

5352

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAR 2 1935

Acc. No.

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton., Director

State: TEXAS

DESCRIPTIVE REPORT

Photo
Topographic
Hydrographic } Sheet No. 5352

LOCALITY

~~MATAGORDA BAY~~

MATAGORDA PENINSULA.

~~COTTON BAYOU TO LONG, 939-211~~

Cotton Bayou

1934

CHIEF OF PARTY

T. M. Price Jr., Ensign

applied to chart 1284, Jan. 21, 1938

J. G. L.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
PHOTO

REG. NO. 5352

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 2 - 1

REGISTER NO. 5352

State Texas

General locality Matagorda Bay Peninsula

Locality Matagorda Peninsula, Cotton Bayou to Long, 060-21

Scale 1/20,000 Date of Photographs: December 7, 1933
" " Survey, 19

Vessel U.S. Army Air Corps Camera: Single lens, 8 1/4" cone,
K-3b, # 31-39
Compilation: May, 1934

Chief of party Ensign T. M. Price Jr.

Surveyed by See data sheet in the descriptive report.

Inked by Dan Allen

Heights in feet above _____ to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated November 7, 1933

Remarks: Compilation of aerial photographs #1-1 to #16-1, incl.

Single Lens . Sheet reduced to scale and printed by photo-litho-
graphic process.

- NOTES ON COMPILATION -

SHEET NO. 2--

PHOTOS: Single Lens No.s 4-1 to 16-1. *incl.*

DATE OF PHOTOGRAPHS: December 7, 1933. TIME: 2:14 P.M. to 2:38 P.M.

	BY:	DATE:
SCALE FACTOR (1.00) (sgd)	<u>C. H. Rulfs</u>	4/18/34
PROJECTION (sgd)	<u>T. A. Price Jr.</u>	4/24/34
PROJECTION CHECKED (sgd)	<u>W. H. Burwell</u>	4/24/34
CONTROL PLOTTED (sgd)	<u>L. L. Smith</u>	4/26/34
CONTROL CHECKED (sgd)	<u>C. H. Rulfs</u>	4/27/34

TOPOGRAPHY TRANSFERED

TOPOGRAPHY CHECKED

SMOOTH RADIAL LINE PLOT (sgd)	<u>C. H. Rulfs</u>	5/ 3/34
RADIAL LINE PLOT CHECKED (sgd)		
DETAIL INKED (sgd)	<u>D. E. Allen</u>	5/18/34

AREA OF DETAIL INKED 8.3 sq. statute miles.

LENGTH OF SHORE LINE OVER 200m. 31.4 statute miles.

LENGTH OF SHORE LINE UNDER 200m. 16.9 statute miles.

GENERAL LOCATION: Matagorda Bay, Texas.

LOCATION: Matagorda Peninsula, Cotton Bayou to Long. 96°-21'.

DATUM STATION: <u>Osgood 2, 1906-1934</u>	LATITUDE: <u>28°-27'-38.773"</u>	METERS <u>1193.6</u>
	LONGITUDE: <u>96°-17'-45.277"</u>	<u>1231.7</u>
(position from field computations)		

COMPILER'S REPORT
for
PHOTO TOPOGRAPHIC SHEET FIELD NO. 2

1. GENERAL INFORMATION

This sheet was compiled from photographs taken by the U.S. Army Air Corps using a single lens camera with an $8\frac{1}{4}$ inch cone. The photographs used were Single Lens No. 4-1 to No. 16-1. The first flight for this area was made November 4, 1933 taking 50 exposures, # 29 to # 98, but because of insufficient overlap they were re-taken December 7, 1933 at 2:14 P.M. to 2:38 P.M. making 64 exposures, # 1-1 to # 64-1. The pictures made December 7, 1933 were the ones furnished this party for compilation.

Camera type K-3b, No. 31-39, Lens # 126593

The tide on the outer coast was low at the time these photos were taken.

2. CONTROL

(a) Sources

Triangulation by Lieut. E. O. Heaton, 1934.

* Theodolite three point fixes and short traverse and azimuth locations from triangulation stations were made by field inspection party without establishing recoverable marks.

This control is adjusted to 1927 N. A. Datum.

(b) Errors

No errors in control found by the radial plot.

Because of the original scarcity of control, an attempt was made to locate station MATA in spite of apparent lack of distinctive ground detail. The radial plot with the subsequent introduction of new three-point fix control points showed its location on the photographs to be in error.

(c) Remarks

* The Hydrographic stations on this sheet (shown by black circles) were located on the ground and spotted directly on the photographs by the field inspection party and their position is established by the radial plot only except for three stations the locations of which were established by theodolite three-point fix.

