

9212

Diag. Cht. No. 1287 & 1288

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

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, - KENEDY AND WILLACY
COUNTIES

194 52

CHIEF OF PARTY

G. E. Morris, Jr., Chief of Party

H. A. Paton, Baltimore Photogrammetric Office

LIBRARY & ARCHIVES

DATE Feb 26 - 1954

B-1870-1 (11)

9212

DATA RECORD

T-9212

Project No. (II): **Ph-36(48)E** Quadrangle Name (IV): **South of ^{Potrero Lopeño} Lopena Island, SE.**

Field Office (II): **Brownsville, Texas**

Chief of Party: **George E. Morris, Jr.**

Photogrammetric Office (III): **Baltimore, Md.**

Officer-in-Charge: **Hubert A. Paton**

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

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

Copy filed in Division of
Photogrammetry (IV)
Office Files

Method of Compilation (III):

Graphic

Manuscript Scale (III):

1:20,000

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): **None**

Date received in Washington Office (IV): **4-30-51**

Date reported to Nautical Chart Branch (IV): **5-2-51**

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 (6) 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
~~Unadjusted~~

Plane Coordinates (IV):

Lambert Grid

State: **Texas**

Zone: **South**

Y=

312,439.43

X=

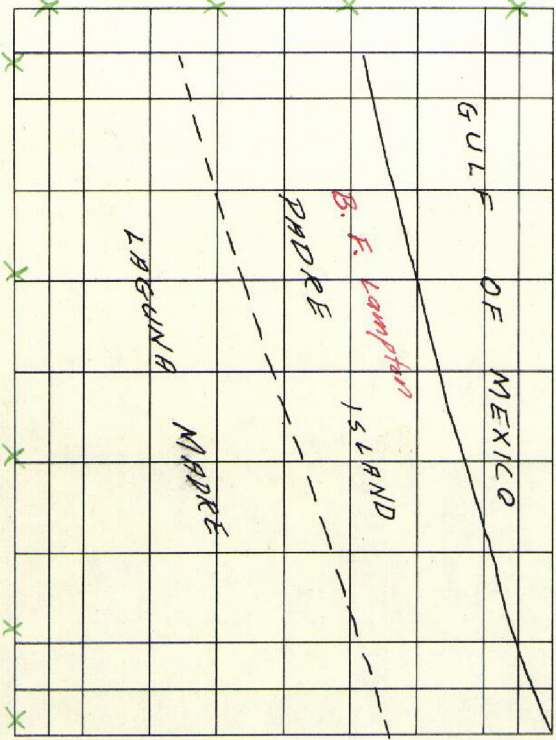
2,102,437.00

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.

26° 37' 30"

97° 22' 30"



26° 30' 00"

Areas contoured by various personnel
 (Show name within area)
 (II) (III)

97° 15' 00"

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. Sheerouse*

Date: *Jan, 1952*

Mean High Water Location (III) (State date and method of location): May 1950

Shoreline of Gulf of Mexico by office interpretation *verified by field editor.*
Storm water line of Laguna Madre by field inspection

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 ~~or Stereoscopic~~

~~Control extension by~~ (III): F.J. Tarcza

Date: 10/18/50

Stereoscopic Instrument compilation (III):
Planimetry

Date:

Contours

Date:

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

Date: 3/8/51

Photogrammetric Office Review by (III): R. Glaser

Date: 4-24-51

Elevations on Manuscript R. Glaser
checked by (II) (III):

Date: 4-24-51

Camera (kind or source) (III): U.S.C. and G.S. nine lens camera-focal length $8\frac{1}{4}$ "
 U.S.C. and G.S. single lens wide angle camera, type O,
 6" focal length

PHOTOGRAPHS (III)				
Number	Date	Time	Scale	Stage of Tide
48-0-1524 to 48-0-1533 incl.	12/9/48	1057-1100 incl.	1:20,000	0.4 ft
25790	5/4/50	1522	1:20,000	} - 0.3 ft Negligible* See Remarks
25791	5/4/50	1525	1:20,000	
25792 b	5/4/50	1526	1:20,000	

Tide (III)

Reference Station: *Galveston, Galveston Channel*
 Subordinate Station: No periodic tide* *Brays Santiago*
 Subordinate Station:

