

5365

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

State: TEXAS

DESCRIPTIVE REPORT

PHOTO
Topographic } Sheet No. 5365
~~Hydrographic~~

LOCALITY

CORPUS CHRISTI

CORPUS CHRISTI TO LAGUNA MADRE

1935

CHIEF OF PARTY

ENSIGN T. M. PRICE JR.

Applied to drawing of Chart 1286, Feb 1936.
Applied to Chart 523 Mar 1945

S.B. Maize
K.R.D.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

PHOTO
TOPOGRAPHIC TITLE SHEET

REG. NO. 5365

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. 15

REGISTER NO. 5365

State TEXAS

General locality CORPUS CHRISTI

Locality CORPUS CHRISTI TO LAGUNA MADRE

Scale 1:20,000 Date of Photographs: March 10, 1934

Compilation: Jan.-March, 1935

Vessel U.S. Army Air Corps Camera: Five-lens Type T-3A No. 31-76.

Chief of party Ensign T. M. Price Jr.

Surveyed by See data sheet in descriptive report.

Inked by W. H. Burwell

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 Nos. I-1 to I-23 incl.,

and U-17 to U-21 incl. Sheet reduced to scale and printed by

photo-lithographic process.

- NOTES ON COMPILATION *

SHEET NO. 15 (Reg. No. 5365)

PHOTOS: Five-lens No.s I-1 to I-23 incl.; U-17 to U-21 incl.

DATE OF PHOTOGRAPHS: March 10, 1934. TIME: I-Flight, 10:55-11:10 A.M.
U-Flight, 11:19-11:30 A.M.

	BY	DATE
SCALE FACTOR (0.97) (sgd)	<i>Dan Allen</i> Dan Allen	7/20/34 ✓
PROJECTION (sgd)	<i>Ben Benson by J. L. P.</i> Ben Benson	9/13/34 ✓
PROJECTION CHECKED (sgd)	<i>V. L. Riehl and T. M. Price Jr.</i> V. L. Riehl and T. M. Price Jr.	9/14/34 ✓
CONTROL PLOTTED (sgd)	<i>V. L. Riehl</i> V. L. Riehl	9/17/34 ✓
CONTROL CHECKED (sgd)	<i>W. Mack Crook</i> W. Mack Crook	9/18/34 ✓
TOPOGRAPHY TRANSFERRED (sgd)	<i>Dan Allen</i> Dan Allen	9/28/34 ✓
TOPOGRAPHY CHECKED (sgd)	<i>W. H. Burwell</i> W. H. Burwell	1/24/35 ✓
	<i>Ben Benson by J. L. P.</i> Ben Benson	1/3/35 ✓
	<i>V. L. Riehl</i> V. L. Riehl	12/14/34 ✓
SMOOTH RADIAL LINE PLOT (sgd)	<i>Dan Allen</i> Dan Allen	12/11/34 ✓

RADIAL LINE PLOT CHECKED (sgd)

AREA OF DETAIL INKED 56.83 ✓ sq. statute miles.

LENGTH OF SHORE LINE OVER 200 m. 39.0 ✓ statute miles.

LENGTH OF SHORE LINE UNDER 200 m. 8.7 ✓ statute miles.

GENERAL LOCATION: CORPUS CHRISTI

LOCATION: CORPUS CHRISTI TO LAGUNA MADRE

DATUM STATION: ABER, 1933 ✓

	METERS
Latitude 27°-43'-47.737"	(1469.3)
Longitude 97°-21'-18.311"	(501.6)
(Position from field computations.)	

COMPILER'S REPORT

for

PHOTO TOPOGRAPHIC SHEET FIELD NO. 15 (REGISTER NO. 5365)

1. GENERAL INFORMATION

This sheet was compiled from photographs taken by the U. S. Army Air Corps using Fairchild T-3A camera No. 3176. The photographs used were #1 to #23, incl., "I" flight (from Flour Bluff Point to Clarkwood), and #17 to #21, incl., "U" flight (from Nuecestown to Corpus Christi). Both flights were made March 10, 1934; the "I" flight 10:55 to 11:10 A. M. and the "U" flight, 11:19 to 11:30 A. M.

The tide in Corpus Christi Bay has a small predictable variation, and the only difference in its stage that would affect interpretation of the aerial photographs would be caused by strong continued winds, except for the sand and mud flats as in Cala del Oso and Nueces Bay, where special studies of the tide are necessary. The height of the water at the time the photographs were taken, however, was about M. H. W., as indicated by the photographs and field inspection.