* The following are the names of the 3 point fix stations located by theodolite with 4 th order accuracy and used in controlling the plot of this sheet. Those marked * are also points selected for hydro. stations but were only temporarily marked:

Station	Lat.	Long.
* "B"	28°-25'-52.606"	96°-20'-22.257"
* "C"	28-26-02.130	96-19-59.667
* "M"	28-28-29.895	96-16-26.911
"G"	28-28-04.985	96-16-17.691

3. COMPILATION

(a) Method

The usual radial line method of plotting from single lens photographs was used in the compilation of this sheet. Because the triangulation control did not furnish sufficient grouping of stations to fix any single lens picture, enough supplemental control points were established to give four control points on at least every tenth picture. An exception is that the southwest end of the radial line plot was held by station CAVALLIO, 1934, (not in the limits of this sheet), and a number of points common to the single lens and the five lens photographs of C and D flights. A strong plot having been made for the C and D flights, the intersections for points on Matagorda Peninsula were transferred to this sheet and used to control the single lens radial plot.

(b) Adjustment of Plot

Although some of the photographs covered by this sheet give evidence of tilt, it is not excessive and the radial line plot required no unusual adjustments to give good intersections.

(c) General Description of Topography and Interpretation

For interpretation of this sheet the following notes are given in addition to the General Report of Matagorda and Adjoining Bays, by the Field Inspection Party (filed with Descriptive Report Register No. 5351).

The Gulf coast of Matagorda Peninsula is a wide sand beach sloping gradually upward to steep sand dunes. These dunes along the Gulf side range from approximately 15 feet to 20 feet in height and they gradually diminish in height toward the Matagorda Bay coast fading into low sand flats and marsh. The sand dunes are covered with tall coarse grass and low bushes. No attempt was made to show, on the tracing, the individual dunes, but a symbol was used to generalize ~~their~~ their position.

There are few trees on the peninsula and these are salt cedars,* the tallest not exceeding 15 feet in height. The vegetation in general is coarse grass and salt cedars. The closely spaced sand symbol indicates low wet sand, usually showing where water has broken thru in storms.

(d) Information From Other Sources

The only source of information was that furnished by the photographs and notes written in the photographs by the field inspection party.

**** Note:** No symbol was used to show the sand and mud flats, but in order to lessen possible mis-interpretation these areas were left open. This is not in agreement with the same type of flats found on the adjoining sheet #5353, on which an attempt was made to symbolize this. See descriptive report #5353.

* Although salt cedar trees are evergreen, the "general tree" symbol was used to denote these.

The low water line is accepted as delineated by the field draftsman, pending receipt of hydrographic surveys now under way. The reviewer of the hydrographic survey should bear in mind that this position is approximate and should give more weight to the hydrographic location, accordingly.

R.M.B. 8/19/34

J. J. Jones

3. COMPILATION (Continued)

(e) Conflicting Names

There are no names on this sheet conflicting with names shown on the U. S. C. & G. S. Charts of this area.

(f) Shoals

Shoal areas were outlined by a dotted line from their appearance on the photographs, and this should not be taken as representing the (low water line).

4. COMPARISON WITH OTHER SURVEYS

Surveys of this area were made by the Coast and Geodetic Survey about 1880 (Chart No. 1284).

No comparison was made. see Page 6

This sheet is joined by Sheet (Field No. 3-~~8~~ ^{Register No. 5353}) on the northeast and 1/10,000 planetable sheet of Lieut. E. O. Heaton on the southwest. (Planetable sheet Field Letter "V")

The junction with adjoining sheets is satisfactory.

5. LANDMARKS

The only landmark recommended for this sheet is the Grangerville Club House Chimney, Lat. $28^{\circ}-27'-20''$, Long. $96^{\circ}-17'-31''$, and this only for 1/40,000 scale charts or larger.

6. RECOMMENDATIONS FOR FURTHER SURVEYS

The compilation of this sheet is believed to have the probable error of 5 meters in well defined detail of importance for charting and of 8 meters for other data.

7. RECOVERABLE OBJECTS

There are no recoverable topographic stations on this sheet.

To the best of my knowledge this sheet is complete in all detail of importance for charting purposes, within the accuracy stated above and no additional surveys are required.

Submitted by (Sgd.) Dan Allen

Assisted by (Sgd.) T. H. Price Jr.

Note: The intermittent water areas were cross-hatched with lines parallel to the parallels of latitude, instead of at 45° which is standard.

DETAIL COMPARISON TO SURVEYS TO 1880 (CHART # 1284)*

1. Change in position of M.H.W. line where it crosses the following meridians:

Longitude	Latitude (approx)	Change, old to new **			Remarks
		Gulf M.H.W. meters	Mat. Bay M.H.W. meters	Width of Pen. *** meters	
96°-20'-00"	28°-25'	-170	- 50	-140	
96°-17'-30"	28°-27'	+ 70	0	+100	(Shoals on Bay side now instead of islands.)
96°-15'-00"	28°-28'	+ 65	- 40	0	(no dif. in width if measured to outside of island on each.)
96°-13'-30"	28°-30'	- 25	+380		
96°-12'-30"	28°-30'	- 17	- 30	-120	(Bay shore changed where perpendicular intersects.)

