

5359

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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

State: TEXAS

DESCRIPTIVE REPORT

Photo
Topographic } Sheet No. 5359
Hydrographic

LOCALITY

MATAGORDA BAY

MATAGORDA PENINSULA

Cany Creek to Tiger Island Channel
~~LONGITUDE 95° 36' to LONGITUDE 96° 00'~~

1934

CHIEF OF PARTY

T. M. PRICE JR., ENSIGN

U. S. GOVERNMENT PRINTING OFFICE: 1925

5359

applied to chart 1283
" " " 1284

Dec 6, 1937
Jan. 1938

J.S.R.
J.G.L.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

REG. NO. 5359

TOPOGRAPHIC TITLE SHEET

PHOTO

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. (9)

REGISTER NO. 5359

Dia 1285 (insert)

State TEXAS

General locality MATAGORDA BAY

Locality MATAGORDA PENINSULA, LONG. ~~95° 36'~~ to LONG. ~~96° 00'~~
Cany Creek to Tiger Island Channel

Scale 1/20,000 Date of Photographs November 4, 1933
December 7, 1934
Compilation August, 1934

~~U.S. Army Air Corps.~~ Camera: Single lens, 8 1/2" cone,
K-35, #31-39.

Chief of party Ensign T. M. Price Jr.

Surveyed by See data sheet in descriptive report.

Inked by W. Mack Crook

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 #34-1 to 64-1, incl.,

and ~~#47-50~~^{to #}, incl., Single Lens. Sheet reduced to scale and

printed by photo-lithographic process.

- NOTES ON COMPILATION -

SHEET NO. 9

PHOTOS: Single Lens No. 34-1 to 64-1, incl., and 47-50, incl.

DATE OF PHOTOGRAPHS: Dec. 7, 1933. TIME: 2:14 P.M. to 2:38 P.M.
Nov. 4, 1933. 2:06 P.M. to 2:47 P.M.

	BY	DATE
SCALE FACTOR (1.00) (sgd)	<u>C. H. Rulfs</u>	6/ 6/34
PROJECTION (sgd)	<u>T. M. Price Jr.</u>	6/18/34
PROJECTION CHECKED (sgd)	<u>W. H. Burwell</u>	6/19/34
CONTROL PLOTTED (sgd)	<u>C. H. Rulfs</u>	6/20/34
CONTROL CHECKED (sgd)	<u>W. Mack Crook</u>	6/21/34

TOPOGRAPHY TRANSFERED

TOPOGRAPHY CHECKED

SMOOTH RADIAL LINE PLOT (sgd) C. H. Rulfs & J. R. Reynolds 7/10/34

RADIAL LINE PLOT CHECKED (sgd)

DETAIL INKED (sgd) W. Mack Crook 8/ 7/34

AREA OF DETAIL INKED 30.0 sq. statute miles.

LENGTH OF SHORE LINE OVER 200 m. 57.3 statute miles.

LENGTH OF SHORE LINE UNDER 200 m. 54.7 statute miles.

LENGTH OF SHORE LINE OF LAKES 67.8 statute miles.

GENERAL LOCATION: MATAGORDA BAY, TEXAS.

LOCATION: MATAGORDA PENINSULA, LONG. 95°-36' to LONG. 96°-00'.

DATUM STATION: MAT. PEN. N.B. ^{1883/1934} LATITUDE : 28°-40'-56.248" 1731.6 METERS
LONGITUDE: 95°-48'-52.891" 1436.0
(position from field computations)

