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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. 5351
Hydrographic }

LOCALITY

MATAGORDA BAY, TEXAS

~~PORT O'CONNOR~~

~~TO AND GALLINIPPER POINT~~

Gallinipper Point to Port O'Connor

1934

CHIEF OF PARTY

T. M. Price Jr., Ensign

U. S. GOVERNMENT PRINTING OFFICE: 1923

5351

applied to chart 1284 Jan. 1938 J.G.L.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5351

PHOTO
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. 1

REGISTER NO. 5351

State Texas

General locality Matagorda Bay

Locality Gallinipper Point to Port O'Connor to Gallinipper Point

Scale 1:20,000 Date of Photographs..November.23.1933..
Survey
Compilation..April-May..1934..

~~Vessel~~ Army Air Corps Camera: Fairchild T-3A-31-76

Compilation Party # 20, Corpus Christi, Texas

Chief of party T. M. Price Jr.

Surveyed by See data sheet in the descriptive report

Inked by J. R. Reynolds

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 C1 - C24, E1 - E13.

Sheet reduced to scale and printed by photo-lithographic process.

- NOTES ON COMPILATION -

SHEET NO. 1 (5351)

PHOTOS, No. C-1 to No. C-24
No. E-1 to No. E-13 (in part)

DATE OF PHOTOGRAPHS November 23, 1933

TIME "2:51 - 3:00 P.M.
3:22 - 3:45 P.M.

	BY	DATE
SCALE FACTOR (1.01)(sgd)	<u>W. H. Burwell</u>	3/10/34
PROJECTION (sgd)	<u>T. M. Price Jr.</u>	3/13/34
PROJECTION CHECKED (sgd)	<u>W. H. Burwell</u>	3/14/34
CONTROL PLOTTED (sgd)	<u>J. R. Reynolds</u>	3/15/34
CONTROL CHECKED (sgd)	<u>W. M. Crook</u>	3/15/34

TOPOGRAPHY TRANSFERRED

TOPOGRAPHY CHECKED

SMOOTH RADIAL LINE PLOT (sgd)	<u>J. R. Reynolds</u>	3/30/34
RADIAL LINE PLOT CHECKED (sgd)	<u>T. M. Price Jr.</u>	3/31/34
DETAIL INKED (sgd)	<u>J. R. Reynolds</u>	5/15/34

AREA OF DETAIL INKED 51.8 Sq. statute miles

LENGTH OF SHORE LINE OVER 200m. 40.2 Statute miles

LENGTH OF SHORE LINE UNDER 200m. 17.3 Statute miles

GENERAL LOCATION Matagorda Bay, Texas

LOCATION Port O'Connor to Gallinipper Point

DATUM STATION	<u>Indianola 2, 1934</u>	Latitude 28-31-49.124	Meters <u>1512.3</u> (unadjusted)
		Longitude 96-30-43.904	1193.7
		(position from field computations)	

COMPILER'S REPORT
for
PHOTO TOPOGRAPHIC SHEET FIELD NO. 1 (5351)^{Reg. No.}

1. GENERAL INFORMATION

This sheet was compiled from photographs taken by the U. S. Army Air Corps using Fairchild r-3A camera # 31-76. The photographs used are # 1-24 C flight and a part of # 1-13 E flight. The flights for the photographs were made November 23, 1933 at 2:51 - 3:00 P.M. and 3:22 - 3:45 P.M. respectively.

The tide in Matagorda and Espiritu Santo Bays is small and the only difference in its stage that would affect interpretation of the aerial photographs would be caused by strong continued winds. The height of water at the time the pictures were taken however is considered normal.

2. CONTROL

(a) Sources

Triangulation by Lieut. E. O. Heaton, 1934.
This control is adjusted to 1927 N.A. Datum.
The field parties' geographic positions were used. The difference between the unadjusted and final adjusted positions would be unplotable at the scale of this compilation.

(b) Errors

No errors in control found by radial line plot.
An error in the field inspection parties' location of Port O'Connor, Beacon # 3 was brought out by the radial plot. This beacon was first spotted at the SW end of the jetty and has been relocated properly 7 meters NE along jetty from the end. This beacon does not show on this sheet but was used by joining another sheet, and was a factor in the radial plot in the vicinity of Port O'Connor.

* T-5045 also

(c) Remarks

The U.S. Engineers stations shown on this sheet were relocated by observations by Lieut. E. O. Heaton, 1934.

The hydrographic stations (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.

* Detail from the southern end of this compilation was transferred to T-5045 giving about a mile overlap on the two surveys. Paragraphs in this report concerning detail in the vicinity of Port O'Connor apply also to T-5045.

3. COMPILATION

(a) Method

The usual radial line method of plotting from five lens photographs was used in the compilation of this sheet. There was no departure from standard practice *

(b) Adjustment of Plot

The photographs covered by this sheet appear to be free of excessive tilt and scale fluctuation and the radial plot required no unusual adjustments. The control is strong and the radial plot gave good intersections. The only difficulty experienced was caused by the wrong location of Port O'Connor Beacon #3 as explained above under Control Errors.