2. CONTROL

(a) Sources

Triangulation by F. L. Gallen, 1931.

Triangulation by E. O. Heaton, 1933-34.

All previous triangulation had been incorporated in the above schemes or adjusted to the 1927 N.A. datum by office compilation except DEMIT 1912 which was adjusted in the field.

Two theodolite 3-point fix stations (Side; Cude) and one theodolite intersection station (Tank) were located by the field inspection party with fourth order accuracy and used as supplementary control. These objects are recoverable and have been described on form 524.

Seven plane table recoverable hydrographic stations (Aid, Sou, Win, Con, Him, Hig, and Yel) located by E.O.H. 1934 on plane table sheet field letter "S" are shown on this sheet. Of these, Aid, Hig, Win and Yel were located on the photographs for use as control.

(b) Errors

Corpus Christi L.H., 1905, as given in the 1931 list of office adjusted positions did not check with radial plot. This station was relocated in 1934 and the latter position checked.

Corpus Christi Standpipe, 1905, as given in the 1931 list of office adjusted positions did not check with the radial plot position of Municipal Water Tank Sam Rankin Street. It was found that the standpipe was destroyed about 1928 and the new tank erected nearby. Position determined later by E.O.H. in 1934 agreed with the plot.

(b) Errors (Contd)

Corpus Christi Municipal Water Tank, 1934, at 12-th. and Morgan Street., did not agree in radial plot with 1934 position. The computation was found to be in error, and the new computed position checked with the radial plot.

The location of a point that could be clearly seen on all the photos was made by a short traverse at station Fairview, 1934.

Aid and Hig, from plane table positions, failed to check with radial plot or to agree with surrounding topography. The strong radial plot of these points gives agreement with topography and field measurements. These stations are shown in their radial plot position only on this sheet but both positions are listed in the paragraph on "Recoverable Objects" in this report.

Referred to Geodesy 12/12/35

(c) Remarks

The control is on the 1927 N. A. Datum. The field parties unadjusted geographic positions were used for the 1934/1933 triangulation but the difference between these and the final adjusted positions would not be plottable on the scale of this sheet.

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. An additional photograph should have been taken east of Photo No. I-1. This flight was started too far inland to give good angles of intersections for the radial plot of the shore of Laguna Madre from Lat. 27°-40'-30" to Lat. 27°-41'-30" including Demit Island. The only reliable cuts in this vicinity are from I-1 alone, the intersecting cuts being from the "E" wings of I-2 and I-3, which do not have good detail for matching the prints in mounting. For similar reasons it would have been advantageous to have had an additional photograph made at the east end of the U flight.

The radial plot for the entire "U" flight was made on Sheet Reg. No. 5366, and the points affecting this sheet were transferred directly to it as there was sufficient overlap and the same scale factor to render this method expedient.

(b) Adjustment of Plot

The radial plot was not made by the compiler of this sheet, but it was found that the final intersections obtained were, in general, excellent. The photos of both flights are close to scale and there is remarkably little evidence of tilt or variation in scale. The abundance of control and the closeness of radial points, particularly in the vicinity of Corpus Christi, expedited accurate tracing considerably.

(c) General Description of Topography and Interpretation

There is a Field Inspection Report forwarded with this sheet that covers generally the territory shown on this sheet. There is also a descriptive report for the 1:20,000 Plane Table Sheet "S", to accompany that sheet, which covers the south portion of Corpus Christi Bay. These reports furnished additional sources of information to the compiler of this sheet. Although the compiler did not make a detailed examination of the entire area, enough of it was seen to enable correct interpretation of the photographs to be made and to obtain a knowledge of features difficult or impossible to indicate on this sheet. The compiler also obtained, in the field, photographs of the different types of shores that occur in this vicinity; these are submitted herewith and will be referred to in the following:

(1) Nueces Bay

Only a small portion of the south end of Nueces Bay appears on this sheet, and the general description in the accompanying Field Inspection Report covers the Rincon Point section. However, in the vicinity of the ship channel from the Turning Basin to the Southern Alkali Co. plant, marked changes in the shore line have occurred since the photographs were taken. These are due to dredging operations and the formations on either side of the channel of spoil banks and sand flats. The mean high water line on the inside at Rincon Point in the marsh and sand flat areas were difficult to determine exactly and therefore it has been shown partly as a solid line lighter than the outside M.H.W. line and partly as a light dash line. As the spoil banks wash down, this line will change.