Diurnal		
Ratio of Ranges	Mean Range	Spring Range
1.0	1.0	1.7
0.9	0.9	1.3

} 1948/1950

Washington Office Review by (IV): *C. Hanavich*

Date: *29 May 1952*

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

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): $2\frac{1}{2}$ 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

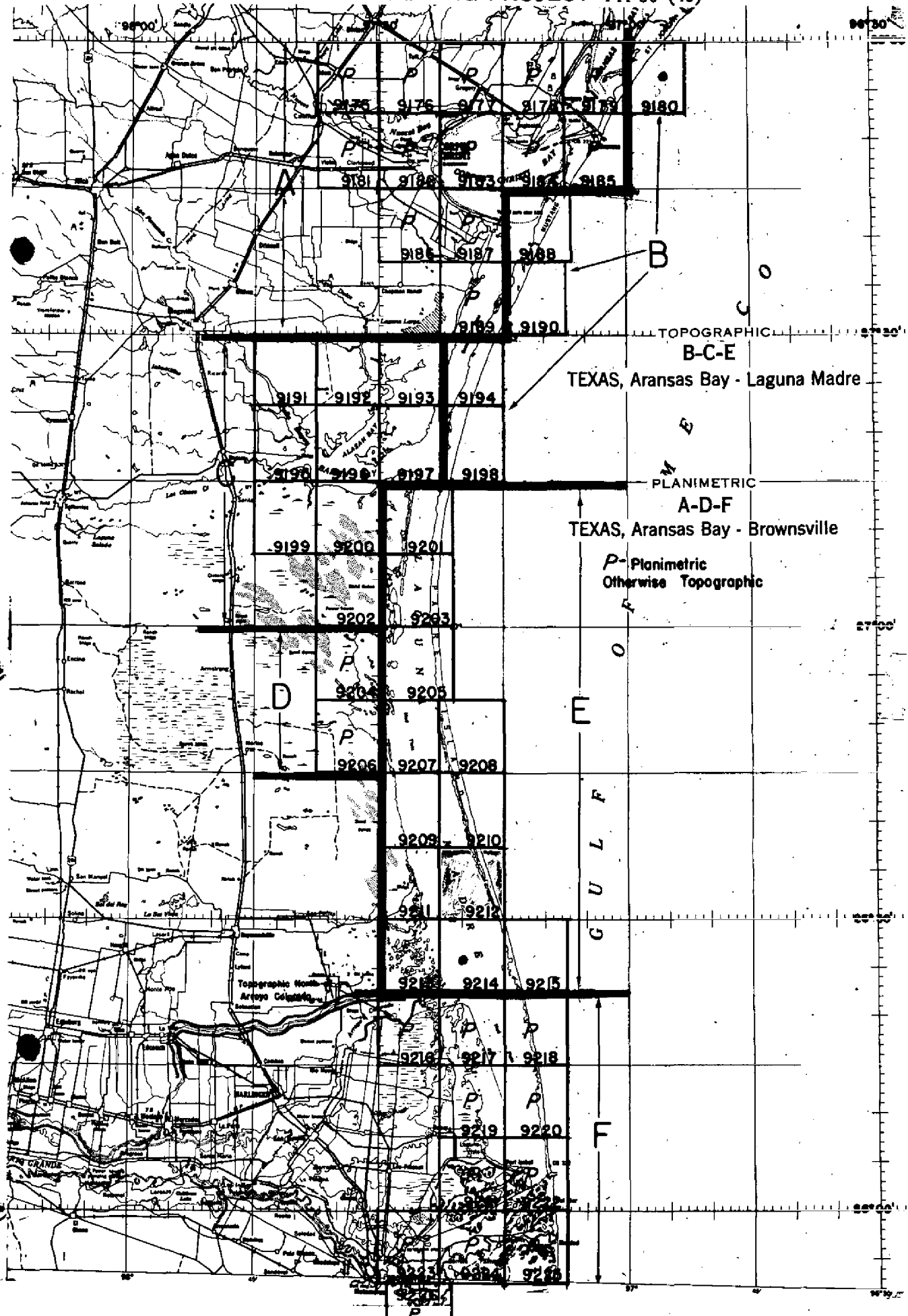
Number of Recoverable Photo Stations established (III): 3

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

Remarks:

* In the Laguna Madre area, the periodic tide is less than $\frac{1}{2}$ foot ~~negligible~~. The variation in water level depends principally on the wind.

