9180

Orig

Diag Chts. Nos. 1285 & 1286-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Project Ph-36(48)B *Office No.* T-9180

LOCALITY

State Texas

General locality Aransas Bay

Locality St. Joseph Island

1951

CHIEF OF PARTY

C.W.Clark, Chief of Field Party
Hubert A. Paton, Baltimore Photo. Office

LIBRARY & ARCHIVES

DATE Apr. 5, 1955

B-1870-1 (1)

DATA RECORD

T - 9180

Project No. (II): Ph-36(48)B Quadrangle Name (IV): St Joseph Island

Field Office (II): Corpus Christi, Texas Chief of Party: C.W.Clark

Photogrammetric Office (III): Baltimore,Md. Officer-in-Charge: Hubert A. Paton

Instructions dated (II) (III):
14 February 1949
Supplement No. 2 - 26 July 1949, and
28 July 1949

8 June 1949

Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:20,000 Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): 1.000

Date received in Washington Office (IV): 2-10-50 Date reported to Nautical Chart Branch (IV): 2-17-50

Applied to Chart No. Date: Date registered (IV): OCT 29 1952

Publication Scale (IV): 1:24,000 Publication date (IV):

Geographic Datum (III): N.A. 1927 Vertical Datum (III): M.S.L.

Mean sea level except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): LUCK, 1934

Lat.: 28 01' 19.350" 595.6 (1251.3)m Long.: 96 57' 50.401" 1376.9 (262.2)m Adjusted

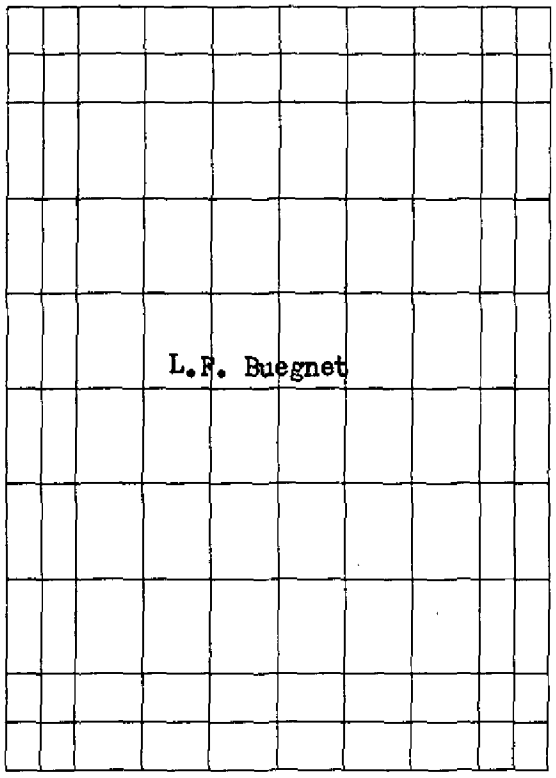
Plane Coordinates (IV): State: Texas Zone: South

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.

M-2618-12(4)



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

M-2618-12 (4)

DATA RECORD

Field Inspection by (II): L.F. Beugnet Date: April 1949

Planetable contouring by (II): L.F. Beugnet Date: April 1949

Completion Surveys by (II): W. H. Shearouse Date: 9-14-51

Mean High Water Location (III) (State date and method of location): Field inspected in April 1949
on photographs exposed in December 1948.
Shoreline (MHW) of Gulf of Mexico } office interpretation &
Shoreline (HW) of Aransas Bay } field inspection of photographs 1949 & 1951

Projection and Grids ruled by (IV): T.L.J. Date: 9-13-49

Projection and Grids checked by (IV): T.L.J. Date: 9-13-49

Control plotted by (III): Control from adjoining surveys only Date:

Control checked by (III): Date:

Radial Plot ~~or Stereoscopic~~ ~~Instrument~~ (III): F.J.Tarcza Date: 10-1-49

Stereoscopic Instrument compilation (III): Planimetry Date:

Contours Date:

Manuscript delineated by (III): M.L.Bloom Date: 1-23-50

Photogrammetric Office Review by (III): R.Glaser Date: 2-1-50

Elevations on Manuscript checked by (II) (III): R.Glaser Date: 2-1-50

M-2618-12(4)

Camera (kind or source) (III): U.S.C.& G.S. single lens type "O" camera
focal length 6 inches

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
48-0-1626 thru 48-0-1632 incl.	Contact 12-9-48	1134	1:20,000	Tide negligible ~~not computed~~ in Aransas Bay.
48-0-1641 thru 48-0-1644 incl.	Contact 12-9-48	1141	1:20,000	

Tide (III)

Reference Station: Galveston, Texas } Gulf Coast
Subordinate Station: Aransas Pass
Subordinate Station:

Diurnal

Ratio of Ranges	Mean Range	~~Spring~~ Range
1.0	1.0	1.4
1.1	1.1	1.5

Washington Office Review by (IV): L. Martin Zeigler Date: 5-2-52

Final Drafting by (IV): None Date:

Drafting verified for reproduction by (IV): —— Date:

Proof Edit by (IV): H Stringfellow Date: 9/10 52

Land Area (Sq. Statute Miles) (III): 9

Shoreline (More than 200 meters to opposite shore) (III): 17

Shoreline (Less than 200 meters to opposite shore) (III): 5

Control Leveling - Miles (II): 26.0

Number of Triangulation Stations searched for (II): 1 Recovered: 0 Identified: 0

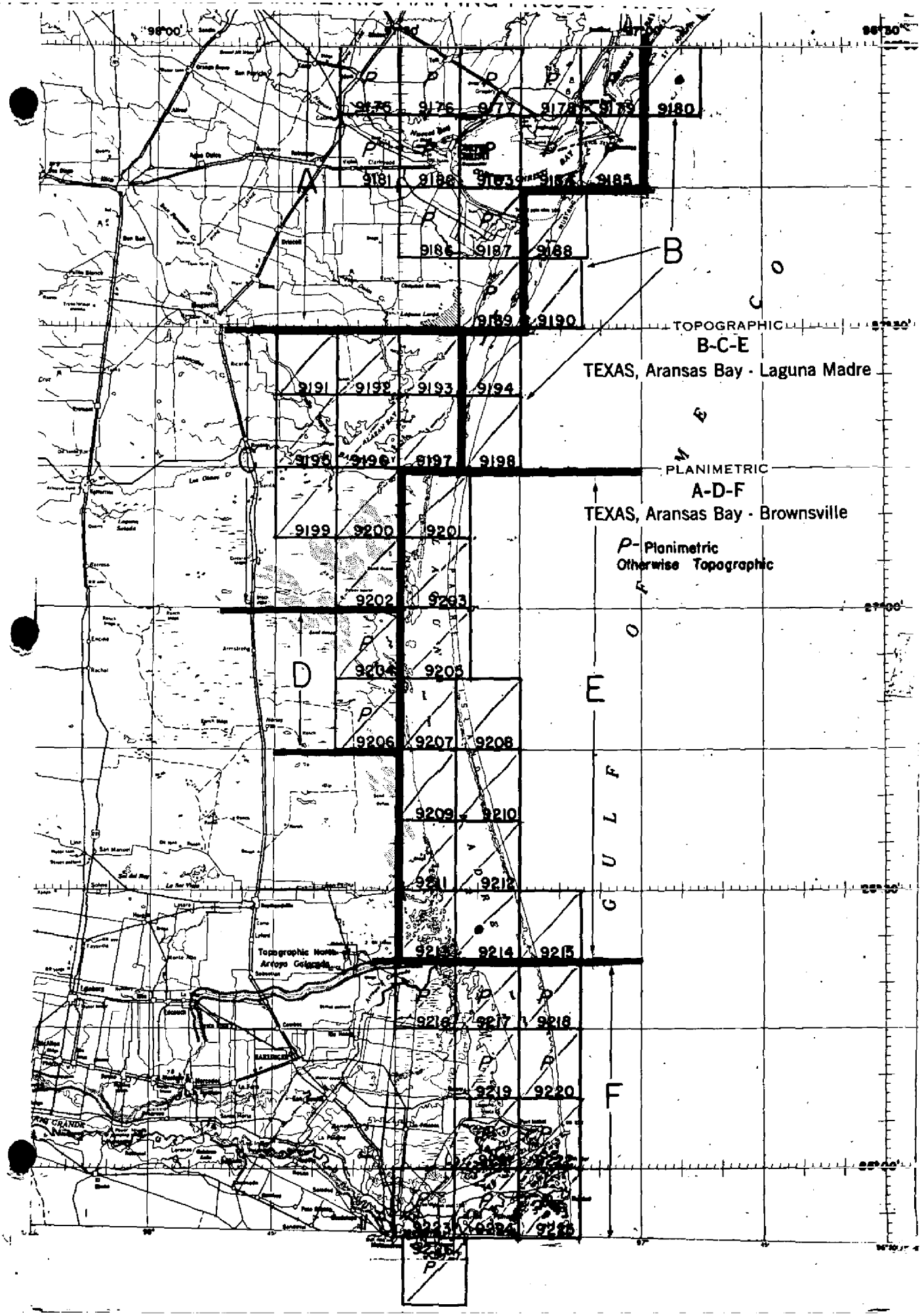
Number of BMs searched for (II): 0 Recovered: 0 Identified: 0

Number of Recoverable Photo Stations established (III): 6 Recovered: 1

Number of Temporary Photo Hydro Stations established (III):

Remarks:

M-2618-12(4)


TOPOGRAPHIC
B-C-E
TEXAS, Aransas Bay - Laguna Madre
PLANIMETRIC
A-D-F
TEXAS, Aransas Bay - Brownsville
P- Planimetric
Otherwise Topographic
GULF OF MEXICO
A
B
C
D
E
F
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Topographic North
Arroyo Colorado

Survey T-9180

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-9169, T-9204, and T-9205, 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

The land area is composed entirely of a portion of the center of St. Joseph Island. This island lies between the Gulf of Mexico and Aransas Bay. It is part of a chain of low, sandy islands lying just off of and parallel to the Texas Coast. The island is sand except for scattered marshy areas on the West side. The fast land is largely covered by sand dunes. Lateral dunes, a series of connected or unconnected dunes, parallel the outside beach. The recognizable pattern breaks to the west, the dunes becoming lower and scattered, until along the middle of the island extensive low, relative level areas are found. Scattered areas of bare, drifting dunes are found. These areas are constantly changing size, shape and pattern due to the prevailing southeasterly winds. Except for the bare area along the beach and the drifting dunes, the island is grass covered.

A large ranch headquarters is located on the island near the center of the quadrangle. Cattle range the entire length of the island, this being the only industry of the area.

Petroleum exploration is in progress, however, to date, no wells have been drilled. Consequently the petroleum industry is of little importance in the area at this time.

There are no roads to the island. It is reached by boat, by plane to a private landing strip owned by the ranch or by ferry from the mainland and driving along the beach.

Field inspection was done on single lens photographs. Intrepretation of photographic detail presented no difficulty because of the recent date of photography. Sand areas bare of vegetation photographed white, grass covered dunes a light gray tone; and marsh areas a very dark gray tone - sometimes black.