T 4837

(2) Corpus Christi Bay

The shore from Alta Vista southeast to Flour Bluff Point is described very thoroughly in the descriptive report accompanying the 1:20,000 Plane Table Sheet "S". The conditions met between Corpus Christi and Alta Vista are similar to those found from Alta Vista to the Cala del Oso, except that the bluff bank increases gradually in height from 30 - 40 feet towards Corpus Christi. It is also less regular in formation, being broken with numerous ravines or draws extending inland. Photograph No. 1, taken near "Aid" and looking north, indicates the nature of the shore in this vicinity. Photograph No. 2, from a point opposite "Him", toward "Con", shows the characteristic shore in this vicinity. Photograph No. 3, taken near "Hig" looking toward Flour Bluff Point, shows the gradual change from a bluff bank to the high dunes mentioned in the above report. The dunes, while forming a connecting ridge, are generally individual mounds and are largely covered with brush.

(c) General Description (Contd)

(3) Cala del Oso

The shore line of this shallow bay is briefly described in the Field Inspection Report. The bluff symbol was used only where there is a fairly steep and regular bank. Where this is not indicated, the shore is formed by sloping banks of heights varying from 4 feet to about 10 feet, broken with numerous gullies. Photograph No. 4 is typical of this condition; it was taken near "Con", looking south. The shore along the causeway is characterised by sand and mud flats and numerous small sand and shell islands. Photograph No. 5, taken from the second wooden bridge northwest of "Hig" and looking south, indicates the nature of this area.

(4) Laguna Madre

The portion of the shore shown along Laguna Madre is of a flat and sandy nature, gradual slope and no marsh. The several small islands off shore are composed of sand and shell, having a growth of grass.

That portion of the Don Patricio Highway causeway which was not ruined is shown with a single solid line and labelled "pier" because that is all that it is used for at the present time. The former channel span is at the east end of this in the triangulation station symbol (see "Bridges"). The demolished portion of the causeway has been shown by a generalized symbol, i.e. a dash line. The breaks in the dashes do not represent openings in the causeway nor do the dashes represent solid portions of the causeway.

(5) Alta Vista, Aberdeen, Flour Bluff Point and Brighton

These are names, not of incorporated towns, but merely of geographical localities, adopted through local usage. They are shown on former charts and their retention is recommended. Along the Corpus Christi Bay shore, between Alta Vista and the Cala del Oso, there are numerous small rip rap and concrete jetties extending a short distance into the bay, normal to the shore. At Flour Bluff Point and in the vicinity of Don Patricio Causeway there are houses, stores, fish houses and piers. There is a small pier at Aberdeen, near the Eidson Lodges.

(6) Corpus Christi

The entire waterfront of the city proper, and about a block back therefrom, is covered by the 1:10,000 Plane Table Sheet "R",⁶²³⁸ and the included features are discussed in the Descriptive Report accompanying that sheet. The following remarks are submitted to clarify interpretation and to describe the conditions in those areas where the congestion of detail makes it difficult or impossible to indicate desirable features clearly. The bluff bank, already referred to under the description of Corpus Christi Bay, continues through the city, generally parallel to and from one to three blocks from the waterfront.

(c) General Description (Contd)

Corpus Christi (Contd)

