief of Party  
H.A. Paton, Baltimore Photogrammetric Office

**Library & Archives**

**Date**: Feb 26 - 1954
DATA RECORD

T-9212

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

Quadrangle Name (IV): Potrero Lopeño

South of Lopone Island, S.E.

Field Office (II): Brownsville, Texas

Photogrammetric Office (III): Baltimore, Md.

Instructions dated (II) (III): 14 February 1949

8 June 1949
26 July 1949
28 July 1949
26 Aug. 1949
24 Feb. 1950

Chief of Party: George E. Morris, Jr.

Officer-in-Charge: Hubert A. Paton

Copy filed in Division of Photogrammetry (IV)

Office Files

Method of Compilation (III):

Graphic

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): None

Date received in Washington Office (IV): 4-30-57

Date reported to Nautical Chart Branch (IV): 5-2-57

Applied to Chart No. 897

Date: Jan 1952

Date registered (IV): 9-3-52

Publication Scale (IV): 1:24,000

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III): MSL

Mean sea level except as follows:

Elevations shown as (25) refer to mean high water
Elevations shown as (2) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): HARENA, 1939

Lat.: 26° 31' 15.074" (463.9m)

Long.: 97° 16' 09.302" (257.5m)

Adjusted

Plane Coordinates (IV): Lambert Grid

State: Texas

Zone: South

Y = 312,489.43

X = 2,102,437.00

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): W. H. Nelson
B. F. Lampton, Jr.

Date: January 1950

Planetable contouring by (II): B. F. Lampton, Jr.

Date: January 1950

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

Date: Jan 1, 1952

Mean High Water Location (III) (State date and method of location): May 1950
Shoreline of Gulf of Mexico by office interpretation,
Storm water line of Laguna Madre by field inspection

Verified by field editor.

Projection and Grids ruled by (IV): S.R.

Date: 9/14/50

Projection and Grids checked by (IV): H.D.W.

Date: 9/14/50

Control plotted by (III): F.J. Tarcza

Date: 5/11/50

Control checked by (III): B. Wilson

Date: 9/25/50

Radial Plot in Stereoscopic

Control extended by (III): F.J. Tarcza

Date: 10/18/50

Planimetry

Contour

Stereoscopic Instrument compilation (III):

Date:

Manuscript delineated by (III): J. E. Phillips

Date:

Photogrammetric Office Review by (III): R. Glaser

Date: 4-24-51

Elevations on Manuscript

checked by (II) (III):

R. Glaser

Date: 4-24-51
U.S.C. and G.S. nine lens camera-focal length 8½".
U.S.C. and G.S. single lens wide angle camera, type 0, 6" focal length.

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<th>Scale</th>
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<td>1057-1100 incl.</td>
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Tide (III)

Reference Station: Yalakwut, Yalakwut Channel
Subordinate Station: No periodic tide
Subordinate Station: Bragas Sargos

Washington Office Review by (IV): C. Hanarich

Date: 29 May 1952

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 8 square miles
Shoreline (More than 200 meters to opposite shore) (III): 24 miles
Shoreline (Less than 200 meters to opposite shore) (III): 2½ miles
Control Leveling - Miles (II): 9.0

Number of Triangulation Stations searched for (II): 4
Recovered: 2
Identified: 2

Number of BMs searched for (II): 0
Recovered: 0
Identified: 0

Number of Recoverable Photo Stations established (III): 3
Number of Temporary Photo Hydro Stations established (III): 0

Remarks:

* In the Lupuna Medr area, the periodic tide is less than ½ foot. The variation in water level depends principally on the wind.
Project Ph-36(48) 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(46).

Information concerning Ph-36(48) in its broader aspects 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 special reports except the Geog. Names Report will be filed in the Project Completion Report.
2. AREAL FIELD INSPECTION

There is a sand and shell beach along the Gulf of Mexico. To the west of this is an area of sand flats and shifting sand dunes. Further west, there are sand flats extending into the Laguna Madre. In the southernmost part of the quadrangle, the shifting dunes are thicker and form a ridge parallel to the Gulf beach. There are gaps in the ridge, with sand flats between. The Gulf beach is subject to breaking through from storm tides in the Gulf of Mexico or in the Laguna Madre.

On the photographs, the Gulf beach and the shifting sand dunes appear white. The sand flats appear a light, smooth gray. There are numerous grass clumps which appear as small dark dots.

The photographs are of good quality.

Field inspection has been done on photographs 48-0-1524 to 48-0-1533 inclusive.

3. HORIZONTAL CONTROL

All horizontal control stations were searched for. Stations THIRTY 1939 and JONES 1939, were reported lost on Form 526.

4. VERTICAL CONTROL

There are no bench marks in the quadrangle. Supplemental vertical control for contouring was established by fly levels. Fly levels for quadrangles T-9212( ) and T-9215( ) were run as a unit, taking off of 10-18, a fly level point in quadrangle T-9210( ), running through the two quadrangles and then back to the origin.

Fly level points are designated 12-01 through 12-16.