3. HORIZONTAL CONTROL:

U. S. C. and G. S. triangulation station FORD, 1934, was the only existing horizontal station, and it was not recovered.

No supplemental control was established.

4. VERTICAL CONTROL:

There are no bench marks in the area.

To furnish control for plane table contouring, a fly level line was run from tidal bench marks at Port Aransas along the beach to the northern limits of the map and back to the beginning, approximately 26 miles in the loop. Closure was - 0.20 foot. The spot points were numbered consecutively from 80-1 to 80-20 inclusive.

5. CONTOURS AND DRAINAGE:

Contouring was done by plane table methods directly on the single lens 1:20000 scale contact prints.

There is no definite drainage pattern. Drainage is by run-off directly into the Gulf of Mexico and Aransas Bay.

6. WOODLAND COVER:

Scattered clumps of mesquite are found in some parts of the area. However, they are small.

7. SHORELINE AND ALONG SHORE FEATURES:

Inspection of the mean high water line was done in accordance with "Field Memorandum No. 1, Mean High Water Line in Marsh and other Swamp Areas," dated 20 June 1938, and "Supplemental Instructions and Shoreline Inspection," dated 18 March 1944.

The low-water line was not located as the shoreline inspection was done during times of high water stand.

A pier and jetties around the entrance to a small boat basin at the ranch headquarters are the only shoreline structures, and are adequately covered on the photographs.

8. OFFSHORE FEATURES:

There are none.

9. LANDMARKS AND AIDS:

There are none.

10. BOUNDARIES, MONUMENTS AND LINES:

See "Special Report, Boundaries, Project Ph-36(48), Latitude 28° 00" to Baffin Bay."

11. OTHER CONTROL:

The following are recoverable topographic stations established:

GOOD	WINDMILL
HERD	JEEP
ITEM	WINDMILL ~~AT TANK~~

12. OTHER INTERIOR FEATURES:

Roads on the island are unimproved dirt roads and were classified in accordance with Photogrammetry Instructions No. 10, dated 14 April 1947, as amended 24 October 1947.

A landing strip was under construction at the time of field inspection just to the southwest of the ranch buildings and on the west side of the island.

13. GEOGRAPHIC NAMES:

Investigation of geographic names was still in progress at the time of writing this report. They will be covered in a special report, the title of and area covered by the report are unknown at this time.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA:

"Special Report, Boundaries, Project Ph-36(48), Latitude 28° 00" to Baffin Bay."

Letter Transmitting Field Records Ph-36-Field-5.

Approved:
10 June 1949
Charles W. Clark
CHARLES W. CLARK
Lt. Comdr., USC&GS
Chief of Party

Submitted:
2 May 1949
L. A. Fitzgerald
I. A. FITZGERALD
Cartographer

PHOTOGRAMMETRIC PLOT REPORT

PROJECT PH-36(48)B

SURVEY T-9180

21. AREA COVERED:

This radial plot is for one topographic Survey, No. T-9180, covering a part of St. Joseph Island near the south end of Aransas Bay. It is the northeast one of a series of topographic and planimetric surveys in Project PH-36(48) which extends to Brownsville, Texas.

22. METHOD-RADIAL PLOT

Map Manuscripts

The map manuscript furnished the compilation office was an acetate sheet ruled with polyconic projection in black and Texas South grid in red at a scale of 1:20,000. No base sheet was furnished or needed.

There are no control stations within the limits of the survey. FORD, 1934 was not recovered. Two control stations, just north of the northern limits of the survey were identified by substitute points and these were plotted on the sheet, using beam compass and meter bar.

A sketch showing the layout of the survey and location of control stations and photograph centers is attached to this report.

Photographs

The photographs used in this radial plot are all single lens photographs, contact scale 1:20,000, taken with the Type 0 camera, focal length 152.37 mm (6 inches). Twenty-three photographs were used in the radial plot, numbered as follows:

48-0-1623 to 48-0-1634 inclusive
48-0-1639 to 48-0-1649 inclusive

Preparation of photographs

The symbols for control stations, pass points and conjugate centers are in accordance with Photogrammetry Instructions No. 12 dated 17 March 1947.

Templets

Acetate templets were made of all photographs. Since these photographs were all contact prints with no special collimation marks, no distortion corrections could be made.

Closure and Adjustment to Control

Before the photographs were prepared for this radial plot, an attempt was made to bridge across the survey with multiplex machines. Due to several water centers and large water areas on most photographs, it was found impossible to bridge across with satisfactory results, particularly in the northern part of the survey. However, the pass points on the photographs on which stations LUCK, 1934 and SID, 1934 appeared were established by multiplex and considered sufficiently accurate to establish a fix for templets in the radial plot. Using control stations on Survey T-9179 and the pass points established in a radial plot previously completed for that survey, the radial plot was extended northeastward with the two flights to the fix established by multiplex. The positions of the pass points previously established on Survey T-9179 were verified by the multiplex method. A satisfactory radial plot was obtained and believed to be within the required accuracy. The radial plot was laid directly on the map projection sheet.

Transfer of points

The map projection, with templets attached, was turned over on a lighttable and positions of the pass points and photograph centers were pricked directly on the back.

23. ADEQUACY OF CONTROL

Only one control station, SUB. PT. CLEAR, 1934, as explained in report for Survey T-9179, was not held in this radial plot. The previously established radially-plotted position was held. It was 0.8 mm southwest of the geographic position. It would have been desirable to have at least one, preferably two, control stations established on this survey which would appear on both flights of photographs.