COMPILER'S REPORT

for

PHOTO TOPOGRAPHIC SHEET FIELD NO. 9

1. GENERAL INFORMATION

This sheet was compiled from photographs taken by the U. S. Army Air Corps using a single lens K-3B camera #31-39, lens #126593, 8 $\frac{1}{2}$ " cone. The photographs used were Single Lens No. 34-1 to No. 64-1, inclusive, and No. 47 to No. 50, inclusive. The first flight for this area was made November 4, 1933, 2:06 to 2:47 P. M. covering the coast and Matagorda Peninsula from San Luis Pass to Pass Cavallo. Because of insufficient overlap another flight was made over the peninsula SW of Cany Creek on December 7, 1933, 2:14 P. M. to 2:38 P.M. and consisted of 64 exposures, No.1-1 to No. 64-1. The photographs taken on November 4, 1933 NE of Cany Creek which were furnished are numbered 47 to 92. The tide on the Gulf Coast was low at the time the photos # 1-1 to # 64-1 were taken, and was approximately half high when the photos # 47 to # 92 were taken

2. CONTROL

Triangulation by Lieut. E. O. Heaton, 1934. *(Field parties' geographic positions were used)*

* Theodolite three point fixes and short traverse and azimuth locations from triangulation stations were made by the Field Inspection Party without establishing recoverable marks. *(4th.order accuracy)*

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

Former triangulation was incorporated in the 1934 triangulation. Note: For method of controlling plot see paragraph # 3.

* Note: For the names and G.P.s of the 3 pt. fix stas. see bottom of this page.

3. COMPILATION

(a) Method

The usual radial line method of plotting from single lens photographs was used in the compilation of most of this sheet and a combination of single lens and five lens plot was used for the remainder. In the single lens plot, because the triangulation control did not furnish sufficient grouping of stations to fix any individual single lens picture, enough supplemental theodolite three point fix control points were established to give four control points on at least every tenth picture, or three on two adjoining photographs.

* Note: The following are the theod. 3 pt. fix stations used in this plot:

Station: "Wed"	Lat. 28°-37'-54.474"	Long. 95°-55'-55.282"
" " "Ding"	Lat. 28-39-05.557	Long. 95-52-48.937
" " "Isa"	28-40-43.428	95-49-38.393
" " "Pin"	28-42-13.340	95-45-32.923
" " "Hap"	28-45-07.407	95-41-26.259

3. COMPILATION (CONTD)

(b) Adjustment of Plot

It was necessary to control the N.E. end of the radial line plot, from Long. 95°-36' to Long. 95°-39', largely by intersections obtained by making a radial plot of the five lens photos of the L-flight which overlap the single lens photos considerably in the vicinity of Cany Creek. The five lens photos were well controlled and practically all the points on the single lens photos had been marked on the wing prints of the L-flight. A special projection with the scale factor of one was made and a strong plot using five lens photos was obtained. The intersections obtained for points common to the two flights were transferred to this sheet (#9). It was only necessary to plot approximately three pictures to obtain a connection between these transferred intersections and the last single lens photo fixed by computed control stations. The connection obtained was perfect.

No photographs covered by this sheet gave evidence of excessive tilt and the radial line plot required no unusual adjustment to give good intersections. ^{no?}

(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 within the limits of this sheet consists of a wide sand beach sloping gradually upward to meet a prairie. This prairie covers the central portion of the peninsula and is made up of tall, coarse grass and bushes on a sandy soil. Occasionally there are found groups of trees, *salt cedars 10 to 15 ft. in height, usually near houses for which they serve as windbreaks. The side of the peninsula adjacent to Matagorda Bay is marsh land covered with tall grass and separated from the prairie by a strip of sand and mud. The M.H.W. on this side is usually marked by the ending of the marsh grass, a dark line on the photographs, and occasionally by a definite tho very narrow sand beach. The peninsula on the bay side is indented by numerous bayous, some extending almost all the way across the peninsula and one, Brown Cedar Cut, forming a pass from Matagorda Bay to the Gulf of Mexico. Many lakes and ponds, some intermittent in nature, are found all along the peninsula. These are all very shallow and are usually bounded by marsh.

Near the N.E. end of this sheet, at Long. 95°-40', the peninsula joins the mainland. This junction is marked by a widening of the peninsula into marshy ground with many winding bayous and merging with the higher ground that forms the mainland.

Several marsh covered islands are to be found in Matagorda Bay near the Peninsula, and a number of shoals

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

3. COMPILATION (CONTD)

(c) General Description of Topography and Interpretation (contd)

extend out from the bay shore. There is a particularly large shoal area at the bay entrance to Brown Cedar Cut.

