

9193

Diag. Cht. No. 1286-2

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey TOPOGRAPHIC
Field No Ph-36(48)C Office No. T-9193

LOCALITY

State TEXAS
General locality KLEBERG COUNTY
Locality ALAZAN BAY TO LAGUNA LARGA

194 51

CHIEF OF PARTY

G.E.Morris, Jr., Chief of Field Party.
H.A.Paton, Baltimore Photogrammetric Office.

LIBRARY & ARCHIVES

DATE Dec - 15 - 1953

9193

DATA RECORD

T -9193

Project No. (II): Ph-36(48)C Quadrangle Name (IV): South Bird Island, NW.

Field Office (II): Brownsville, Texas Chief of Party: George E. Morris, Jr.

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

Instructions dated (II) (III): 14 February 1949 Copy filed in Division of
8 June 1949 Photogrammetry (IV)
26 July 1949) Supplement No. 2 Office Files
28 July 1949)
24 Feb. 1950 - Supplement No. 1

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): 10-26-50 Date reported to Nautical Chart Branch (IV):

Applied to Chart No. ⁸⁹⁴
893 Date: 11-15-51 Date registered (IV): 10-7-52
11-19-51

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

Geographic Datum (III): N.A. 1927 Vertical Datum (III):

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): SORDO, 1939

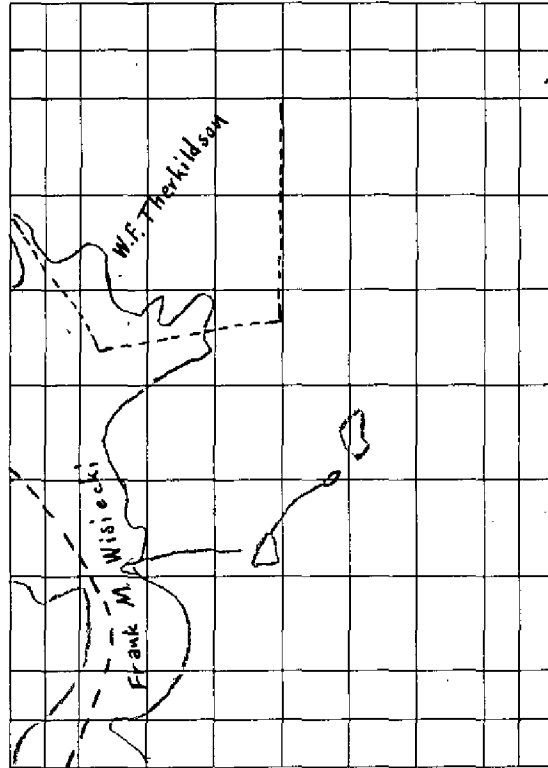
Lat.: 27° 25' 04.547" (140.0m) Long.: 97° 23' 24.938" (685.0m) Adjusted
Unadjusted

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.



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

DATA RECORD

Field Inspection by (II): F. M. Wisiecki Date: June, July & August 1949

Planetable contouring by (II): F. M. Wisiecki
W. F. Therkildson Date: June, July & August 1949

Completion Surveys by (II): *William H. Shearouse* Date: *Oct. 1951*

Mean High Water Location (III) (State date and method of location): Planetable surveys June to Sept. 1949 and July 1950

Projection and Grids ruled by (IV): W.E.W. Date: 10-18-49

Projection and Grids checked by (IV): H.D.W. Date: 10-21-49

Control plotted by (III): F.J.Tarcza Date: 12-28-49

Control checked by (III): W.L.Lineweaver Date: 12-30-49

Radial Plot ~~as shown on map~~ F.J. Tarcza Date: 1-18-50
Control extension by (III):

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

Manuscript delineated by (III): F. M. Wisiecki Date: 9-2-50

Photogrammetric Office Review by (III): R. Glaser Date: 10-20-50

Elevations on Manuscript R. Glaser Date: 10-20-50
checked by (II) (III):

Camera (kind or source) (III): U. S. C. & G.S. single lens type 0, focal length 6 inches.