24. SUPPLEMENTARY DATA

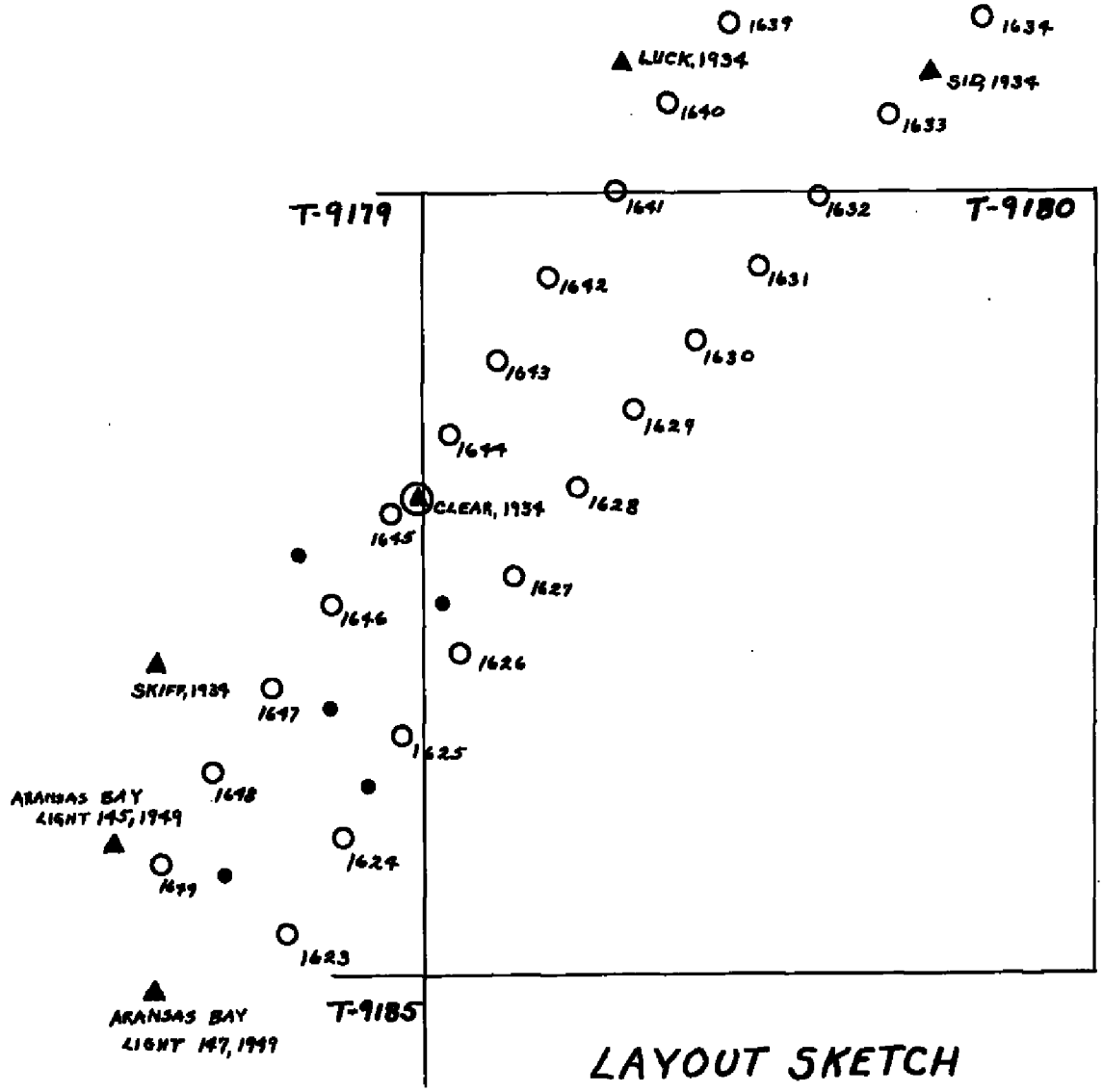
No graphic control surveys were used for control in this radial plot.

25. The photographic coverage was adequate and definition was good. No badly tilted photographs were found.

Respectfully submitted

Frank J. Tarcza

Frank J. Tarcza
Cartographer (Photogrammetric)



LAYOUT SKETCH
PROJECT PH-36(48)B
SURVEY T-9180

○ FIELD AND OFFICE PHOTOGRAPHS
▲ TRIANGULATION STATIONS (IDENTIFIED AND HELD)
Ⓐ TRIANGULATION STATIONS (NOT HELD IN RADIAL PLOT)
● PASS POINTS FROM PREVIOUS PLOT

Photogrammetry

MAP T- 9180 PROJECT NO. Ph-36(48)B SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
* LUCK, 1934	G-2874 P. 55	N.A. 1927	28 01 19.350 96 57 50.401			595.6 (1251.3) 1376.9 (262.2)	
* SID, 1934	G-2874 P.70	"	28 01 11.89 96 54 22.94			366.0 (1480.9) 626.7 (1012.4)	
*SUB. STA. SID, 1934		"	28 01 96 54			233.2 (1613.7) 490.4 (1148.7)	
* SUB. STA. LUCK, 1934		"	28 01 96 57			531.1 (1315.8) 1379.2 (259.9)	
* outside area of Survey T-9180							

Page 13

1 FT. = .3048006 METER

COMPUTED BY: M.F.Kirk DATE 6 Sept.1949 CHECKED BY: J.Steinberg DATE 13 Sept. 1949

M-2388-12

COMPILATION REPORT

T-9180

31. DELINEATION

The delineation of the manuscript was accomplished by graphic methods only. The radial plot however, was implemented by pass points established by multiplex. (See photogrammetric plot report bound with this descriptive report.)