The few houses along the peninsula are shown slightly exaggerated in size due to the small scale of the sheet. There was no cultivation within the limits of this sheet. Sand and mud areas have been left open and labeled as such.

There were no first order roads within the limits of this sheet, a double full line being used to indicate the importance rather than the nature of the road. A double broken line was used for less important roads. Trails were indicated by a single dash line. Shoal areas (indicated by a dotted outline) were shown from their appearance from the photos

(d) Bridges (alone, This should not be taken as representing low water line.

The only bridge on this sheet is over the Intracoastal Waterway near Cany Creek. It is a wooden swing highway bridge owned by the U. S. War Department. It has a pier extending 26 ft. from the S.E. bank of the canal but no pier on the N.W. bank. The clear width on each side of the center when the draw is open is 50 ft. Clear height above M.L.W. is 6.5 ft. and above H.W. is 3.5 ft.

(e) Information From Other Sources

The only source of information was that furnished by the photographs and the notes written in the photographs by the Field Inspection Party, and the clearance of the bridge which was furnished by the U. S. Engineers Office, Galveston, Texas.

(f) Conflicting Names

There are no names on this sheet conflicting with names shown on the U. S. C. & G. S. Charts of this area. The name Smith's Landing, and the town symbol should be removed from

(g) List of New Names (chart 1117.

GREEK ISLAND
HOG ISLAND
SPRING BAYOU
BROWN CEDAR CUT

The above listed new names were given to represent localities hitherto not named on charts. GREEK I. was the name given by the Matagorda Rec. Survey for the small island just S.W. of TIGER I. The other names are those in common usage among the local inhabitants.

(h) Junction with Sheets

This sheet is joined by sheet Register No. 5353 (Fld. No. 3) on the S.E., and by Sheets Reg. Nos. 5360 and 5361 on the N. E. and Reg. No. 5358 on the N. W. at Long. 95°-59'. The junction with adjoining sheets is satisfactory.

4. COMPARISON WITH OTHER SURVEYS (Note: Also see paragraph #5 "LANDMARKS")

Surveys of this area were made by the Coast and Geodetic Survey about 1880, (Charts #1283 & #1284) and by the Intracoastal Waterway Survey, U. S. Engineers 1927-28 (Section 8, Sheets 3 & 4). No comparison was made to the U. S. E. surveys.

DETAIL COMPARISON TO SURVEYS TO 1880, ^{and 1897} (CHARTS #1283 & #1284)*

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

Longitude	Latitude (approx)	Change, old to new **		
		Gulf M.H.W. m.	Mat. Bay M.H.W. m.	Width of Pen.*** m.
96°-00'-00"	28°-36'	- 95	+ 20	-240
95°-57'-30"	28°-37'	- 81	-130	-154
95°-55'-00"	28°-38'	-105	- 19	-180
95°-52'-30"	28°-39'	- 83	- 73	- 73
95°-50'-00"	28°-40'	-123	- 50	-245
95°-47'-30"	28°-41'	-110	- 41	-130
95°-45'-00"	28°-42'	-173	- 32	-225
95°-42'-30"	28°-43'	-384	- 14	-391
95°-40'-00"	28°-45'	-320	+ 23	-193
95°-37'-30"	28°-46'	-350		
95°-36'-00"	28°-47'	-235		

2. Gulf shore line has moved inland 235 to 385 meters from Long. 95°-36'-00" to Long. 95°-42'-30".

Course of Cany Creek at Long. 95°-37'-30", Lat. 28°-46'-00" at the entrance to the Intracoastal Waterway ~~has~~ changed.

Stream shown at Long. 95°-39'-00", Lat. 28°-45'-45" on Chart #1283 is now marsh.

Open water and Islands, shown on Chart # 1283 from Long. 95°-39' to 95°-40', Lat. 28°-45' to 28°-45'-30", is now marsh; and bayous extending East as far as Long. 95°-38' on land shown as dry on Chart # 1283. There is a lake at Long. 95°-38', Lat. 28°-45'-30" not shown on Chart #1283.