5. CONTOURS AND DRAINAGE

There are shifting sand dunes throughout the quadrangle and no attempt has been made to contour these. Spot elevations have been selected to show maximum and minimum elevations.

Spot elevations have been shown on photographs 48-0-1524 to 48-0-1533 inclusive.

There is no definite drainage pattern.

6. WOODLAND COVER

There is no vegetation to be shown on the map manuscript.
7. SHORELINE AND ALONGSHORE FEATURES

   See Review Report #67.

   The mean high water line has been indicated at intervals on the field
   photographs. The low water line, because of spring tides at the time of
   shoreline inspection, could not be accurately determined. The low water
   line appears to be about 5 or 6 meters from the mean high water line. The
   foreshore is sand with no bluffs, cliffs, piers, landings, or other shore-
   line structures.

   Tidal data on Laguna Madre and a court decision in regards to the mean
   high water line of Laguna Madre will be taken into consideration when shore-
   line inspection of the west side of Padre Island is completed after new photo-
   graphs are made to furnish complete photographic coverage. This work will be
   the subject of "Special Report, Identification and Delineation of the Shoreline
   of Laguna Madre, Project Ph-36(48)", to be submitted at a later date.

8. OFFSHORE FEATURES

   None.

9. LANDMARKS AND AIDS

   None.

10. BOUNDARIES, MONUMENTS, AND LINES

    See "Special Report, Boundaries, Project Ph-36(48), Baffin Bay to the
    Rio Grande", to be submitted at a later date.

11. OTHER CONTROL

    The following recoverable topographic stations were established:
    BEAM 1949, BRAG 1949, and CALM 1949.

12. OTHER INTERIOR FEATURES

    There is no culture to be shown on the map manuscript.

13. GEOGRAPHIC NAMES

    See "Special Report, Geographic Names, Baffin Bay to Port Mansfield (Red
    Fish Landing), Project Ph-36(48)", forwarded to Washington Office 6 December
    1949, and "Special Report, Geographic Names, Port Mansfield (Red Fish Landing)
    to the Rio Grande, Project Ph-36(48)", to be submitted at a later date.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

    "Special Report, Identification and Delineation of the Shoreline of
    Laguna Madre, Project Ph-36(48)", to be submitted at a later date.
"Special Report, Boundaries, Baffin Bay to the Rio Grande, Project Ph-36(48)", to be submitted at a later date.

"Special Report, Geographic Names, Baffin Bay to Port Mansfield (Red Fish Landing), Project Ph-36(48)", forwarded to Washington Office 6 December 1949.

"Special Report, Geographic Names, Port Mansfield (Red Fish Landing) to the Rio Grande, Project Ph-36(48)", to be submitted at a later date.


Submitted
14 February 1950

Wilber H. Nelson
Cartographic Survey Aid

Approved
15 February 1950

George E. Morris, Jr.
Chief of Party
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</table>
PHOTOGRAMMETRIC PLOT REPORT

The radial plot report for the area of this survey is included in the descriptive report for T-9208.

31. DELINEATION

Graphic methods were used.

The nine lens photographs taken in 1950 were used to delineate the shoreline; however, the single lens photographs taken in 1948 were used to delineate spot elevations and non-monumented bench points.

32. CONTROL

The identification, density, and placement of horizontal control were adequate.

33. SUPPLEMENTAL DATA

Corps of Engineers, U. S. Army, Texas, South of Lopena Island Quadrangle dated 1930. Used to identify approximate boundary line between Kenedy and Willacy Counties.

34. CONTOURS AND DRAINAGE

In the southern section of the quadrangle there are sand dune areas of the type which appear as smaller peaks, with some vegetation, which the field inspector considered too unstable to contour. However, these areas were not delineated as shifting sand dunes because of the distinctly different character and appearance of the undisputedly shifting sand dunes.

The area in question has been delineated on the manuscript as an open area in which selected spot elevations were shown, and may be of interest for future comparison.

35. SHORELINE AND ALONGSHORE DETAILS

See Review Report #67

Shoreline inspection was adequate.

Low water lines are based on data furnished by the field party during the 1950 season.

36. OFFSHORE DETAILS

There are no offshore details.

37. LANDMARKS AND AIDS

None
38. CONTROL FOR FUTURE SURVEYS

Three forms 524 are being submitted for the recoverable topographic stations; these are listed under item No. 49.

39. JUNCTIONS

Junctions to the north with T-9210, and to the south with T-9214 have been made and are in agreement.

Junction to the west with T-9211 is an all water area.

There is no contemporary survey to the east.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41. DISCREPANCY OVERLAY

No discrepancy overlay was prepared for this manuscript.

42. BOUNDARIES

The special report on Boundaries, Baffin Bay to the Rio Grande, Project Ph-36(48), does not locate the boundary between Kenedy and Willacy Counties; however, this boundary line is shown on the Corps of Engineers South of Lopena Island, Texas quadrangle dated 1930, following an exact EW direction on the 26° 36' line of latitude. No boundary monuments have been recovered in this area; however, this approximate boundary has been indicated on the manuscript. On checking the County line as noted on the 665 South of Lopena Island Quadrangle as well as on a County map, it was found that the County line—although approximate—did not exactly follow the 26° 36' parallel. The line was corrected.