Photographic coverage and field inspection were adequate.

A discrepancy overlay has been prepared to accompany the manuscript.

32. CONTROL

No triangulation stations were recovered within the area of this survey.

While the radial plot is satisfactory and believed to be within the required accuracy, the density and placement of the horizontal control is considered inadequate.

33. SUPPLEMENTAL DATA

1. General Land Office Map of Aransas County, dated 24 May 1947, marked "Boundary Sheet No. 1."

2. Geographic Names Standard dated 7-18-49 furnished on lithograph copy of T-5369.

3. Geographic names standard dated 11-4-49 furnished on Chart No. 1285.

34. CONTOURS AND DRAINAGE

Contoured areas requiring particular attention during field edit have been noted on the discrepancy overlay.

Drainage in the area has no definite pattern.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline inspection was adequate, but it could have been more complete.

One small shallow area on the west side of St. Joseph Island was identified by the field party. This feature falls inside a larger shallow area and was delineated on the manuscript as an offshore area of sand and mud.

The limits of shallow areas were delineated from office interpretation of the photographs. No low water line has been delineated.

See Review Report for discussion of delineation of High + Low Water lines.

36. OFFSHORE DETAILS

None.

37. LANDMARKS AND AIDS

None

38. CONTROL FOR FUTURE SURVEYS

Forms 524 are being submitted for six newly established recoverable topographic stations. Form 524 is also being submitted for a recoverable topographic station established in 1938 and recovered in 1948.

The above mentioned stations have been listed in notes to hydrographer, item 49.

39. JUNCTIONS

Satisfactory junctions have been made with the following adjoining manuscripts:

To the north: T-9296 and T-9297
To the west: T-9179

To the southand east is the Gulf of Mexico.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41 through 45

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

The manuscript was compared with the following maps:

1. General Land Office map of Aransas County, dated 24 May, 1947, scale, 1 inch = 2000 varas.
2. Corps of Engineers, U.S.Army tactical map of Blind Pass, Texas, scale, 1:62,500, dated 1929.
3. Planimetric map, T-5369 of this bureau, Aransas Pass to Ninemile Point, scale, 1:20,000, dated 1934.

47. COMPARISON WITH NAUTICAL CHARTS

The manuscript has been compared with chart No. 1285, scale 1:80,000, published 28 February 1949, and corrected to 23 January 1950.

Items to be applied to nautical charts immediately

None

Items to be carried forward

None.

Respectfully submitted
1 February 1950

Raymond Glaser
Surveying and Cartographic Aid

Approved and forwarded
February 1950

Hubert A. Paton
Comdr., USC&GS
Officer in Charge

T - 9180

48. GEOGRAPHIC NAMES

o Allyns Bight
o Allyns Lake
o Aransas Bay
o Aransas County

o Blind Pass

o Commissioner Precinct I

o Gulf of Mexico

o St. Joseph Island
~~Shell Island~~
o Mud Island
o Texas
~~* Name from supplemental data~~
o San Jose Cattle Co. Ranch

o = Names approved

3-27-50

a.g.c.

49. NOTES FOR THE HYDROGRAPHER

The following recoverable topographic stations are shown on the manuscript:

GOOD, 1949
HERD, 1949
WINDMILL, 1949
~~BARN, 1938~~ ~~(1948)~~
CENTER, 1948
ITEM, 1949
WINDMILL, 1949
JEEP, 1949

Form T-2

50.

PHOTOGRAMMETRIC OFFICE REVIEW

T- 9180

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

CONTROL STATIONS

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

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary ~~lines~~ data G 32. ~~Public land lines~~ _____

MISCELLANEOUS

33. Geographic names G 34. Junctions G 35. Legibility of the manuscript G 36. Discrepancy overlay G 37. Descriptive Report G 38. Field inspection photographs G 39. Forms G

40. Raymond Glaser — 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:

M-2623-12

Field Edit Report, T-9180

51. Methods.--Field edit was accomplished by riding up the beach from Aransas Pass and walking over the dune areas to the places where the reviewer had raised questions. A skiff was used to check the compilation of detail in Aransas Bay.

Standard planetable methods were used to check the small section of contours the reviewer had questioned and to complete the contours along the west boundary.

Field edit information is shown on the Field Edit Sheet and photograph 48-0-1638. Violet ink was used for additions and corrections and green for deletions.

52. Adequacy of compilation.--The map manuscript appears well-compiled and will be adequate after application of field edit information.

53. Map accuracy.--No accuracy test was specified. From visual inspection the accuracy of the map appears good.

One small area of contouring was checked and found to be very good. All other contours accurately portray the sand dune pattern.

54. Recommendations.--No recommendations are offered.

55. Examination of proof copy.--It is recommended that the proof copy of the map be sent to Mr. E. W. Tarrant, P. O. Box 238, Port Aransas, Texas. Mr. Tarrant is Mayor of Port Aransas and is highly familiar with the area. He is enthusiastic over this and other maps in the area and readily agreed to make the examination.

No discrepancies were found in geographic names.

Respectfully submitted,
14 September 1951

William H. Shearouse

William H. Shearouse,
Cartographer

REVIEW REPORT T-9180
Topographic Manuscript
2 May 1952

62. Comparison with Registered Topographic Surveys

T-720	1:50,000	1858
T-823	1:20,000	1860, 61, 66
T-5369	1:20,000	1934
T-6662 (graphic control)	1:20,000	1938
T-9296	1:20,000	1950

The pier and islets delineated in BLIND PASS on T-5369 and T-9296 (a revision of T-5369) do not appear on the December 1948 photographs, nor did field inspection for this survey indicate their existence.