The width of the peninsula has greatly decreased in the vicinity of Brown Cedar Cut due to erosion of the Gulf shore, and the shape of the cut is different from that shown on Chart #1283. Erosion on the Matagorda Bay side of this cut has formed several islands at this point that were shown as part of the peninsula on Chart #1283.

A road shown on Chart #1283 at Long. 95°-44', Lat. 28°-42'-30" is no longer in existence.

The town of Smith's Landing, shown on Chart #1287 at Long. 95°-45', Lat. 28°-42'-30" is no longer in existence.

* Account taken of change of datum.

** + Accumulation; - Recession.

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

Note The accuracy given on the opposite page is high for work on this scale. A better estimate is an accuracy of location of 0.3 to 0.5 mm on the ~~map~~ sheet for intersected points and 0.3 to 0.8 mm for other points.

B. G. Jones.

4. COMPARISON WITH OTHER SURVEYS (CONTD)

2.(Contd). The islands along the Intracoastal Waterway between Long. 95°-40' and 95°-41' should be changed to agree with this compilation.

The Island shown on Chart #1284 at Long. 95°-50'-30", Lat. 28°-40'-30" is now part of the peninsula, as is the island shown on Chart #1284 at Long. 95°-51', Lat. 28°-39'-45".

The large lake shown on Chart #1284 at Long. 95°-58', Lat. 28°-37' has almost disappeared, being very small now.

See Note * and **

5. LANDMARKS

No landmarks are recommended for this sheet.

The following features shown on former charts should be removed:

- (1) Road at Long. 95°-44'-30", as on Chart #1283, no longer in existence.
- (2) Roads on South and West sides of Cany Creek, on Chart #1283, now only trails.
- (3) "Smith Landing", as on Chart # 1117, Long. 95°-45'-00", Lat. 28°-42'-30", no longer in existence, should be deleted from chart.

See Note **

6. RECOVERABLE OBJECTS

recommended for H. & T. stations

There were no recoverable objects within the limits of this sheet.

Additional Rec.H&T stations in this area located in 1937 and the forms 524

7. RECOMMENDATION FOR FURTHER SURVEYS

are filed under No. T-6612. T.M.P. Aug. 3, '38

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. It is understood that the width of roads, etc., may be slightly expanded in order that the detail may be kept clear and to keep it from photographing as a solid line in the photo-lithographic process.

See opposite page.

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) *W. Mack Crook*
W. MACK CROOK

Assisted by (sgd) _____

*Note: Comparison with the present hydrographic survey may disclose changes in the appearance of the new and the old breaks through Matagorda Peninsula. Since, at these breaks, no representation would be true for long, it is thought impracticable to change the sheet in this respect at this time.

**Note: The day beacons that come within the area covered by this sheet were not located by triangulation and could not be located on the photographs. Their position will be determined by the hydrographic party but they will not be transferred to and shown on this compilation.

*** Note: The intermittent pond symbol on this sheet has the cross hatch lines parallel to the lines of latitude instead of at 45° which is standard.

Survey No. T- 5359

Date. July 2, 1935

GEOGRAPHIC NAMES

Chart No. 1117 & 1283-4

Texas

Diagram No. _____

Approved by the Division of Geographic Names, Department of Interior. ✕

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

[illegible]

REVIEW OF AIR PHOTO COMPILATION T-5359

Scale 1:20,000

Comparison with Graphic Control Surveys.

There are no graphic control surveys in this area.

Comparison with Previous Topographic Surveys.

T-557 (1856) 1:20,000.

T-557 covers the area of the head of Matagorda Bay.

The alignment of Cany Creek is within 20 meters of the position shown on the compilation except that it is shown as flowing directly into the Gulf of Mexico instead of into Matagorda Bay via the Intracoastal Waterway as is now the case.

The shore line on the Gulf of Mexico side of Matagorda Peninsula has receded about 250 meters.