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

T-9212 has been compared with the Corps of Engineers, U. S. Army, South of Lopena Island, Texas, quadrangle, scale 1:62,500, dated 1930.

47. COMPARISON WITH NAUTICAL CHARTS

T-9212 has been compared with nautical chart No. 1287, scale 1:80,000 published 10-17-49, corrected to 3-20-50, and with chart No. 1288, scale 1:80,000 published 3-6-50 and corrected to 3-20-50.
47. **COMPARISON WITH NAUTICAL CHARTS (continued)**

Items to be applied to nautical charts immediately:
None.

Items to be carried forward
None.

Respectfully submitted
8 March 1951

**Jacqueline B. Phillips**  
Jacqueline B. Phillips  
Cartographic Draftsman

Approved and forwarded

**Hubert A. Paton**  
Condr., C&GS  
Officer in Charge
GEOGRAPHIC NAME LIST

Commissioner Precinct No. 2
Commissioner Precinct No. 4

- Gulf of Mexico
- Kenedy County
- Laguna Madre
- Padre Island
- Willacy County

Names approved
7-18-51
A.J.W.
PHOTOGRAMMETRIC OFFICE REVIEW

1. Projection and grids
2. Title
3. Manuscript numbers
4. Manuscript size

CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)
7. Photo-hydro stations
8. Bench marks
9. Plotting-of-sextant-fixes
10. Photogrammetric plot report
11. Detail points

ALONGSHORE AREAS
12. Shoreline
13. Low-water line
14. Rocks, shoals, etc.
15. Bridges
16. Aids to navigation
17. Landmarks
18. Other alongshore physical features
19. Other alongshore-cultural-features

PHYSICAL FEATURES
20. Water features
21. Natural ground cover
22. Planatable contours
23. Stereoscopic instrument contours
24. Contours in general
25. Spot elevations
26. Other physical-features

CULTURAL FEATURES
27. Reeds
28. Buildings
29. Railroads
30. Other-cultural-features

BOUNDARIES
31. Boundary lines
32. Public-land lines

MISCELLANEOUS
33. Geographic names
34. Junctions
35. Legibility of the manuscript
36. Discrepancy overview
37. Descriptive Report
38. Field Inspection photographs
39. Forms

40. Raymond Glass
Reviewer

Joseph Stemburg
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

43. Remarks:

M-2623:12
REVIEW REPORT
Topographic Map T-9212
29 May 1952

62. Comparison with Registered Topographic Surveys:

1477 a & b (1879-80)  1:20,000
6704 a & b (1939)  1:20,000

A recession, which ranges from 0 to about 150 meters, has taken place along the Gulf Coast. Inland, in the Laguna-Madre area, numerous changes have occurred along Padre Island.

The previous topographic surveys, which are listed above, are superseded for nautical charting by the new map, T-9212.

63. Comparison with Maps of Other Agencies:


There were noticeable changes inland along Padre Island.

64. Comparison with Contemporary Hydrographic Surveys:

None

65. Comparison with Nautical Charts:

Chart No. 1287  5 March 1951  1:80,000
Chart No. 1288  15 January 1951  1:80,000

Pronounced shoreline changes were noticed along Padre Island in the Laguna-Madre area.

66. Adequacy of Results and Future Surveys:

This map complies with the project instructions and the National Map Accuracy Standards.

67. Shoreline Interpretation and Delineation:

In the Laguna Madre area 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 stead to indicate by a broken line the approximate limits of areas which were subject to inundation. This decision was arrived at mainly for these reasons:

1. The difficulty encountered in identifying the
MHHW line from photographs of the Laguna Madre area and of 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 problem, refer to the correspondence and various reports to be attached to the completion report which will be submitted when the review of the surveys on the project has been 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:

S. J.民族
Chief, Review Section
Division of Photogrammetry

H. M. Schonfeld
Chief, Nautical Charts Branch
Division of Charts

C. DePreeing
Chief, Div. Photogrammetry

Earl O. Hurton
Chief, Div. Coastal Surveys
HISTORY OF HYDROGRAPHIC INFORMATION
QUADRANGLE T-9212

Laguna Madre - Padre Island East of Port Mansfield, Texas

Hydrography was applied to the manuscript of this quadrangle in accordance with Division of Photogrammetry general specifications dated 18 May, 1949.

Soundings and 6, 12, 18 and 30 foot depth curves at mean low water datum originate with the following:

USCG&GS Hydrographic Surveys
H-6490 (1939)  1:20,000
H-6491 (1939)  1:40,000
H-6495 (1939)  1:40,000

USCG&GS Nautical Charts
1287 52-6/23  1:80,000  (compared with)
1288 52-5/5    1:80,000  (compared with)

Hydrography compiled by K. N. Maki and checked by C. B. Samuel.

K. N. Maki
Division of Photogrammetry
19 June 1952
# NAUTICAL CHARTS BRANCH

**SURVEY NO. T-9212**

## Record of Application to Charts

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<th>REMARKS</th>
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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.