(c) General Description of Topography and Interpretation

In addition to the General Report of Matagorda and Lavaca Bays by the Field Inspection Party (filed with Descriptive Report Register No. 5351) the following notes are submitted to act as a guide in the interpretation of this sheet since the compiler also assisted in the field inspection of this area:

The coast line of Matagorda Bay between Port O'Connor and Gallinipper Point is in general a narrow sand and shell beach. There are no large trees here and the country, for the most part, is pasture land with grassy sloughs. In the vicinities of Indianola Island, Port O'Connor and Station "Bargo", there are some heavy brush growths. The brush growth shown on this sheet is mesquite, huisache, scrub oak and salt cedar, the tallest seldom exceeding 15 or 20 feet. The "general tree" symbol was used to denote all of the above growths.

No difficulty was experienced in interpreting the photographic detail.

The low bluff running along the coast was exaggerated in size due to the small scale. Bluff height is from 9 feet to 2 feet.

There were no first order roads in this locality and a double full line was used to indicate the importance rather than the nature of the road. The main roads to the different localities were indicated as such. A double broken line was used to indicate ~~private roads~~ and roads of lesser importance; ~~an exceedingly~~ poor road was shown by a single dash line. This symbol was also used to indicate grass covered streets.

An abandoned railroad which parallels the Port O'Connor-Seadrift highway was shown with a single dash line and legend. This was considered of sufficient importance to indicate, but although it is an embankment of 2 or 3 feet this latter feature was not considered of sufficient prominence to show with hachures.

*Intermittent ponds were cross hatched with lines parallel to the parallels of latitude instead of at 45° which is standard.
Recut to 45° on the Negative*

* Note: Both office and field photographs of C, D, and E, flights were received from Brooks Field already trimmed.

All boundaries of shallow water areas (shown by low-water sand symbol) on this sheet were so indicated from their appearance on the photographs alone and cannot be taken as representing the low water line until later revised from hydrographic or ground surveys. No low water line obtained. Approx. low water and shoal areas have been indicated by the same symbol (sanding outside the high water line). See note under "Landmarks" Page 6 P.P. 5.

(d) Information From Other Sources

The high water line and the shoal area in the vicinity of Port O'Connor between Lat. $28^{\circ}-25'-30''$ and Lat. $28^{\circ}-26'-30''$; Long. $96^{\circ}-24'-10''$ and Long. $96^{\circ}-25'-30''$ were obtained by plane table (sheet "V") survey, E. O. Heaton, 1934. This detail was transferred by proportion from the 1:10,000 scale plane table sheet in order to give a straight line junction, and it was found to be in agreement with the detail as represented by the photographs. T5045
a/b

(e) Conflicting Names

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

(f) List of Names

Foster Ranch

W. L. Moody Jr. Ranch

The above new names were given to represent localities hitherto not named on charts. Local inhabitants were the source of these names and they have general acceptance in the locality. The following new names were taken from the Calhoun Co., Texas map: Old Town Lake; Blind, Boggy, La Salle, Orange, Huckleberry, Big Dam Bayous.

4. COMPARISON WITH OTHER SURVEYS

Surveys of this area were made by the Coast and Geodetic Survey about 1880 (chart #1284) and the Intracoastal Waterway Survey, U. S. Engineers 1927-8 (Sheet #1 Section #9). No comparison to the U. S. E. surveys was made. See Page 7 for comparison to chart #1284.

This sheet is joined by sheet Reg. No. 5357 (field No. 7) on the northeast, by Sheet Reg. No. 5364 (field No. 14) on the southeast, Now joined by
T5045, 1:20,000. and 1:10,000 plane table sheet "V" of Lieut. E. O. Heaton on the southwest. The junction with adjoining sheets is satisfactory.

5. LANDMARKS

note: The beacon marking a wreck at Lat. $28^{\circ}31.3'$ Long. $96^{\circ}28.4'$ was not located by triangulation and can not be seen on the photographs. It will be located later by the hydrographic party, but will not be shown on this compilation.
Certain buildings in Port O'Connor were considered but rejected because it is thought they are not sufficiently conspicuous. Building (Moody barn), recommended as landmark and listed on form #567 (list of landmarks). T5045
a/b

The following landmarks and features shown on former charts covered by this sheet should be removed.

(1) All roads shown which do not agree with this sheet, because of changes since last survey.

(2) St. L. B. & M. Ry. into Port O'Connor should be shown as abandoned. T5045
a/b

5. LANDMARKS (Continued)

(3) Tank (Lat. $28^{\circ}-26'-32''$, Long. $96^{\circ}-24'-38''$) landmark at Port Connor should be removed because it is no longer in existence. T5045 a/b

(4) Building (Lat. $28^{\circ}-26'-32''$, Long. $96^{\circ}-24'-10''$) should be removed because it is no longer existent or no longer prominent. T5045 a/b

Note: Formerly a hotel. Now the site is occupied by a house which is not prominent.