		PHOTOGRAPHS (III)				
Number	Date	Time	Scale	Stage of Tide		
48-0-1190 thru 48-0-1193	12-8-48	1142	1:20,000) Tide negligible) Not computed		
48-0-1231 thru 48-0-1233	12-8-48	1211	")		
48-0-1859	12-9-48	1358	")		
48-0-1860	12-9-48	1358	")		
48-0-1861	12-9-48	1359	")		

Tide (III)

~~Diurnal~~

Reference Station: ~~Galveston, Texas~~
 Subordinate Station: *The mean range of tide is*
 Subordinate Station: *less than 1/2 foot*

Ratio of Ranges	Mean Range	Spring Range
1.0	1.0	1.4

Washington Office Review by (IV): *K.N. Maki*

Date: *15 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): 50

Shoreline (More than 200 meters to opposite shore) (III): 21 statute miles

Shoreline (Less than 200 meters to opposite shore) (III): 2 statute miles

Control Leveling - Miles (II): 32

Number of Triangulation Stations searched for (II): ~~15~~ 14 Recovered: ~~14~~ 13 Identified: 9

Number of BMs searched for (II): ~~17~~ 7 Recovered: ~~16~~ 6 Identified: ~~16~~ 6

Number of Recoverable Photo Stations established (III): 3

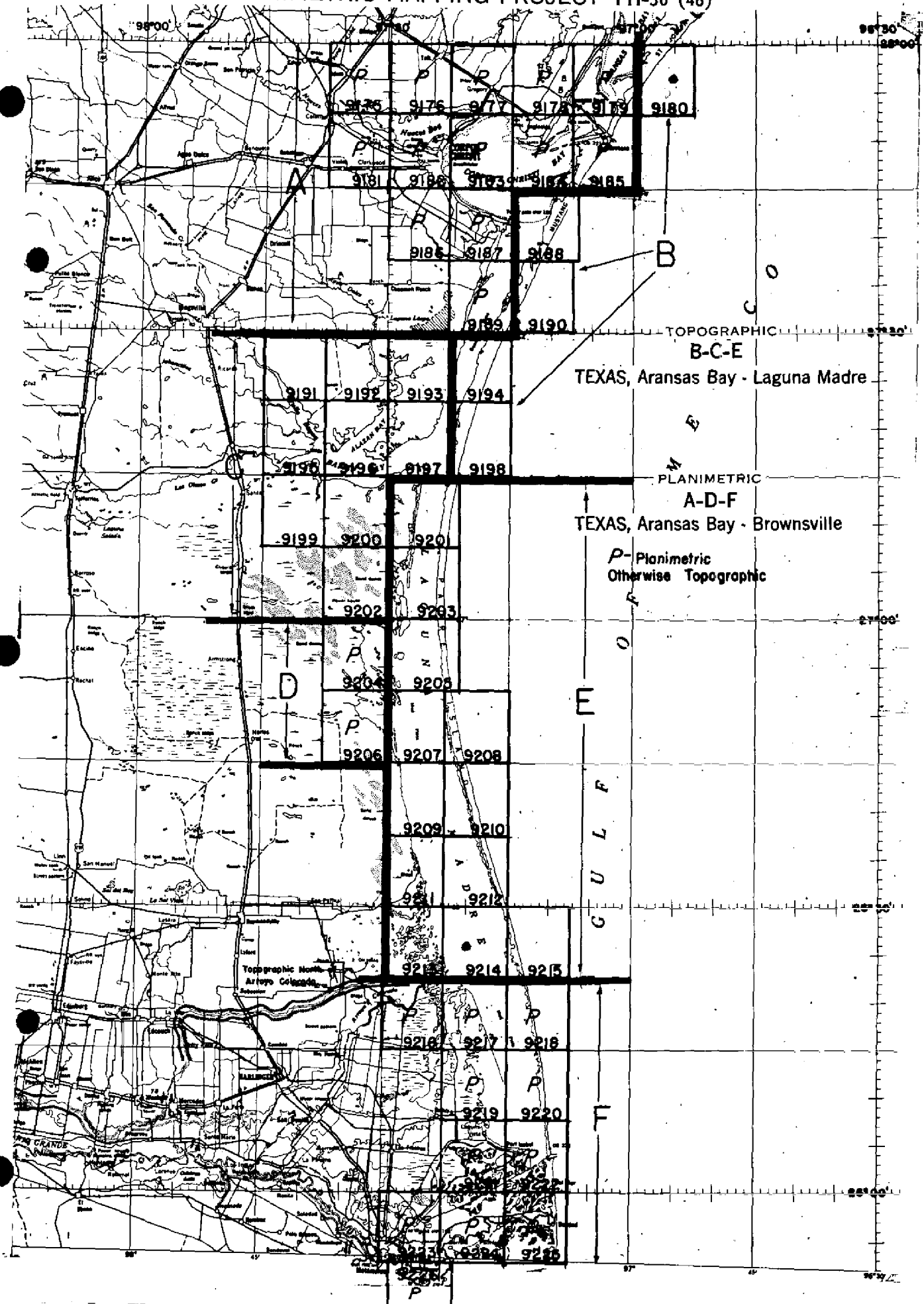
Number of Temporary Photo Hydro Stations established (III): none