2. General Comparison.

Greatest change is at Greensand Cotton Bayou where marsh and sand have accumulated on the Matagorda Bay shore moving the shore line 300 to 500 meters towards the bay. Both of these former breaks have filled in with sand, and the former connections to the Gulf are now identified by intermittent water and washes.

* Account taken of change of datum.

** accumulation; - recession.

*** Measured approximately perpendicular to the Gulf shore where it crosses the meridial shown.

LANDMARKS FOR CHARTS

Corpus Christi, Texas

July 1, 1934

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

T. M. Price, Jr.

Chief of Party.

Sheet Field # 2 (Reg. # 5352)

[illegible]

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaves and like objects are not sufficiently permanent to chart.

REVIEW OF AIR PHOTO COMPILATION T-5352

1:20,000

Comparison with Graphic Control Surveys

There are no Graphic Control surveys in this area.

Comparison with Previous Topographic Surveys

T-643 (1856) (1:20,000).

T-643 covers Matagorda Peninsula from Pass Canalla to one mile east at Cotton Bayou.

The shoreline of the Gulf of Mexico has receded \pm 75 meters for about two miles at each of the compilations. Elsewhere the coast line is in agreement within 20 meters.

The shoreline of Matagorda Bay has built out \pm 400 meters in the vicinity of Cotton Bayou and Greens Bayou. Elsewhere, it has built out about 50 meters.

T-5352 is adequate to supersede T-643 in all points of detail within the area common to the two surveys.

Comparison with Recent Hydrographic Surveys.

Hydrographic surveys in this area are under way but have not as yet been received in this office.

Comparison with Chart 1284.

A detailed comparison with Chart 1284 is given on page 6 of the Descriptive Report T-5352.

Landmarks and Aids to Navigation.

No landmarks or aids to navigation are charted in this area. One landmark is submitted with the compilation.

General.

The projection checked 0.1 mm across diagonals.

Respectfully submitted,

Ralph M. Berry
Ralph M. Berry.

August 19, 1935.

Approved
K.T. Adams

B. Jones

REVIEW OF PHOTO TOPOGRAPHIC SURVEY NO. 5352

Title (Par. 56) See page one of descriptive report.

Chief of Party T. M. Price Jr.

Compiled by See page two of descriptive report.

Project Party # 20,
Corpus Christi, Texas.

Instructions dated Nov. 7, 1933.

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 8; and 16, a, b, c, d, e, g and i.)
2. The character and scope of the compilation satisfy the instructions and the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs".
3. The control and adjustment of the radial plot were adequate. (Par. 12, 29.)
4. There is sufficient control on maps from other sources that were transmitted by the field party for their application to the charts. (Par. 28.) None submitted.
5. High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.)
6. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) Shoal areas indicated only, by a dotted outline. No low water line was obtained. See note opp. page 5.
7. Important details shown on previous surveys and on the chart have been compared with this sheet and a statement has been entered in the report regarding the removal from the chart or change in position of important detail such as rocks, lights, beacons, prominent objects, bridges, docks, and structures along the water front.
8. The span, draw and clearance of bridges are shown. (Par. 16c.) No bridges over surveyed waters are on this sheet.
9. The data furnished by the Field Inspection is adequate.

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

- ✓10. The descriptive report covers all details listed in the Manual, so far as they apply to this survey. (Par. 64, 65 and 66.)
- ✓11. The descriptive report also contains all additional information required in photo topography as prescribed in the instructions and in the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs".
- ✓12. The descriptions of recoverable stations and references to shore line were accomplished on Form 524, and scaling of positions checked. (Par. 29, 30 and 57.) The only recoverable stations are triangulation stations.
- ✓13. A list of landmarks for charts was furnished on Form 567 and scaling of positions checked. (Par. 16d, e, 60.)
- ✓14. The geographic datum of the sheet is North American 1927 and the reference station is correctly noted. (Par. 34.)
- ✓15. Junctions with contemporary surveys are adequate.
- ✓16. Geographic names are shown on the sheet and are covered by the Descriptive Report. (Par. 64, 66k.) *Approved*
17. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46.)
The hydrographic station symbols are too small and heavy.
- ✓18. No additional surveying is recommended.
19. Remarks: Ground Surveys by theodolite have been used to supplement the the radial plot as discussed in the descriptive report.

20. Examined and approved:

T. M. Price Jr.
T. M. Price Jr.
Chief of Party

21. Remarks after review in office:

See note opposite page 5.

Reviewed in office by: *Ralph M. Berry* & *B. G. Jones*

Examined and approved:

K. T. Adams
Asst Chief, Section of Field Records
Division of Charts
K. T. Adams
Chief, Division of Charts

J. S. Borden
Chief, Section of Field Work
G. W. de
Chief, Division of
Hydrography and Topography.

Date. April 15, 1935

Chart No. 1284

Under investigation. Q

(M-L3)