(5) The double dash line extending offshore at Lat. $28^{\circ}-26'-32''$, Long. $96^{\circ}-24'-38''$, and the parallel single dash lines extending off shore at Lat. $28^{\circ}-30'-50''$, Long. $96^{\circ}-29'-15''$, have no present significance as could be seen from the photographs and ground observations but their removal should be subject to the approval of the officer executing the hydrography of this vicinity. T5045 a/b

Note: The above double dash line indicated a pier which does not now exist. However, several piles of this pier exist and are a danger. These piles could not be located accurately by use of the photographs. T5045 a/b

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

7. RECOVERABLE OBJECTS

The following recoverable objects are among the points selected by the field inspection party for hydrographic stations and their position was determined by the radial plot of this sheet. The field inspection party has submitted descriptions of recoverable objects on Form 524 for those objects marked (d). The hydrographic party has not at this time assigned names to these objects, but these will be added latter if possible.

<u>Object</u>	<u>Lat.</u> o ' "	<u>D.M.</u> met.	<u>Long.</u> o ' "	<u>D.P.</u> met.	<u>Description</u>
Stovepipe	28-34	1752.8	96-34	847.1	on N. side of shack ✓
North Gable (d)	28-33	(95.2) 1334.1	96-32	(783.4) 864.0	N peak of, on house ✓
Windmill	28-33	(513.0) 1570.4	96-33	(766.9) 272.3	✓
WHITE (Tank) (d)	28-32	(276.7) 1587.6	96-31	(1358.5) 462.5	White ✓
Chimney (d)	28-27	(259.5) 519.5	96-24	(1168.5) 673.0	In center of W side of house T5045 a/b
Chimney	28-26	(1327.5) 1805.4	96-24	(959.5) 329.7	Large white house T5045 a/b
Tank (X)	28-26	(41.6) 1404.6	96-24	(1302.8) 267.1	Large white storage T5045 a/b
Barn (d)	28-25	(442.4) 1486.0	96-27	(1365.4) 836.8	Center of Moodys barn T5045 a/b
		(361.0)		(796.0)	

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) J. R. Reynolds
J. R. Reynolds

Assisted by (sgd) T. M. Price Jr.
T. M. Price Jr.

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

1. Change in position of M.H.W. where it crosses the following meridians or parallels.

Latitude	Longitude	Change, old to new ** (meters)	Remarks
near 28°-35'-00"	on 96°-34'-00"	- 30	
on 28°-35'-00"	near 96°-35'-00"	-102	
near 28°-33'-30"	On 96°-31'-30"	75	
on 28°-33'-00"	near 96°-31'-00"	-125	
near 28°-31'-30"	on 96°-30'-00"	-100	
on 28°-31'-00"	near 96°-29'-30"	- 58	
near 28°-28'-00"	on 96°-25'-00"	-510	} Shoreline has moved inshore opening lake and forming a spit at entrance.
on 28°-28'-00"	near 96°-25'-00"	-450	
on 28°-27'-00"	near 96°-24'-00"	-165	
on 28°-26'-30"	near 96°-24'-00"	-485	

2. Powderhorn Lake.

	Latitude	Longitude	Change	
North shore near	28°-30'-30"	on 96°-30'	-160	) Width of lake on 96°-30' has increased 205 meters.
South shore near	28°-29'-30"	on 96°-30'	- 45	

3. General Comparison.

- (1) Shape of Indian Point is different.
- (2) Lake at Lat. 28°-31'-23", Long. 96°-31'-30" is now twice as large and long axis has changed in direction from NW-SE to W and E.
- (3) Entrance to Broad Bayou is different.
- (4) Lake at Lat. 28°-27'-45", Long. 96°-25' has different shape and entrance has changed.
- (5) Greatest change in shoreline between Indianola Island and Port O'Connor where the shoreline has moved inshore from 50 meters to 500 meters.

* Account taken of change of datum.

** + accumulation; - recession.

FIELD INSPECTION REPORT

for

MATAGORDA and ADJOINING BAYS

This report covers the territory adjoining Matagorda Bay, Lavaca Bay, Keller Bay, Cox Bay, Karankawa Bay, Turtle Bay, Trespalacios Bay, and Oyster Lake. The following notes are submitted to act as a guide in the compilation of the sheets for this area including Matagorda Peninsula and that land which falls within the middle half of the wing prints, about four miles inland from the coast line. These are compiled by notes and sketches made by the field party and through a knowledge of this locality obtained by the field inspector in locating control on the aerial photographs, and establishing supplementary control points.