Remarks:

Forms 524 for two recoverable stations (azimuth marks) originate at the compilation office.

Eleven additional bench marks were recovered outside the project limits.

TOPOGRAPHIC AND PLANIMETRIC MAPPING PROJECT PH-36 (48)



SUMMARY T-9193

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

This quadrangle includes the area south of Laguna Larga, west of Laguna Madre, Agua Dulce Creek on the west and south to the mouth of Agua Dulce Creek and Alazan Bay.

This quadrangle is accessible by a single lane paved road from Laureles Ranch headquarters. This road runs on the east side of the quadrangle parallel to the coastline of Laguna Madre. The quadrangle may be entered from the north gate of King Ranch, following the coastline to Navillo Windmill and turning east on a paved road. By following sand trails and using a four wheel drive vehicle, all parts can be reached.

The area is part of King Ranch and the whole area is used for grazing of cattle. It is covered with scattered clumps of cacti, mesquite and scrub oak.

The upper third of the quadrangle is a low area covered with grass, becoming sandy and covered with mesquite and scrub oak to the east and south.

The rest of the quadrangle is all sand ridges covered with mesquite and scrub oak. This area photographs dark gray to black for ridges and gray or lighter shade for low areas between ridges. Heavy clusters of scrub oak photograph black, the same as ponds, hills, or clumps of trees.

Laguna Larga should be shown as an intermittent lake. Portions of the shoreline have been indicated on the photographs.

All roads are private.

Field inspection was performed on photographs 48-0-1190, 1 of 2; 48-0-1191 to 48-0-1193 inclusive; 48-0-1231 to 48-0-1233 inclusive; and 48-0-1234, 1 of 2.

3. HORIZONTAL CONTROL

For supplemental control see "Special Report, Supplemental Control, Project Ph-36(48)."

TANQUES DE LUIS WINDMILL 1949 was established by this party and identified on photograph 48-0-1190. The windmill has since been destroyed and the station is lost.

4. VERTICAL CONTROL

The following USC&GS second-order bench marks were recovered; N 633, P 633, Q 633, R 633, T 633 and U 633.

A closed loop of levels was run from bench mark P 633, on the east side of the quadrangle, through quadrangle T-9197() to furnish vertical control for contouring. The loop was then run up the west side of the quadrangle to bench mark R 633. The error of closure was ± 0.72 ft. and adjusted into the number of points set. Short cross lines were run from this loop for additional control.

The designated fly level points are: 93-01 through 93-33 inclusive.

Bench marks and fly level points were identified on photographs 48-0-1190, 1 of 2; 48-0-1191 to 48-0-1193 inclusive; 48-0-1231 to 48-0-1233 inclusive; and 48-0-1234, 1 of 2.

5. CONTOURS AND DRAINAGE

Contouring was done by planetable methods on 1:20,000 scale field ratio prints 48-0-1231; 48-0-1232; 48-0-1233; 48-0-1234, 1 of 2; 48-0-1190, 1 of 2; 48-0-1191 to 48-0-1193 inclusive.

There is no definite drainage pattern.

6. WOODLAND COVER

Except for the low area in the northern part, the entire area is covered with mesquite and scrub oak. Some areas have a heavy growth and reach the height of 12 feet.

The woods were classified according to Topographic Manual, Part II, Section 5433.

7. SHORELINE AND ALONGSHORE FEATURES

See Review Report

The normal water line of Laguna Madre was found to be as photographed. Field inspection of this shoreline was done on photographs 48-0-1860 and 48-0-1861.

The normal water line of Alazan Bay will be delineated by planetable methods on duplicate prints of photographs 48-0-1231 through 48-0-1234 when tide data from a private source becomes available. This data is to be available early in 1950.