For a discussion of the special treatment of shoreline interpretation and delineation by this survey as compared to the above surveys see Item 66 below.

T-9180 supersedes the above listed surveys as a basic topographic survey for nautical chart purposes.

63. Comparison with Maps of Other Agencies

BLIND PASS, Tex., USE, 1:62,500 Reprint 1942

The above USE map was constructed in 1929 from a base map of the USC&GS. Other than ordinary changes to be expected over the period of time between the above and present surveys, none of any significance are to be noted.

64. Comparison with Contemporary Hydrographic Surveys

H-5693	1:20,000	1934-35
H-6394	1:20,000	1938

See Item 62 above for comments on the pier and islets shown in BLIND PASS and Item 66 below for a discussion of shoreline delineation.

65. Comparison with Nautical Charts

Chart 1285	1:80,000	March 1952

Same comment applicable as in Item 64 above.

66. Shoreline Interpretation and Delineation

Areas labelled "sand flats covered by extreme high

tides" along the ARANSAS BAY side of ST. JOSEPH ISLAND on T-5369 and T-9296 were delineated on the shore side of the MHW line.

In the present survey, T-9180, these areas were excluded from the shore side of the shoreline by indicating the limits of inundation caused by meteorological conditions rather than by ~~this~~ tide which in this area is negligible. The two principal reasons for this special treatment being:

1. Difficulty in identifying the MHW line from photographs in ARANSAS BAY and similar areas throughout the project.

2. Impracticability of determining the MHW line by extensive levelling.

For a thorough study and investigation of this problem and special treatment of shoreline delineation see the complete file of correspondence, field and project reports to be included in the completion report to be drafted at the conclusion of the review of the surveys in this project.

The final determinations resulting from the above-mentioned study and investigation are to be found in the following pages of correspondence:

711-rs

24 February 1950

To: Comdr. George E. Morris, Jr.
U. S. Coast and Geodetic Survey
Airport Branch Post Office
Brownsville, Texas

Subject: Instructions - Project Ph-36(48)-Field, Supplement 1

Reference: Your letter of 1 February 1950. Subject: Shoreline in the Laguna Madre and previous correspondence on this subject.

1. These supplemental instructions cover the mapping of shoreline in Laguna Madre.

2. Where the mean high-water line is definite and can be readily distinguished on the ground, it shall be identified on the photographs and will be delineated on the manuscripts in the usual manner with a solid black line. As for example, at the southern end of the Laguna and along parts of the west shore the high-water line appears to be quite definite and subject to identification and delineation in the usual manner.

3. In the mud flat areas of Laguna Madre or in any part of the Laguna where the mean high-water line is indefinite and is not subject to accurate identification on the photographs, it shall be omitted and will not be mapped. In such areas the shoreline will be mapped as indicated in paragraph 4.

4. In the mud flat areas and in other areas where the mean high-water line is indefinite and is omitted as stated in paragraph 3, the storm water line shall be identified on the photographs and shall be mapped as the shoreline. The storm water line shall be shown on the manuscripts by a broken black line to represent the edge of land that is seldom, if ever, inundated. This line will be the limit of the buff tint on nautical charts.

5. In the mud flat areas and in other areas of the Laguna Madre where extensive areas are bare at low water stage, the approximate low-water line shall be indicated by the field inspection and shall be delineated on the

manuscripts with a dotted line. This line will mark the limits of flats that are frequently inundated and will define the limits of the green tint on the nautical charts.

6. Each map manuscript on which any part of the shoreline is defined by the broken line specified in paragraph 4 shall carry the following note and this note shall be shown on the published maps:

> Water stages in this area vary widely with meteorological conditions; the mean high-water line is extremely indefinite and has been omitted. The usual mean high-water line has been replaced with a broken line that defines the edge of land that is seldom, if ever, inundated. The dotted line represents the approximate mean low-water line and defines the edge of areas that are frequently inundated.

7. One flight of 1:20,000 nine-lens photographs will be flown along the center of the Laguna Madre as soon as aerial photography is started this spring, probably in late March or early April. The officer-in-charge of the photographic mission will contact you and will endeavor to fly these photographs when the water stage is either normal or below normal. These photographs will be taken especially for the field delineation of the approximate low-water line.

8. This office will consider favorably your estimates for the hire of a plane for field inspection of the photographs for delineation of the mean low-water line.

9. With reference to the last paragraph, page 2, of the reference letter, you are authorized to run cross section level lines or do any surveying you consider economically justifiable for delineating the approximate mean low-water line on the photographs. You should keep in mind that the line to be mapped is an approximate mean low-water line for charting purposes and that it is not the intent of these instructions that the exact mean low water contour be mapped. If relatively stable high water conditions occur, short sounding lines at intervals normal to the mean low-water line might be preferable to the level lines mentioned in your letter. It is assumed that signals from opposite shores of the Laguna Madre would be visible for this purpose and that soundings from a skiff might serve the purpose as well as the level lines.

10. Reference should be made to the Humble Oil Company map and other tested survey data in sketching the approximate mean low-water line on the photographs. The low water contour will not be copied directly from such maps but will be compiled from the approximate line shown on the field inspection photographs.

11. Please do not hesitate to write to the office if you have further questions regarding these instructions.

/S/ L. O. COLBERT

Director

Excerpt from Bureau letter of April 26, 1950 to Mr. Nelson Jones, Humble Oil & Refining Company.

You are correct in your contention in paragraph 1 of page 2 of your letter "that the mean high water line is never indefinite where sufficient work has been done to determine it in accordance with accepted practice", but for the purposes for which our surveys are intended, it is only necessary generally to delineate a line which approximates the mean high water line. In accordance with this understanding, the following changes are being made in statements 1, 2, and 4 quoted under those numbers on the first page of your letter.