GENERAL DESCRIPTION OF TOPOGRAPHY

It is thought best to divide the field inspection report into several parts, each relating to that specific territory covered by a Photo-Topographic Sheet. This is done in order that each draftsman may more easily obtain that which has reference to his particular compilation. In most instances the draftsmen assisted in the field inspection of the area covered by their compilation.

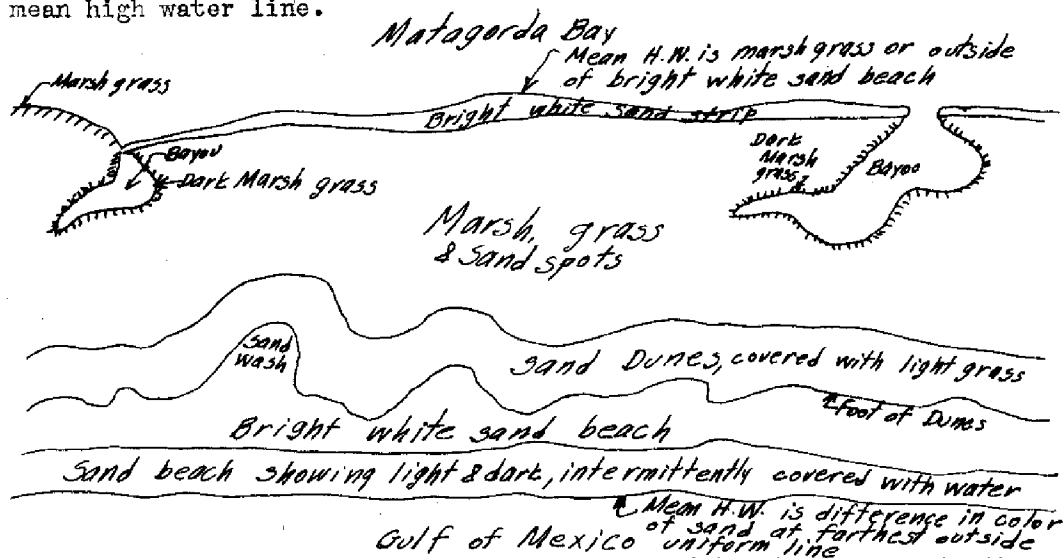
1. MATAGORDA PENINSULA

This narrow stretch of land separating Matagorda Bay from the Gulf of Mexico runs N.E. by East from Lat. $28^{\circ}-24'$; Long. $96^{\circ}-22'$ to Lat. $28^{\circ}-45'$; Long. $95^{\circ}-40'$. On the Matagorda Bay side the water is shallow and the land usually marshy with frequent bayous cutting into the peninsula, sometimes extending to the Gulf of Mexico. Infrequently there are found narrow stretches of sand bordering Matagorda Bay and usually sand bars are found paralleling the shore and extending into the bay normal to the shore. With the exception of a few 15 foot salt cedar trees near the S.W. corner of Matagorda Peninsula, the vegetation consists uniformly of marsh grass, sand spots and small water spots. Beach grass is found on the sand dunes which parallel the peninsula on the Gulf side. 8-12 foot salt cedars are found in spots on the peninsula, usually near an inhabited or an abandoned dwelling. The high water line on the bay side is apparent on the photographs as just outside the line of marsh grass or by variation in coloring when the beach is sandy. Some difficulty is to be expected in the vicinity of bayou openings in the determination of mean high water line as sand bars show no definite line marked by the mean high water. In most instances the bars are under water when the tide is at mean high.

A characteristic of the beach along the Gulf side of the Matagorda Peninsula is the built up sand ridge which extends about 100 meters inland from the Gulf mean high water line. The sand dunes are found only on the Gulf side of the peninsula and are of maximum height (approximately 20 feet) in the southern half of Matagorda Peninsula and seem to get smaller about Long. $96^{\circ}-02'$ (approximately 6 feet) and then die out about Longitude $96^{\circ}-00'$. There are slight

depressions inland on the Gulf side of the sand dunes. These depressions are sometimes filled with water from the wash of high waves. The sand in the depressions usually shows darker on the photographs than the beach sand adjacent to the water although sometimes it becomes difficult to distinguish it on the photographs. It is to be noted that the beach slopes steeply between the mean high water and the low water line on the Gulf side of Matagorda Peninsula and the stage of the tide would have little influence on the interpretation of the mean high water line.

A local resident has stated that the strip of beach between the mean high water line as present and the foot of the sand dunes was built up by the storm of September, 1933 and that the old mean high water line was near the foot of the sand dunes. No verification for this information could be found except that the photographs in the vicinity of Long. 95°-56' seem to verify the location of the old mean high water line.



The above sketch shows the nature of the topography in the southwestern half of Matagorda Peninsula. In the northeastern half of Matagorda Peninsula the topography is the same with the exception that the sand dunes gradually decrease in height and then disappear about Long. 96°-00'.