Strong southeasterly winds force salt water well up Alazan Bay. During periods of heavy precipitation Agua Dulce Creek is in flood resulting in a larger volume of water in Alazan Bay. *Not in area of T-9193*

See "Special Report on Identification and Delineation of Shoreline in the Laguna Madre, Project Ph-36(48)" to be submitted to Washington at a later date.

See Field Inspection Report, Quadrangle T-9191().

Along the Laguna Madre shoreline, starting in the vicinity of bench mark 117(USE) and extending northeastward approximately 0.75 mile, there is a low bank.

There is also a bank along Alazan Bay. The elevation of this bank varies considerably and recedes inland in several areas.

There are no shoreline structures of any type.

8. OFFSHORE FEATURES

Adequately covered by the photographs.

9. LANDMARKS AND AIDS

There are no aids to navigation or landmarks within the area.

10. BOUNDARIES, MONUMENTS, AND LINES

There are no political boundaries in this quadrangle. See "Special Report, Boundaries, Baffin Bay to Latitude 28°00'."

11. OTHER CONTROL

Bench Mark 117(USE) was identified as a recoverable topographic station. No other control was established. *(No elev. available)*

12. OTHER INTERIOR FEATURES

All roads and trails in the area have been classified according to Photogrammetry Instructions No.10 dated 14 April 1947, as amended 24 October 1947. All roads are private.

There are no bridges or cables over navigable waters in this area.

The only buildings are at Ojo de Agua Camp and are classified according to Photogrammetry Instructions No.29 dated 1 October 1948.

13. GEOGRAPHIC NAMES

*Instructions on file in Div. of
Photogrammetry office files*

** See "Special Report, Geographic Names, Aransas Bay to Baffin Bay, Project Ph-36(48)." *Outline - 854-1**

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

The following are special reports pertaining to this area:

* "Special Report, Supplemental Control, Project Ph-36(48)" forwarded to Washington 20 July 1949.

* "Special Report, Boundaries, Baffin Bay to Latitude 28°00', Project Ph-36(48)", forwarded to Washington 20 July 1949.

** "Special Report, Geographic Names, Aransas Bay to Baffin Bay, Project Ph-36(48)", forwarded to Washington 27 July 1949.

* "Special Report on Identification and Delineation of Shoreline in the Laguna Madre, Project Ph-36(48)", to be submitted at a later date.

Records, Quadrangle T-9193(), forwarded to Baltimore 14 October 1949 by letter of transmittal Ph-36-Field 38.

* Filed in Div. Photogr general files
** " " Div Charts, Geogr. Names Section

Submitted
13 October 1949

Isaiah Y. Fitzgerald
Isaiah Y. Fitzgerald
Cartographer (Photo)

Approved
14 October 1949

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

MAP T. 9193 PROJECT NO. Ph-36(48)C SCALE OF MAP 1:20,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR x -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	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)
BECERRA WINDMILL, 1949	G-8133 P.11 Field	N.A. 1927	27	27	59.491			1831.1	15.7		
			97	28	54.322			1491.5	155.9		
SUB. PT. BECERRA WINDMILL, 1949			27	27				1816.3	30.5		
			97	28				1510.2	137.2		
TLACUACHE WINDMILL 1949	G-8133 P.11 Field	"	27	30	08.836			272.0	1574.8		
			97	28	46.430			1274.4	372.5		
HINDJOSO, 1949	G-8043 P.4 Field	"	27	23	47.661			1467.0	379.8		
			97	29	42.864			1177.6	470.8		
SUB. PT. HINDJOSO, 1949			27	23				1480.1	366.7		
			97	29				1272.9	375.5		
LARGA, 1949	G-8043 P.4 Field	"	27	28	52.917			1628.8	218.0		
			97	27	01.719			47.2	1600.0		
SUB. PT. NO. LLARGA, 1949		"	27	28				1579.8	267.0		
			97	27				44.0	1603.2		
SORDO, 1939	G-4197 P.119	"	27	25	04.547			140.0	1706.8		
			97	23	24.938			685.0	963.1		
SUB. PT. SORDO, 1939	G-4197 P.119	"	27	25				138.3	1808.5		
			97	23				642.0	1006.1		
FRANK 2, 1912	G-6538 P.147	"	27	22	45.900			1412.8	434.0		
			97	28	35.028			962.5	686.2		
SUB. PT. FRANK 2, 1912			27	22				1447.5	399.3		
			97	28				979.1	669.6		
WIND, 1912	G-6538 P.151	N.A. 1927	27	27	28.11			865.2	981.6		
			97	22	35.02			961.6	685.9		