Here it is graded and landscaped so as to form a terraced bank of varying degrees of slope, gradually flattening out towards Nueces Bay. The change in elevation, made by several paved ramps, and a pedestrian tunnel from the City Hall Building to the Nixon Building. The nature of the bluff and the closeness of detail rendered it impracticable to indicate it by the use of the bluff symbol. ^{Excludes the first houses back from the water front} Only government buildings, schools, prominent churches and warehouses or plants near wharves and railroads are shown. The position and approximate size of the new junior high school, in process of construction, is indicated. In the suburban sections, streets laid out, but not yet paved, are indicated as double dashed lines. In most cases only the main lines of railroad systems and clearly defined turnouts and sidings are shown; the spur running off the sheet near Dr. Spohn's House Cupola (Triangulation station) goes to and on the Municipal Wharf. The sand flats in the vicinity of several oil storage tanks are apparently undergoing a process of filling, being used as a city dump. They are traversed by several shelled roads and drained by a system of deep ditches. It should be noted that the streets and thoroughfares are, ingeneral, of varying widths, but that a standard width was employed on this compilation to obtain uniformity and clarity. However, at the street junctions with the 1:10,000 Plane Table Sheet "R", ^{1:62,500} some slight variation in widths is apparent; this was necessary for matching detail, as the compiler of that sheet evidently used actual widths. The standard width selected for this sheet is slightly greater than the majority of actual street widths; hence, the blocks appear slightly smaller. Where streets and railroad lines coincided the standard symbol for a railroad in a street was shown except where the Texas & Mexican Railroad goes through the city east of the Port Compress Company' Warehouses in which case the relative position of a parallel street makes it impossible to show both clearly on this scale so the railroad tracks were shown and the street omitted. Sufficient radial points were selected so that the difference in elevation caused by the bluff did not affect the accuracy of the tracing.

Salt cedar trees where they occur on this sheet have been shown with the general tree symbol although they are evergreen. In most instances this growth has been labelled.

(d) Low Water Line

The low water line in the vicinity of Nueces Bay and the ship channel was obtained from the 1:20,000 Plane Table Sheet "Q", ^{T4904} and that along Corpus Christi Bay from the 1:20,000 Plane Table Sheet "S". No shoal areas are indicated on this sheet.

(e) Bridges

The largest opening between Cala del Oso and Corpus Christi Bay might be termed navigable for very small craft of shallow draft. It is crossed by a wooden fixed highway bridge, on piling bents. The clear span between bents is 14.0 feet and the vertical clearance is 3.5 feet. These dimensions were measured by the compiler in the field.

The now partly demolished highway timber trestle causeway to Padre Island has a channel span near its west end. This span is in fact a clear opening in the causeway which was formerly spanned by a movable barge. It has no overhead obstruction ~~and has~~ ^{and has} a 50 foot horizontal clearance. This distance furnished by the U. S. Engineer office at Galveston.

(f) Information From Other Sources

All information was obtained from the photographs and notes written by the field inspection party except as follows:

All topographic detail and shoreline that was shown on ~~T4873~~ ^{T4873 and T4904} plane table sheets field letter "S" and "Q" was transferred to this sheet. That detail which the photographs showed clearly was checked against the plane table representation and any discrepancy investigated. If the plane table sheet proved correct ~~this sheet was made to conform~~ ^{if the} photographs proved correct tracings were made and given to the topographer of the plane table sheet in order that his sheet might be corrected.

The azimuth of the Don Patricio Causeway was taken from the azimuth as determined on the plane table sheet field letter "W" and plotted graphically on this sheet because that which could have been determined by the photographs would not have been as strong.

City maps were obtained locally for railroad ~~for railroad~~ locations and building sites identification purposes only.

(g) Conflicting Names

(1) Cala del Oso

As Callo del Oso on U.S.C. & G.S. Chart No. 1286 & No. 1117.
As Oso Creek on U.S.G.S., Oso Creek Quadrangle.
Cala del Oso is given on this compilation; the Spanish "Cala" means "creek" or "a small bay" (nautical term), "del" means "of the", "Oso" means "Bear". The word "Callo" as now shown means a corn (as on the foot), and this spelling is not accepted locally as being proper for the bay. Another usage which is said to be an old one is the spelling as "Cayo", which means a "rock" or "shoal". Of all of these, "Cala" is the only one with consistent meaning and local authorities agree that it is probably the original name which has been misspelled in various ways since.



#1



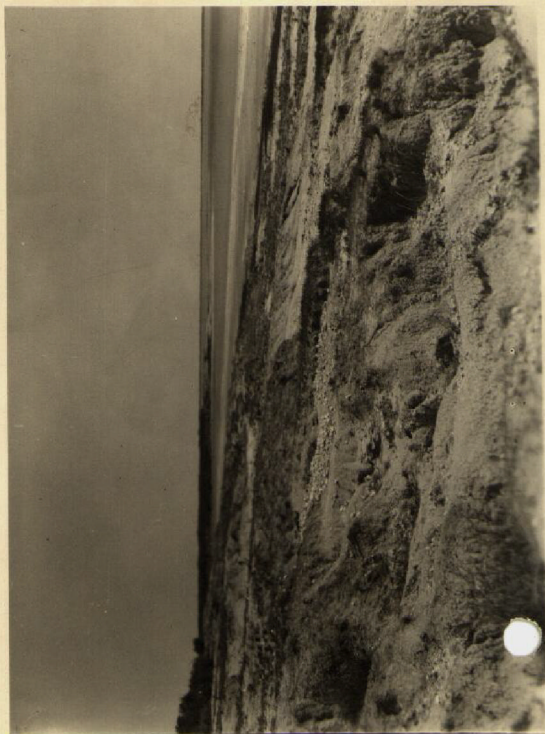
#2



#3



#5



#4

(g) Conflicting Names (Contd)