There is no cultivation on the peninsula although parts of it are used for grazing cattle, principally in the vicinity of Station GORDA.

2. MATAGORDA BAY, West Coast

The shore line here can be identified on the photographs as a faint line showing a difference in sand coloring. There is a narrow sand beach along the coast. In the southern half of this vicinity the bayous extend to the bay while in the northern half the bayous usually do not reach the coast. The general culture of the vegetation south of Powderhorn Lake is marsh with the grass showing intermittently dark and light due mainly to different color of the grass and to slight differences in elevation caused by grass knolls about 2 feet in height.

x"

The culture north of Powderhorn Lake consists of marsh, grass, and some cultivation in the interior. A few trees are found in this territory as well as some brush. A bluff about 7 feet high is found in the vicinity of Station BARGO and Gallinipper Point. In the vicinity of Indianola Island, Port O'Connor and Station BARGO the heaviest growth occurs. This consists of "trees" of mesquite and salt cedar,, the tallest not exceeding 25 feet (averaging 15 feet), and brush thickets of huisache, cat-claw, scrub oak, etc.

3. MATAGORDA BAY, North Coast, West of Palacios

This area includes the adjoining inland bays Keller, Karankawa, Turtle and Trespalacios. The shore line west of Karankawa Bay is characterized by a sand beach and the mean high water line can be distinguished on the photographs by differentiation in coloring of the sand. The sand under the mean high water line shows dark whereas the sand above this elevation shows up bright. East of Karankawa Bay the shore line is characterized by marsh grass and care must be exercised in determining the mean high water line due to the fact that some of the marsh grass is normally below the mean high water line. In the vicinity of Well Point is found a five foot receding bluff covered with bushes. Farther inland in this vicinity is found cultivation. Dense growths of bushes line the shore south of Camp Hulen and in the vicinity of Station SMITH.

The mean high water line around Keller Bay and Karankawa Bay is not difficult to determine from the photographs. At the opening of Keller Bay and intermittently around Karankawa Bay are found low bluffs of three to six feet in height. Field inspection of these bluffs indicate that they are eroding due to wave action but there are no evident means of determining the rate of recession. In the vicinity of Turtle Bay and the N.W. side of Trespalacios Bay the shore line is characterized by dark marsh grass and it is easily identified on the photographs if sufficient care is exercised in noting certain small patches of marsh grass which show offshore from the mean high water line.

4. MATAGORDA BAY, East Coast, Collegeport to Palacios Point.

The shoreline in this vicinity is characterized by a six foot bluff which is in a state of recession due to erosion by high waves from Matagorda Bay. The mean high water line is easily identified on the photographs and the culture inland from the shore consists of rice, some in cultivation and some abandoned. There are no trees in the vicinity of the shore with the exception of two strips, each a mile long, in the vicinity of Portsmouth. These trees are 6-9 feet in height.

5. OYSTER LAKE

This is a shallow lake of $1\frac{1}{2}$ to $2\frac{1}{2}$ feet in depth. The entire shore surrounding this lake is marsh.

6. MATAGORDA BAY, North Shore, East of Palacios Point

The shore line in this vicinity is characterized by a sand beach in the southwestern part and marsh grass in the central and northeastern parts. The mean high water line in either case is readily determined on the photographs. Several reefs extend into the bay and shoal areas are found near the shore: dense growths of 6-12 foot brush are found close to and paralleling the beaches. Inshore from the brush growths are marshes and bayous. Irrigated rice fields and fields of abandoned cultivation are found a few miles in the interior. Irrigation canals, distribution laterals, etc., show up well on the photographs. Care should be exercised in differentiating between roads and canals. In many instances the canals are found paralleling the roads. Frequently, and especially in the N. E. section of that land adjacent to Matagorda Bay, marsh areas extend several miles inland. Beyond the marshes are found cultivated fields.

7. LAVACA BAY

This area includes the land in the vicinity of Lavaca Bay, north and west of Sand Point. With the exception of the land in the vicinity of creek and river inlets, which is low marsh, the shore line is marked by a steep bluff on the west side and a sloping bluff on the east side. The height of the bluff varies but is usually about 15 feet high. There is a marked berm between the bluff and the high water line on the north and east sides of Lavaca Bay.

~~In the vicinity of Station MITCHELL, on Pt. Comfort, there is a low marsh.~~ In the vicinity of the east end of the causeway over Lavaca Bay a reef and a marsh area are found. Near Station GAR the shoreline is marsh but the station is on top of a 15 foot bluff which follows the shore line in back of the marsh area for a small distance. The mean high water line is not difficult to distinguish due to the delineation of the bluff and the marsh.

The culture of the vegetation on the east side of Lavaca Bay is principally grass and dense brush whereas on the west side cultivated fields predominate with intermittent areas of grass and marsh.

Care should be exercised in the office compilation of this territory west of Lavaca Bay to distinguish between canals, drainage ditches and roads. West of Station NOBLE canals parallel the roads in some instances.