TOPOGRAPHIC AND PLANIMETRIC MAPPING PROJECT PH-36 (48)



TOPOGRAPHIC
B-C-E
TEXAS, Aransas Bay - Laguna Madre

PLANIMETRIC
A-D-F
TEXAS, Aransas Bay - Brownsville

P - Planimetric
Otherwise Topographic

G
U
L
F

Topographic North
Arroyo Colorado

SUMMARY T- 9212

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.

WINDY, 1913,

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 shoreline 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 shoreline inspection of the west side of Padre Island is completed after new photographs 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.

Records, Quadrangle T-9212(), forwarded to Washington Office 15 February 1950, letter of transmittal Ph-36 Field 51.

Submitted
14 February 1950

Wilber H. Nelson
Wilber H. Nelson
Cartographic Survey Aid

Approved
15 February 1950

George E. Morris, Jr.
George E. Morris, Jr.
Chief of Party

MAP T. 9212 PROJECT NO. Ph-36(48)E SCALE OF MAP 1:20,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR x -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS	
					FORWARD	(BACK)	FORWARD	(BACK)	FORWARD	(BACK)
DESERT, 1939	G-4304 P. 126	N.A. 1927	26 97	37 19	18.037 11.969		555.1 331.1	1291.5 1328.7		
SUB. PT. No.2 DESERT, 1939			26 97	37 19			544.7 550.2	1301.9 1109.6		
HAHENA, 1939	G 4304 P 131	N A 1927	26 97	31 16	15.074 09.302		463.9 257.5	1382.6 1403.7		
SUB PT. HARENA, x 1939			26 97	31 16			465.3 329.7	1381.2 1331.5		

COMPILATION REPORT, T-9212

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

The area was verified by field editor as shifting sand dune area, and area has been redelineated as such.

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.

43-45 On checking the County line as noted on the USG South of Lopena Island Quadrangle as well as on a County map, it was found that the County line - although approximate - does 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
Hubert A. Paton
Comdr., C&GS
Officer in Charge

48. GEOGRAPHIC NAME LIST

Commissioner Precinct No. 2
Commissioner Precinct No. 4

} *Precinct lines were not indicated.
~~this is in accordance with the~~
~~topographic instructions issued by~~
~~the USGS.~~*

Gulf of Mexico .

Kenedy County .

Laguna Madre .

Padre Island .

Willacy County .

Names approved

7-18-51

a.j.w.

50 - PHOTOGRAMMETRIC OFFICE REVIEW

T. 9212

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

CONTROL STATIONS

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

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

20. Water features B 21. Natural ground cover B 22. Planetable contours _____ 23. Stereoscopic instrument contours _____
24. Contours in general _____ 25. Spot elevations B 26. Other physical features _____

CULTURAL FEATURES

27. Roads _____ 28. Buildings _____ 29. Railroads _____ 30. Other cultural features _____

BOUNDARIES

31. Boundary lines B 32. Public land lines _____

MISCELLANEOUS

33. Geographic names B 34. Junctions B 35. Legibility of the manuscript B 36. Discrepancy overlay _____
37. Descriptive Report B 38. Field inspection photographs B 39. Forms B
40. Raymond Glasser Reviewer Joseph Steinberg 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:

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:

South of Lopena Island Quadrangle, USE, Edition 1930, 1:62:500.

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~~^{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 symbol 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

MHW 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
Charles Hanavich

APPROVED:

S. V. Griffith
Chief, Review Section B
Division of Photogrammetry

H. C. Swenson
Chief, Nautical Charts Branch
Division of Charts /GWS

O. S. Reading
Chief, Div. Photogrammetry
MS

Carl O. Horton
Chief, Div. Coastal Surveys
JAH

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:

USC&GS Hydrographic Surveys

H-6490	(1939)	1:20,000
H-6494	(1939)	1:40,000
H-6495	(1939)	1:40,000

USC&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. E. Samuel.

K. N. Maki
K. N. Maki
Division of Photogrammetry
19 June 1952

NAUTICAL CHARTS BRANCH

SURVEY NO. T-9212

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
	897	GEARHART	Before After Verification and Review
8/2/91	11304	L. Ashman	Before After Verification and Review Superseded by BP143754 to 759 Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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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.