1 FT. = 3048006 METER
 COMPUTED BY: W. Lineweaver
 DATE: 21 December 1949
 CHECKED BY: F. J. Tarcza
 DATE: Dec. 23, 1949
 M. 2388-12

MAP T. 9193

PROJECT NO. Ph-36(48)C

SCALE OF MAP 1:20,000

SCALE FACTOR

None.

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR x -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	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)	FORWARD	(BACK)
MATEO WINDMILL, 1949	G-8133 P.10 Field	N.A. 1927	27	29 18.917				582.3	1264.5		
SUB.PT. MATEO WINDMILL, 1949			97	22 38.027				1043.9	603.2		
SORDO WINDMILL 1949	G-8133 P.10 Field	"	27	29				442.2	1404.6		
SUB.PT. TANQUES DE LUIS WINDMILL, 1949	"	"	97	22				1200.9	446.2		
NOCHE BUENO WIND- MILL, 1949	"	"	27	25 07.979				245.6	1601.2		
SUB.PT. NOCHE WINDMILL, 1949	"	"	97	23 28.896				793.7	854.4		
AURAS WINDMILL, 1949	"	"	27	23				1187.0	659.8		
SUB.PT. AURAS WINDMILL, 1949	"	"	97	23				921.9	726.6		
CALIXTRO WIND- MILL, 1949	"	"	27	23 26.701				821.8	1024.9		
ESTRELLA WIND- MILL, 1949	"	"	97	27 24.680				678.1	970.4		
OJO DE AGUA WINDMILL, 1949	"	"	27	23				861.9	984.8		
PALOMAS WINDMILL 1949	"	"	97	27				501.3	1147.2		
	"	"	27	26				826.2	1020.5		
	"	"	97	26 26.844				1070.2	577.6		
	"	"	27	26 38.968				836.1	1010.6		
	"	"	97	26				1071.6	576.2		
	"	"	27	27 18.581				571.7	1274.8		
	"	"	97	23 37.270				1023.4	624.2		
	"	"	27	27 54.882				1689.3	157.5		
	"	"	97	24 04.026				110.5	1536.9		
	"	"	27	27 52.627				1619.8	227.0		
	"	"	97	25 23.101				634.3	1013.1		
	"	"	27	28 51.561				1587.0	259.8		
	"	"	97	27 01.269				34.8	1612.6		

see next p. for station proper.

COMPILATION REPORT

PH-36(48)C

T-9193

PHOTOGRAMMETRIC PLOT REPORT

The photogrammetric plot report for this area is included in the descriptive report for T-9191 submitted to the Washington Office on 3 May 1950. ✓

31. DELINEATION

Manuscript No. T-9193 was delineated by graphic methods.

Perra Artesian Well was not delineated on the manuscript as suggested by the field party. No well by that name is identified or located on the field photographs and its position is unknown. *Located and identified by Field Edit.*

A discrepancy overlay is being submitted with the manuscript.

32. CONTROL

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

33. SUPPLEMENTAL DATA

In addition to supplemental data listed under item 14, the following supplemental data were furnished for use with this survey.

Geographic name standards No. 5, 8, and 9 furnished by the Washington Office. *Geogr. Names Section, Div. Charts*

Wye leveling book for Project Ph-36(48) Quad 9193 furnished by Field Party. *Photogrammetry general files*

A cahier of correct names and locations of windmills on King Ranch, Texas, submitted by field party. *Geogr. Names Section, Div. Charts*

Boundary sheet No. 2 showing that Commissioner Precinct No. 4 falls partly within the area of this survey.

Also see item 14 of the field inspection report.

34. CONTOURS AND DRAINAGE

No comment.

35. SHORELINE AND ALONGSHORE DETAILS

The delineation of all shoreline was based on data furnished by the field party.

The shoreline in the area of this survey is the subject of a special report.

36. OFFSHORE DETAILS

No comment.

37. LANDMARKS AND AIDS

None.