(2) Flour Bluff Point

As above on U.S.G.S. "Oso Creek" Quadrangle and on U.S.E. Intracoastal Waterway large scale blueprints. As Flourbluff Point on U. S. C. & G. S. Chart No.1286. Flour Bluff Point is recommended as being consistent with local usage.

(3) Alta Vista

As above on Chart 1286 and U.S.G.S. "Oso Creek" Quadrangle and this is recommended. It is spelled "Altavista" on Chart #1117. The town symbol on Chart #1117 should be removed as this is a locality name only.

(4) Aberdeen and Brighton

These are spelled correctly on all charts but the town symbols should be removed from Chart #1117 as they are locality names only.

(5) Flour Bluff

This is spelled "Flourbluff" on Chart #1117. The spelling should be "Flour Bluff" to conform to local usage and the town symbol removed as it is a locality name only.

(6) Sunshine

Shown as a town on Chart #1117. The name should be removed as there is no town here and the name is not generally used as a locality name.

(h) List of New Names

(1) Ward Island

Shown on Chart #1117 but not on #1286. This name has local usage.

(2) Don Patricio Causeway

One-time causeway to Padre Island. Local Usage.

(3) Encinal Peninsula

Extending south from Flour Bluff Point, between Cala del Oso and Laguna Madre. Local Usage.

(i) Junction With Adjoining Sheets

This sheet is joined on the north northwest by Photo-Topographic Sheet Reg. No. 5366 (Field No. 16) and on the northeast by the 1:10,000 Plane Table Sheet "R". The junctions with adjoining sheets are satisfactory.

4. COMPARISON WITH OTHER SURVEYS

(a) A comparison of the Corpus Christi Bay shore line with that of the original hydrographic survey of 1868-69 and Chart #1286 was made by the compiler of the 1:20,000 Plane Table Sheet "S" and discussed in the report accompanying that sheet. Therefore only a small portion of Nueces Bay, Cala del Oso and Laguna Madre will be treated here.

- (1) There is a large change in that portion of Nueces Bay which appears on this sheet which was caused by the dredging of the channel to the Southern Alkali Chemical Plant.
- (2) The islands separating Cala del Oso from Corpus Christi Bay have broken up into smaller islands.
- (3) There are piers on this sheet not previously shown.
- (4) Demit Island has changed shape considerably and the islands bordering the shore of Laguna Madre from Flour Bluff Point to Brighton have changed.
- (5) Don Patricio Causeway was not formerly shown.
- (6) In the Cala del Oso the following changes are noted:
A general accumulation on the west shore, averaging about 104 meters.
A gradual recession on the east shore, averaging about 46 meters.
Varying amounts of accumulation and recession along the north shore paralleling the causeway.

(b) Detail Comparison to Chart No. 1286

LATITUDE	LONGITUDE	CHANGE, Old to New*	REMARKS
On 27°-40'	Near 97°-19'	-75 meters	W. shore of Cala del Oso
" 27 -41	" 97 -19	+75 "	" " " " " "
" 27 -42	" 97 -20	+200 "	" " " " " "
" 27 -43	" 97 -20	+65 "	" " " " " "
" 27 -40	" 97 -19	-70 "	East " " " " " "
" 27 -41	" 97 -18	-55 "	" " " " " "
" 27 -42	" 97 -17	-15 "	" " " " " "
Near 27 -42	On 97 -18	-130 "	North " " " " " "
" 27 -43	" 97 -19	+77 "	" " " " " "
" 27 -43	" 97 -20	-100 "	" " " " " "

A comparison of the shore of Laguna Madre with that of Chart #1286 indicates a general recession, a division of the lone island shown on the chart into two, and the formation of several others north of these.