The following information regarding railroads is given for use in Coast Pilot Notes, corrections to charts, and for compiling photographs:

Port O'Connor: The railroad tracks have been taken up and only the abandoned three foot high bed remains.

Port Lavaca: A railroad serves the town. In the town proper there is a double track. The second track is used as a siding only.

Palacios: A railroad serves the town and a spur runs to Camp Hulen. In the town of Palacios double tracks for siding purposes are found. The railroad to Palacios and Camp Hulen is not shown on the present charts (#1284) but should be shown on the photo-topographic sheets.

Collegeport: Railroad service to Collegeport has been abandoned. There is no railroad shown on chart #1284 and care should be exercised not to show the abandoned roadway as a railroad.

Matagorda: A railroad furnishes communication between Matagorda, Bay City and Gulf and a spur runs from the town of Matagorda to the river for the Culver Shell Dredging Company. There is a siding, spur and a Y between the Matagorda railway station and the Culver Shell Dredging Company.

Gulf: A private railroad serves the Texas Gulf Sulphur Co. There are numerous switches and sidings around the sulphur plant. The private line joins with the Gulf, Colorado & Santa Fe R. R. at Gulf Hill, a railroad depot $2\frac{1}{2}$ miles N.W. of Gulf.

It should be noted that the principal part of the town of Collegeport is located about one mile east of the location shown on chart #1284; however, some of the residences of Collegeport are situated in the old location.

A city map of Palacios has been procured by the field inspection party as well as sketches of the Colorado River delta near Matagorda and the layout of the Texas Gulf Sulphur Co. Plant. These should be used only as aids in identifying approximate locations of buildings, railroads, reservoirs, tanks, names of streets, etc., and not for accurate location of detail.

There are a number of small piers at Palacios extending into Trespalacios Bay as well as a pier at Camp Hulen. These do not show on chart #1284 but should appear on the photo-topographic sheets. Although there are no airway beacons at Camp Hulen, a wind sock and the nature of the camp indicates that it is sometimes used as a landing field. It is believed that the revised charts should show Camp Hulen.

CONTROL

Triangulation executed by the party of Lieut. E. O. Heaton in 1934 and Ens. T. M. Price Jr., 1934 and the first order 1931 triangulation by Lieut. F. L. Gallen form the principal control for the area covered in this report. Supplemental third order triangulation and theodolite three-point fix ~~were~~ executed by the field inspection party together with occasional short traverse control. This supplemented the main control for the five lens photographs at occasional places where an additional point was needed to hold the radial line plot, and in numerous places on the single lens photographs of Matagorda Peninsula where sufficient control by triangulation was impractical. The location of these supplementary points was marked on the photographs and by only a temporary mark on the ground.

In the areas included in the intra-coastal canal survey by the U. S. Engineer Department, their stations were used as supplemental control as well as stations established by the Matagorda County Reclamation District. All previously established control that could be used, and which was not connected to the 1934 triangulation, was used by applying an adjustment for change to the 1927 datum.

The field inspection party also located on the ground and on the photographs points that could be used as hydrographic stations. The position of these points are to be determined by the photographic radial line plot except in the few cases in which the points coincide with three-point fix locations.

CHANGES IN MAPS AND PUBLICATIONS

The jetties south of Port O'Connor, shown on chart #1284 as $\frac{3}{4}$ mile long, are in reality about $\frac{1}{3}$ mile. Beacons are located at the extreme east end of the jetties while on the west end they are to be found east of the jetty extremities about seven meters. The pleasure pier on the side north of Port O'Connor has been destroyed and should not be shown on the chart. Some of the piles of this pleasure pier are still remaining and should be shown as such. The railroad leading into Port O'Connor has been taken up and should no longer be shown on the chart. Page 190 of the United States Coast Pilot, Gulf Coast, second line under heading "Port O'Connor" should be amended due to the abandonment of railroad communications. (See page 13 of this report regarding railroads)

The town of Saluria near the Coast Guard Station at McHenry Bayou is no longer in existence and should be removed from the chart. Page 49 of the Supplement to U. S. Coast Pilot, Gulf Coast, should be amended, deleting the two words "near Saluria" in the second paragraph under "Cedar Lakes".

The old Life Saving Station, located by 1906 triangulation, on Matagorda Island $1\frac{1}{2}$ miles N.E. of the Matagorda Lighthouse is still in existence and is now used only as a hunting and fishing lodge by the Randolph Field flyers of San Antonio, Texas.

There are no piers at Collegeport or at Portsmouth, and these should be taken off of the chart as well as those shown just north of Powderhorn Bayou at Indianola Island. The chart does not show the railroad to Palacios nor the spur running to Camp Hulen. These should be shown. The same notation is true of the town of Gulf.