38. CONTROL FOR FUTURE SURVEYS

Three 524 forms are applicable to this survey. The field party submitted Form 524 for EM 117 (U.S.E.). Forms 524 for LARGA AZ. MK. 1949 and SORDO AZ. MK. 1939 were not submitted by the field party due to instructions prevailing at the time of field inspection. The forms for these stations were prepared and completed at the compilation office. The three completed forms are being submitted with this report.

*Filed in Div. of
Photogrammetry general files under T-9193*

~~The above topographic stations have been listed in item No. 49.~~

39. JUNCTIONS

Junctions with Surveys T-9194 to the east, T-9197 to the south and T-9192 to the west have been made and are in agreement. There is no contemporary survey to the north.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41-45.

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

Survey No. T-9193 has been compared with the Corps of Engineers POINT PENESCAL, TEXAS, quadrangle, scale 1:125,000, edition of 1920-R-1928; the only available map of this area.

47. COMPARISON WITH NAUTICAL CHARTS

Survey No. T-9193 has been compared with USC&GS Chart No. 1286, scale 1:80,000, published August 1, 1949 and corrected to February 20, 1950.

Items to be applied to nautical charts:


None.


Items to be carried forward

None.

Respectfully submitted
20 October 1950

Approved and forwarded
October 1950


Frank M. Wisiecki
Cartographic Photo. Aid


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

T-9193

48. GEOGRAPHIC NAMES *

- Alazan Bay
- ✓ Alazan Mott
- Cayo de Hinoso
- King Ranch
- Laguna Larga
- Laguna Madre
- ✓ Mesquite Well
- Parra Lake

The following names were recommended by field party as geographic names.

- ✓ Alazan Artesian Well
- ✓ Altos Prietos Artesian Well
- Auras Windmill
- Becerra Windmill
- Cabeza Artesian Well
- Calixtro Windmill
- Estrella Windmill
- Mateo Windmill
- ✓ Noche Buena^a Windmill
- Ojo ^{de} Agua Windmill and Camp
- Palomas Windmill
- ✓ Patricia Artesian Well
- Sordo Windmill
- Tandues ^{de} Luis Windmill
- Tlacuache Windmill (off limits of sheet)

Windmill
destroyed
see report p. 7.

* Names from geographic names standards No. 5, No. 8, and No. 9.

Names underlined in
red are approved.

4-23-51.

L. Heck.

Re-checked after Field Edit

5-13-51
- H.

50 -

PHOTOGRAMMETRIC OFFICE REVIEW

T. 9193

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 B
~~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 B

PHYSICAL FEATURES

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

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary lines _____ 32. Public land lines _____

MISCELLANEOUS

33. Geographic names B 34. Junctions B 35. Legibility of the manuscript B 36. Discrepancy overlay B
 37. Descriptive Report B 38. Field inspection photographs B 39. Forms B
 40. Raymond Glaser Reviewer Joseph Steinberg Supervisor, Review Section for 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:

Field Edit Report, T-9193

51. Methods.--Field edit was accomplished by riding out all roads to check their classification and to answer questions raised by the reviewer. All other topographic features were verified as to their existence and classification. In areas inaccessible by roads, driving was done cross-country by Jeep. Corrections, deletions and additions were made on the Field Edit Sheet or photographs and cross-referenced.

The planetable was used for corrections shown on the Field Edit Sheet and direct identification for those on the photographs.

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

Field edit information will be found on the Field Edit Sheet and photographs 48-O-1191, 1193 and 1233 and 1231.

52. Adequacy of compilation.--This quadrangle is well-compiled and will be adequate after application of field edit information.

53. Map accuracy.--From visual inspection and points used to take-off and tie-in with the planetable, the horizontal accuracy appears good.

Four short vertical accuracy checks were made. These tests began and ended vertically at bench marks or fly-level points. Error of closure was less than 0.5 foot in each instance and no adjustments were made. Horizontal origin and termination was at road intersections. Error of closure was negligible.

The four tests were made at the following approximate positions:

Lat. 27 22.6'	Lat. 27 27.0'
Long. 97 24.6	Long. 97 24.3
Lat. 27 23.5'	Lat. 27 28.0'
Long. 97 27.3	Long. 97 29.0

The two tests in the south part proved the contours to be very good horizontally and vertically. The northerly two, where the ground is flatter, proved the contours to be somewhat displaced horizontally but within accuracy requirements vertically. Corrections were made on the Field Edit Sheet.