1. Where the high water line is indicated by definite differences in the terrain and can be readily distinguished on the ground, as in the southern end of Laguna Madre and along parts of the west shore, it shall be shown in the usual manner with a solid black line.

2. In the mud flat areas, or in any part of the Laguna madre where the high water line is not indicated by differences in appearance of the terrain, the high water line shall be omitted and will not be mapped. In these areas the storm water line shall be mapped as a broken black line to represent the edge of land that appears seldom, if ever, to be inundated, except perhaps in violent storms. This line will be the limit of the buff tint on nautical charts.

4. Each map on which the storm water line is shown shall carry the following note:

   Water stages in this area vary widely with meteorological conditions; where the high water line is very indefinite it has been omitted. The usual high water line has been replaced with a broken line to indicate the edge of land which appears to be seldom, if ever, inundated except perhaps in violent storms. The dotted line represents the approximate low water line and the edge of areas usually inundated.

It must be emphasized that for the purposes of the nautical charts an approximation to mean high water is all that is needed for the guidance of the mariner, and this so-called high water line is estimated by the topographer from the physical appearance of the beach and the stage of the tide at the time the survey is made. Those using our charts must keep this limitation in mind, particularly if they are to be used for purposes for which the charts are not intended.

As you will appreciate from our letter dated December 20, 1949, it would be impracticable to attempt to delineate the line of mean high water on the charts of the Laguna Madre without a careful and thorough investigation made pursuant to law by our own engineers. The present appropriations of the Bureau do not provide for this type of investigation, except when Federal interests are involved.

The wording of a descriptive note for the areas in the vicinity of Laguna Madre is still under study and Comdr. Morris will be kept advised of the results of these studies.

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The wording of the explanatory note to be shown on charts and maps as shown in paragraph 4 is the result of subsequent conferences and has been adopted as the final wording in place of the wording given in paragraph 6 of the Project Instructions, Supplement 1, dated 24 February 1950.

O. S. Reading,
Chief, Division of Photogrammetry

COPY

April 30, 1951

Memorandum

To: Atlantic Region Engineer
Central Region Engineer

From: Chief Topographic Engineer (RT-4)

Subject: Coast Survey manuscripts covering recent surveys on the southern Texas coast.

The following information should be noted by your cartographers for use when subject manuscripts are received from the Coast and Geodetic Survey for drafting and publication by the Geological Survey. Manuscripts covering the Laguna Madre areas (see the Lopeno Island and Saltillo Ranch 15-minute maps) will be among the first deliveries from the South Texas project area of Coast and Geodetic Survey.

In a recent conference with Coast Survey personnel and Mr. Wilson of Humble Oil Company, some of the unusual features characterizing these areas were discussed. It appears that the mean high water line (our normal shoreline) cannot be determined in the Laguna Madre area and others of like character. Our old maps, and the new C&GS compilations, delineated as shoreline the limits of occasional inundation. It is now recognized that this line should be otherwise designated to avoid the implication that much of the Laguna Madre area is of a normal tideland nature. Actually most of this area is known as the Laguna Madre Flats--an essentially mainland feature. Except for a very small sector which Humble Oil mapped on a large scale (with 0.2 foot contour interval) the actual line of mean high water is indeterminate within feasible costs. The problem therefore resolves itself to one of an editorial nature, to devise some means of presenting the available facts in understandable form, and to convey the actual conditions properly for general map use.

The consensus recommendation is that of limiting the blue tint in the Laguna Madre area, and others of similar nature, to the low water line. The limits of occasional inundation (shown on our old maps and the C&GS manuscripts as normal shoreline) should be delineated by broken line on the dark blue drawing and should be described in the legend as noted below. This is an identifiable feature on the ground, and as such is an essential item of map content.

The treatment recommended herewith will pose a minor problem in occasional spots where the normal high waterline (shore) line is dropped (or changes to the line limiting occasional inundation) in estuaries from the Gulf. We understand that the low water line will closely parallel the shoreline in such cases and the blue

tint would therefore lack a bounding line only for a tenth of an inch or so.

Question was also raised concerning the relative propriety of the generic terms island vs potrero for specifically named isolated segments above the limits of occasional inundation. This question will be resolved by field check soon to be made by USC&GS and we should use the terms that will be indicated on their final compilations. Note attached copy of letter of April 24 from the Humble Oil Company to the Coast and Geodetic Survey.

The unusual conditions noted above will call for a marginal note on maps so affected, such as the following:

> Water stages vary with meterological conditions. Approximate limits of occasional inundation shown by broken blue lines where mean high water (normal shore line) is undetermined for lack of visual evidence.

s/ Gerald FitzGerald
Chief Topographic Engineer

C
O
P
Y

June 7, 1951

Mr. S. W. Oberg
Chief Engineer
Humble Oil & Refining Co.
Post Office Box 2180
Houston 1, Texas

Dear Mr. Oberg:

Careful consideration has been given to the several suggestions contained in your letters of June 27, 1950, March 20, 1951, and April 24, 1951, relative to the symbolization, notations, and nomenclature to be used on manuscript topographic maps and nautical charts of the Coast and Geodetic Survey covering the Laguna Madre area of Texas, or similar areas elsewhere.

In the light of these suggestions and the conferences had with your representatives, this Bureau is prepared to adopt the following procedures relative to these matters:

A. SYMBOLIZATION FOR MANUSCRIPT TOPOGRAPHIC MAPS
(These are prepared as black and whites only)

(1) A solid heavy black line will be used for the high-water line where this feature is definite and marked by visible evidence on the ground.
(2) Where the high-water line is indefinite and is not marked by visible evidence on the ground, a broken line will be used to indicate the approximate inshore limits of areas subject to inundation.
(3) A dotted line will be used to represent the approximate low-water line.