There are no piers at Matagorda extending into Matagorda Bay. There is a small dock on the Colorado River at Matagorda. There is a narrow pier at Gulf which extends into Matagorda Bay. This should be shown on the revised topographical sheet.

the following changes in spelling are recommended:

Decros to Decrow (The point at the S.W. end of
Matagorda Peninsula)
Kane to Kain (Houses located by previous
Shipprian to Zipprian (triangulation))

The recommendation is based on the spelling as given in the records of the Tax Collector at Bay City, Texas.

The railroad tank at Port O'Connor is no longer in existence and hence should be removed from the chart as a landmark.

The building at the end of the destroyed pleasure pier is no longer in existence and should be removed from the chart as a landmark.

It is recommended that the spelling of Karankawa Bay be changed to Carancahua Bay to conform with the practice of the Texas State Highway Dept., the Galveston office of the U. S. Engineers, the Texas State map issued by the Dept. of the Interior and local practice.

The numerous differences in roads and buildings between the present coast charts and actual conditions is best explained and noted in the descriptive reports of the individual sheets which will be compiled to cover this locality.

(see additional notes Page 8)

COAST PILOT NOTES AND LIGHT LIST CORRECTIONS

A telephone line runs from Port O'Connor to the Matagorda Light House via the Coast Guard House at McHenry Bayou. This telephone line is carried underground at Big Bayou crossing and at the intra-coastal canal crossing at Port O'Connor.

~~There is no storm warning display tower at Port O'Connor.~~
(See U. S. Coast Pilot, Gulf Coast, page 190)

Port O'Connor Bn. #3 is only about 0.3 mile from Port O'Connor Bn. #1 and should be more properly listed under "Matagorda Bay"

Reference is here made to page (6), "Changes in Maps & Publications" for those notations affecting Coast Pilot and Light List publications, and to page (5) for railroad communications.

There is a bridge over the Trespalacios River on the Palacios-Collegeport road which has a total length of 101.1 meters. A steel truss in the center is 100 feet long and the new clearance is 2 meters.

Notations regarding other bridges and transmission lines have been furnished by the U. S. Engineers and will be listed in the descriptive report of the sheet in which they occur.

About one mile S. E. of Gulf, Texas, off shore, there are 3 piles in the shape of a tripod with a cross-arm on top which mark the entrance to Gulf, Texas, from the N. E.

Additional notes in "Changes to Maps and Publications".

The point of land at Lat. $28^{\circ}-40'$ and Long. $96^{\circ}-35'$ is known as Cox Pt. The name of Cox Pt. in the vicinity of Station High Point U. S. E. should be changed to Rhodes Pt. The changes are recommended to conform with local practice.

Chart Letter 282 (1935)

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

~~Corpus Christi, Texas~~

September 1, 1934

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

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

Delete the following landmarks.

T. M. Price, Jr.

Chief of Party.

Sheet Field #1 (Reg. No. 5351)

[illegible]

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

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.

Chart Letter 282(1935)

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

September 1, 1934

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

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

Sheet

Field No. 1

Reg. No. 5351

T. M. Price, Jr.

Chief of Party.

[illegible]

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

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, flagstuffs and like objects are not sufficiently permanent to chart.

Survey No. T-5351Date. May 27, 1935
GEOGRAPHIC NAMES
TEXASChart No. 1284

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

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>Gallinipper Point</u>	Same			
	<u>Chocolate Bay</u>	"			
	<u>Magnolia Beach</u>	"			
	<u>Old Town Lake</u>	"	Same		
	<u>Indian Point</u>		"		
	<u>Blind Bayou</u>				
	<u>Indianola Island</u>	Same			
	<u>Powderhorn Lake</u>	"			
	<u>Powderhorn Bayou</u>	"			
	<u>La Salle Bayou</u>		Same		
	<u>Huckleberry Bayou</u>		"		
	<u>Orange Bayou</u>		"		
	<u>Big Dam Bayou</u>		"		
	<u>Broad Bayou</u>	Same	"		
	<u>Boggy Bayou</u>		"		
	<u>Port O' Connor</u>	Same (Omit the geographic)			
	<u>Barroom Bay</u>	"			
	<u>Bla ckberry Island</u>	"			
	<u>Espiritu Santo Bay</u>	"			
	<u>Lavaca Bay</u>				
	<u>Mataorda Bay</u>				
	<u>Alamo Beach</u>				

APPROVED

J. J. Hardy Jan. 21 1936
E. J. Kerner

REVIEW OF AIR PHOTO COMPILATION T-5351.

Scale 1:20,000.

Comparison with Contemporary Topographic Surveys.

There are no contemporary topographic surveys in this area.

Comparison with Graphic Control Surveys.

There are no graphic control surveys in this area.

Comparison with Previous Topographic Surveys.

(a) T-752 (1859) Scale 1:20,000.

T-752 covers the area around Indianola and the northerly shore of Powderhorn Lake.