As a whole the contours are believed to be within standard accuracy requirements.

54. Recommendations.--None offered.

55. Examination of proof copy.--It is recommended that the proof copy

be sent to the King Ranch Office, Kingsville, Texas, and marked for the attention of Mr. Robert C. Wells.

Geographic names.--Geographic names were verified by Mr. Charles Burwell, Foreman of the Laureles Section of the King Ranch. No errors were detected. Mr. Wells of the King Ranch Office states they are in the process of standardizing geographic names on all the King Ranch holdings and that they will make a thorough check when the proof copy is received.

Two artesian wells should have names. They are, ESPERANZA ARTESIAN WELL and FERRA ARTESIAN WELL. These names are recommended for charting and were furnished by the Ranch Foreman. 857-108 5-13-52

Respectfully submitted,
15 October 1951

William H. Shearouse
William H. Shearouse,
Cartographer

REVIEW REPORT T-9193
Topographic Map
15 May 1952

62. Comparison with Registered Topographic Surveys:

T-1627	1:20,000	1881-82
T-1628	1:20,000	1881-82

The configuration and position of the shoreline on T-9193 has changed relatively very little as compared with the previous surveys. One exception is Alazan Bay in the vicinity of latitude $27^{\circ} 23'$ which is approximately 100 meters narrower on T-9193 than that shown on the older surveys. T-9193 supersedes these previous surveys for nautical chart purposes.

63. Comparison with Maps of Other Agencies:

Point Penescal, U.S.E., 30 minute quadrangle, 1:125,000, 1909.

The area of T-9193 falls in Kleberg County, whereas on the U.S.E., quad it is indicated as Nueces County. Agreement between the two surveys is very generalized in other respects.

64. Comparison with Contemporary Hydrographic Surveys:

None

65. Comparison with Nautical Charts:

1286, 1:80,000, ed 1942, corr. 1/14/52

Only a small area of Laguna Madre and Alazan Bay on the chart is common to T-9193. There are no significant differences between T-9193 and the chart.

66. Adequacy of Results and Future Surveys:

This map complies with national map accuracy standards. It is adequate as a base for construction of nautical charts.

67. Shoreline Interpretation and Delineation:

Due to the fact that water stages in this area vary widely with meteorological conditions special methods of representing the shoreline on the map have been adapted. A complete discussion of these methods and reasons for them can be found in the attached correspondence on the specific subject of shoreline mapping in Laguna Madre.

Reviewed by:


F. N. Naki

Approved:

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

J. R. Edmonson
Chief, Nautical Chart Branch
Division of Charts *1973*

O. S. Reading
Chief, Div. of Photogrammetry
pub

Carl O. Heaton
Chief, Div. of Coastal Surveys
At. 7

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

24 February 1950

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.

Comdr. Geo. E. Morris

-3-

24 February 1950

10. Reference should be made to the ~~Handbook~~ ~~COE~~ 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

C
O
P
Y

83-ehw

21 February 1950

To: Chief, Division of Charts
From: Chief, Nautical Chart Branch
Subject: Shoreline in the Laguna Madre

I agree with the plan; (1) to show on the topographic maps a broken line defining the edge of land seldom if ever inundated, in place of the solid line generally used to define the mean high water line, and (2) to define areas frequently inundated by a dotted line, the usual low water line.

Our standard symbols and tints are adequate to depict such areas on the charts without a special note.

The note on the topographic sheet should read:

"The positions of the mean high water line and mean low water line vary widely with meteorological conditions. For this reason, the usual mean high water line has been replaced with a broken line to define the edge of land that is seldom, if ever, inundated. The usual mean low water line symbol, (dotted line) is used to define the edge of areas frequently inundated.

s/ H. C. Edmonsten
Chief, Nautical Chart Branch.

To: 20, 80, 2
From: Chief, Division of Photogrammetry
Subject: Shoreline in the Laguna Madre

15 February 1950

The position of the water line in the Laguna Madre on the Texas coast varies widely with local meteorological conditions. The area is very flat and a 1/10 foot difference in elevation often means 1/10 of a mile in the location of the water line. The range of tide is about 4/10 foot but variations of 2 or 3 feet in the elevations of the water surface occasionally occur due to wind conditions. Comdr. G. E. Morris has written that the only practicable way to determine the position of a mean high waterline or mean low waterline would be to run second order level lines in the area and map the lines on a plane-table. The water line varies too rapidly to be used in place of such levels.