B. SYMBOLIZATION FOR NAUTICAL CHARTS

(1) Where the high-water line has been delineated on the topographic map by a solid heavy black line, it will be so shown on the nautical charts.
(2) Where the high-water line has not been delineated on the topographic map, a light broken line will be used on the charts to indicate the approximate inshore limits of areas subject to inundation.
(3) The low-water line will be shown by a dotted line.
(4) Inshore of (1) or (2) above, a bluff tint will be used to show land above high water.
(5) Between (1) or (2) above and the low-water line, a green tint will be used.
(6) Offshore of (3) the area will be left blank or a blue tint will be used.

C. SYMBOLICATION FOR QUADRANGLE MAPS

It is the understanding of this Bureau that the U. S. Geological Survey will limit the blue tint on the quadrangle maps to the low-water line for the areas where the high-water line is indefinite. In such cases the area inshore of the low-water line will be left untinted or will be symbolized by a fine black stippling.

D. NOTATIONS TO BE USED

(1) On Manuscript Topographic Maps.--The following notation will be used on the manuscript topographic maps where the high-water line is omitted:

Note:
"Water stages in this area vary widely with meteorological conditions. The high-water line has been omitted where it is indefinite and is not marked by visible evidence on the ground. The broken line indicates the approximate inshore limits of areas subject to inundation. The dotted line represents the approximate low-water line."

(2) On Nautical Charts.--No notations regarding th omission of the high-water line or the nature of the broken line will be shown on the published chart. It is considered that the color symbolization provided for under section A above will sufficiantly designate the character of the area.

(3) On Quadrangle Maps.--It is the understanding of this Bureau that the U.S. Geological Survey will place a notation in the margin of the map covering this area substantially the same as given in D (1) above but in an abbreviated form.

Regarding other notations suggested in your letters of June 27, 1950, and March 20, 1951, for use on our manuscript topographic maps and nautical charts, to the effect that "This map (or chart) is not intended for use as evidence of boundaries or property ownership," I regret that we cannot comply with this request. As was stated in my letter of October 10, 1950, it is the Bureau's desire to have its surveys and charts correctly interpreted by those having occasion to use them. It is also our desire to have them serve a maximum usefulness. While their primary purpose is to promote safety in navigation, we know from experience that they have a great many collateral uses. They have been used many times in the past in boundary disputes as evidence of the condition of our coastline as of a given date, or to show the successive changes (both natural and artificial) that have taken place in an area over a period of years. We would not want to

circumscribe there uses. The limitations that must be placed upon our surveys and charts are set out in the pamphlet titled "Coast and Geodetic Survey Data--An Aid to the Coastal Engineer," a copy of which was previously sent to you. I trust you will understand our position in this matter.

E. NOMENCLATURE

This office is cognizant of the importance of using correct geographic names on its surveys and charts, and special efforts are taken by our field parties and in our office investigations to arrive at the most probably correct name. Where published names differ from well-established local usage, our field parties are instructed to obtain verification from at least three local authorities. This was the case with the names that were placed on the advance prints of topographic maps T-9203 to T-9208, inclusive, that were sent to you.

The comments contained in your letter of March 20, 1951, as well as in the several letters received from interested parties, throw new light on the nomenclature problem of this area. In view of the conflicting information, a reevaluation is required of the correctness of the tentative names adopted by this Bureau.

It is our established practice to submit all names (generic or specific) of a conflicting nature to the U. S. Board on Geographic Names for final settlement. This Board is charged with responsibility for deciding all name conflicts. The Federal agencies are required to conform to the decisions of the Board. All of the information that has been received thus far, including letters, maps, etc., will be furnished to the Board. It might be mentioned that in 1943 the Board approved the name Lopeno Island, rejecting the form Potrero Lopena.

Should you wish to submit additional information to the Board, you may send it to the U. S. Board on Geographic Names, Department of the Interior, Washington 25, D. C. Pending final decision by the Board, conflicting names will be appropriately indicated on our topographic maps.

I wish to assure you of our full cooperation in these matters. It was indeed a pleasure to have been able to meet personally with representatives of your company. If I may be of further service to you, please do not hesitate to call on me again.

Very truly yours,

s/ R.F.A. Studds
Rear Admiral, USC&GS
Director

67. Adequacy of Manuscript:

This topographic map complies with Bureau standards, project instructions and with National Map Accuracy Standards.

Reviewed by:

L. Martin Gazik

Approved:

L C Laudy 23 Dec 1954
Chief, Review Section
Division of Photogrammetry

Chief, Nautical Chart Branch
Division of Charts

Chief, Div., Photogrammetry

Earl O. Hewton
Chief, Div., Coastal Surveys

Hydrographic Information
Quadrangle T-9180
St. Joseph Island, Texas

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

Depths in feet and depth curves at 6, 12, 18 and 30 feet - mean low water datum - originate with the following USC&GS hydrographic surveys:

H-5693	1:20,000	1935
H-6394	1:20,000	1938
H-6402	1:40,000	1938

USC&GS Nautical Chart
892 1:40,000 aid proof dated 6-2-52

Hydrography was verified by R. E. Elkins after compilation by

L. Martin Gazik

L. Martin Gazik
Division of Photogrammetry
May 20, 1952

NAUTICAL CHARTS BRANCH

SURVEY NO. T 9180

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1/10/56	892	SAM Gunn	~~Before~~ After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

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.