T-752 shows a settlement and numerous houses at Indianola. This settlement has practically disappeared.

The piers are discussed on page 7 of the Field Inspection Report. The shoreline of Powderhorn Lake has changed considerably.

T-752 shows a line of hachures around the edge of the upland. This survey shows the edge of the upland by a line of dots. Except for the hachures, T-5351 is adequate to supersede T-752 in all respects.

(b) T-644 (1857) Scale 1:20,000.

T-644 covers the area from Powderhorn Lake south.

There is a recession of about 250 meters in the shoreline off Broad Bayou and one of about 40 meters at triangulation station Bargo, 1934.

The bayous along shore are generally larger, the entrance to Boggy Bayou now being much larger.

Hachures are shown on T-644 around Huckleberry, Big Dam, Broad and Boggy Bayous, which are not shown on this survey.

(c) T-645 (1857-58) Scale 1:20,000.

T-645 covers the area from Powderhorn Lake north.

The shoreline at Blind Bayou has built out about sixty (60) meters. Indian Point has built out to the northward about 90 meters. The ponds in this area have increased in size.

T-5351 1 2

T-645 shows hachures along the edge of the upland and a bluff from Gallinipper Point to Indian Point. T-5351 shows the bluff but the edge of the upland is shown by a line of dots.

Except for these hachures, T-5351 is adequate to supersede T-645 in all respects.

Comparison with Contemporary Hydrographic Surveys.

(a) H-5857 (1935) Scale 1:20,000.

H-5857 covers the northern part of Matagorda Bay and Lavaca Bay.

There are numerous piles and stakes shown on H-5857 that have not been shown on T-5351. H-5857 had not been verified at this time so these were not transferred.

There is no conflict with H-5857.

(b) The hydrographic survey for the southern section of of this survey has not yet been received. See next page.

Comparison with Chart No. 1284.

For a detailed comparison with Chart 1284 see the Descriptive Report for this survey. The beacon and wreck at latitude $28^{\circ} 31.3'$, longitude $96^{\circ} 28.4'$ is not shown on this survey. It will probably be located on the hydrographic sheet of this area.

Landmarks.

There are no charted landmarks in this area. *One has been recommended for charting and is shown on this survey. Landmark TANK on the chart at Port O'Connor has been destroyed, (See pages 17 and 18, the report).*

Aids to Navigation.

Chart letter 78 (1935) lists two lights in the area covered by this survey. These have been shown on this survey.

Remarks.

The Projection checked with 1 m. on 1:20,000 scale error on the diagonals.

The degree of accuracy stated in the Descriptive Report under "Recommendations for Further Surveys" is believed to be too high.

T-5351 -3

A better estimate would be 0.3 to 0.5 m.m. for intersected points and 0.3 to 0.8 m.m. for other data.

There are two recoverable topographic stations described on Form 524 and filed under T-5351.

August 29, 1935.

H. L. Hawkins.

Frank G. Eakin

Comparison with H-5866 (1935) 1:20,000

There are no conflicts with the hydrography. H-5866 shows a wreck at $28^{\circ}31'$, $96^{\circ}28\frac{1}{2}'$ and a wreck and a "concrete object" at $28^{\circ}31'$, $96^{\circ}29'$. These dangers have not been transferred to T-5351.

H. L. H.

REVIEW OF AIR PHOTO COMPILATION NO. 5351

Chief of Party: T. M. Price Jr.

Compiled by: ^{See Page 2 Des. Report} J. R. Reynolds

Project: Party #20, Corpus Christi, Tex. 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, sextant, or 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)

No such surveys were required for this sheet

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 submitted

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.
Comparison with hydrographic surveys made against incomplete boat sheet only.
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)
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 by low water symbol as described in descriptive report, and is not representative of the actual low water line.
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)
~~Recoverable objects were completed on form 524 Ed. Dec. 1929 before receiving May 1934 forms. Only a part of the recoverable hydro. stations were described in order to space them.~~
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)
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 U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)
No U.S.G.S. Quadrangles available for this area.
13. The geographic datum of the compilation is N.A. 1927 *undadjusted* 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.
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;

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

19. Remarks after review in office:

Detail from the southern end of this compilation was transferred to T-5045 giving about a mile overlap on the two surveys. Paragraphs in this report concerning detail in the vicinity of Port O'Connor apply also to T-5045.

Reviewed in office by:

Frank G. Eskine

Examined and approved:

C. K. Meen
Chief, Section of Field Records
L. O. Solbert
Chief, Division of Charts

T. S. Borden
Chief, Section of Field Work
G. W. Hilde
Chief, Division of Hydrography and Topography.

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H
No. T-5351

received
registered
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25	✓	<i>DR</i>	<i>page 13 - D.R.</i>
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	
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CKG - Jan. 3 '36

NAUTICAL CHARTS BRANCH

SURVEY NO. _____

Record of Application to Charts

[illegible]

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.