A further complication is that it would be probably necessary to run a new line of first order levels between Corpus Christi and Port Isabel before it would be practicable to determine mean sea level to the nearest 1/10 of a foot in this region. The area, as a whole, appears to be subsiding although the mud flats in Laguna Madre appear to be accreting.

The Humble and the Sun Oil Companies are in litigation concerning the shoreline and would doubtless be glad to have the Coast and Geodetic Survey locate the mean high waterline accurately. However, in view of the difficulty and expense of accurate levels, the location of the mean sea level or other shoreline appears unwarranted for the purposes of this Bureau, unless the accurate determination of subsistence and accretion is deemed important for scientific purposes.

It is recommended that the shoreline be sketched as well as practicable from aerial photographs and studies of the oil companies' surveys. A note similar to the attached would be placed on the nautical charts and a similar note without the references to tints would be used on the topographic maps.

Your comments regarding this recommendation and any revisions of the wording of the note you consider desirable are requested.

/s/ O. S. Reading
Chief, Division of Photogrammetry

Attachment

To: Chief, Div. of Photogrammetry
From: Technical Assistant
Subject: Shoreline in the Laguna Madre

9 Feb. 1950

Attached is a letter from Morris on this subject. You have the original file of correspondence. This memorandum is to present my conclusions. Reference should be made to charts 1286 to 1288 in reading this memorandum.

1. We should not attempt to map either a definite mean high water line or mean low water line on the flats in Laguna Madre.

2. We should map the storm water line as identified on aerial photographs and show it on the manuscripts with a broken line, beginning it on the west shore of Padre Island at about latitude $26^{\circ} 12'$ and extending all the way to Port Aransas. This line would be the limit of the buff tint on the charts. It is now erroneously shown on the charts as the mean high water line.

3. We should map a very approximate extreme low water line in the same area, as sketched by the field party on aerial photographs and show it on the manuscripts by a dotted line. This would be the limit of the green tint on the charts. New nine-lens photographs would be taken for this purpose and the field party would be instructed to make the best possible sketch and would be allotted funds for hiring a plane if needed. We might also study the Humble Oil Company contour map in sketching this line but should not refer to it in the reports or follow any exact contour from it.

4. Each manuscript should carry the following note:

The mean high water line where mapped is shown with a solid black line. For most of this area the mean high water line is extremely indefinite and has not been mapped. The broken line defining the shoreline in most areas represents the edge of land that is rarely, if ever, inundated. The low water line shown as a dotted line on this map was sketched from aerial photographs and indicates the edge of sand and mud flats that are covered by extremely high water but bare at low water and partly covered at intermediate water stages.

5. I think any attempt to survey the mean high water line would be a mistake for these reasons:

(a) The Division of Tides and Currents is not at all sure that Humble Oil tidal observations are adequate to define the mean high water plane.

(b) Any such observations of our own would require a long time.

(c) Any attempt by us to map the mean high water line will only involve us in property line disputes and is not really essential to either the maps or the charts.

6. If you accept this recommendation I think it might be made the subject of a Planning Board Letter, or at least it should be discussed with the Nautical Chart Branch, the Division of Tides and Currents, and the Assistant Director, since it will be a decided departure from usual topographic mapping practices. The note to be placed on the maps should certainly be examined and criticized by both the Chart Division and the Division of Tides and Currents.

/S/ B. G. Jones
Technical Assistant to the
Chief, Div. of Photogrammetry

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.

- - - - -

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

C
O
P
Y

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 Lopena 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 meteorological 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
9
P
T

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 the 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 sufficiently 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 their 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

History of Hydrographic Information
Quadrangle T-9193
Laguna Madre, Texas

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


Hydrographic data is not available for Alazan Bay since no hydrographic surveys have been made in that area.

Soundings at mean low water datum originate with the following:

USC&GS Nautical Chart
894, 1:40,000, aid proof, May 1952

USE Hydrographic Survey
Intracoastal Waterway, Sheet 5, 1931-32, BP-31730

Hydrography compiled by K.N. Maki and verified by R. E. Elkins.



K. N. Maki
Div. of Photogrammetry
22 May 1952