The shore line on the Matagorda Bay side of Matagorda Peninsula has receded 50-75 meters.

Brown Cedar Cut now makes an island out of the major portion of Matagorda Peninsula, formerly shown as contiguous with the mainland.

The area at the head of Matagorda Bay, between Matagorda Peninsula and the spoil banks of the Intracoastal Canal, has filled in about 3/4 of a mile from the original shore.

The compilation is adequate to supersede T-557 in all points of detail within the area common to the two surveys.

T-642 (1857) 1:20,000.

T-642 covers both shores of Matagorda Bay from Lake Austin to Tiger Island Channel.

Both shores of Matagorda Peninsula have receded; on the Gulf side, 10-200 meters; on the Bay side, 50 to 100 meters.

The compilation is adequate to supersede T-642 in all points of detail within the area common to the two sheets.

Comparison with Recent Hydrographic Surveys.

The hydrographic surveys in this area are under way but have not yet been received in this office.

H-5858 and H-5865, hydrographic surveys covering this compilation have been received by the office but have not been examined. Several clay beacons and iron pipes are shown on these hydrographic surveys but have not been transferred to T-5359. Between the date of the photographs and the date of H-5865, deepening of the Colorado River channel had progressed practically thru Matagorda Peninsula at Long. 95°58'. The compilation does not show this cut but shows the topography as of December 1933.

Frank G. Enline 12/4/35

Comparison with Charts 1283 and 1284.

A very complete and detailed comparison with Charts 1283 and 1284 is found on pages 6 and 7 of the descriptive report for this compilation.

Landmarks and Aids to Navigation.

No landmarks are charted in this area and none are submitted with the compilation.

Day beacons charted in this area are not shown on the compilation but the new hydrographic survey (not yet in this office) is referred to as the latest source for their number and position.

Respectfully submitted,

Ralph M. Berry

Ralph M. Berry.

B. G. Jones

August 14, 1935.

Approved
K.T. Adams

REVIEW OF AIR PHOTO COMPILATION NO **Field #9**
Register 5359

Chief of Party: T. M. Price

Compiled by: see descriptive report

Project: **Party #20**
Corpus Christi, Texas

Instructions dated: **Nov. 7, 1933**

- ✓1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b, c, d, e, g and i; 26; and 64)
- ✓2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g, n)
- ✓3. Ground surveys by ~~plane table, aneroid, and~~ theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d, e)
- ✓4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)

None Transmitted
- ✓5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.

No contemporary plane table or hydrographic surveys in the area covered by this sheet.
 Comparison made to boat sheet only. *Hydrographic surveys not yet in office 8/15/35*
- ✓6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c, h, i)

No unusual or large adjustments necessary
- ✓7. High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

- ✓8. 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 dotted outline,
No low water line obtained. (Not changed, pending arrival of hydrographic surveys.)

- ✓9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)

No recoverable H. & T. stations recommended.

- ✓10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)

No landmarks recommended

- ✓11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)

- ✓12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts ~~and from the~~ ~~Handbook of Geographical Names~~ is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)
Names approved.

- ✓13. The geographic datum of the compilation is N. A. 1927 and the reference station is correctly noted.

- ✓14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)

- ✓15. The drafting is satisfactory and particular attention has been given the following:

1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
2. The degrees and minutes of Latitude and Longitude are correctly marked.

- ✓3. All station points are exactly marked by fine black dots.
- ✓4. Closely spaced lines are drawn sharp and clear for printing. Reproduction unsatisfactory.
- ✓5. Topographic symbols for similar features are of uniform weight.
- ✓6. All drawing has been retouched where partially rubbed off.
- ✓7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

✓16. No additional surveying is recommended at this time.

17. Remarks:

18. Examined and approved;

I. L. Price, Jr.
Chief of Party

I. L. Price, Jr.

19. Remarks after review in office:

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
L. O. Robert
Chief, Division of Charts

J. S. Borden
Chief, Section of Field Work
G. H. Hude
Chief, Division of Hydrography
and Topography.