*+ = accumulation; - = recession. Measurements for the north shore of Cala del Oso made along the meridians

4. COMPARISON WITH OTHER SURVEYS (Contd)

Laguna Madre (Contd)

A detailed comparison to Chart # 1286 shows:

LATITUDE	LONGITUDE	CHANGE, OLD TO NEW *	
On 27° -39'	Near 97°-17'	-100 meters ✓	Measurements made
" 27° -40"	" 97°-16'	- 25 "	along the parallels.
" 27° -41'	" 97°-16'	-230 "	

* + = accumulation; - = recession.

5. LANDMARKS

The following objects appearing on this sheet are recommended as landmarks and have been submitted on Form 567:

DESCRIPTION	LATITUDE	LONGITUDE
TANK (ELEVATED) (△Port of Corpus Christi Tank)	27°-48.7' ✓	97°-23.8' ✓
TANK (ELEVATED) (△Aransas Compress Co. Tank)1931)	27°-48.6' ✓	97°-23.8' ✓
*SIGN ON BUILDING (△Plaza Hotel Sign,1931)	27°-47.8' ✓	97°-23.8' ✓
CUPOLA (⊙ Man, cupola of stucco house)	27°-45.6' ✓	97°-22.7' ✓

The first mentioned landmark is the Port of Corpus Christi Water Tank, painted black, about 100 ft. in height and prominent in all directions.

The second is the Aransas Compress Co. Water Tank, aluminum color, about 100 ft. in height and prominent in all directions.

The third is the structural steel framework sign on top of the pent house of the Plaza Hotel, bearing the legend "~~Plaza Hotel~~" ^{Hotel} _{Plaza}. This is illuminated red at night. It is the highest object in the city and prominent in all directions.

The fourth is listed and described in the descriptive report accompanying the 1:20,000 Plane Table Sheet "S". T4873
See also lists in reports T4904 and T6230.

Deletions

DESCRIPTION	LATITUDE	LONGITUDE	CHARTS AFFECTED
SIGNAL TOWER	27°-47.75' ✓	97°-23.8' ✓	#1286

This object is no longer prominent and should be deleted. Form 567 has been submitted.

5. LANDMARKS (contd)

(a) Beacons

The only beacons within the limits of this sheet is of a very temporary nature, being a lantern mounted on a stand on the Don Patricio Causeway, and subject to removal by theft as is the case at present. It is for the guidance of local fishermen and boatmen and is attended by private individuals.

BEACON AND TYPE	LATITUDE	LONGITUDE
DON PATRICIO CAUSEWAY (F.W.) (A Don Patricio Causeway Light)	27°-38.9'	97°-16.4'

This beacon was not submitted on Form 567 because of its uncertain showings. It was located by triangulation in December, 1934.

Other landmarks and beacons appear in ~~in~~ the area covered by the 1:10,000 Plane Table Sheet field letter "R"^{T4823} and are treated in the descriptive report accompanying that sheet.

6. RECOVERABLE OBJECTS

The following recoverable objects were located by plane table survey on the 1:20,000 Plane Table Sheet field letter "S"^{T4823} and descriptions on Form 524 were submitted with that sheet by the party of Lieut. E. O. Heaton:

<u>NAME</u>	<u>DESCRIPTION</u>
AID	Chimney on south side of two-story house.
SOU	East corner of house.
WIN	Windmill.
CON	East corner of house.
HIM	Chimney in center of house.
HIG	Windmill.
YEL	East gable, yellow house.

Of the above, the following were located on the photographs in the field and difference in position as obtained by the radial plot of this sheet is indicated below:

<u>NAME</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
AID (By plane table)	27°-44' +1556.9'	97°-22' +887.1'
	- 289.9'	-756.1'
(By radial plot)	+1568.5'	+889.3'
	- 278.4'	-744.1'
HIG (By plane table)	27°-42' + 90.0'	97°-16' +1351.0'
	-1757.0'	-293.0'
(By radial plot)	+82.5'	+1341.2'
	-1764.3'	- 302.7'

WIN (Radial plot and plane table position same.)

YEL (Radial plot and plane table position same.)

Important Note: The above disagreeing stations are shown in the position given by the radial plot, on this sheet. *Photo. positions accepted and note made on T4823.*
B.G.J.

RECOVERABLE OBJECTS (Contd)

The following recoverable topographic stations were located by theodolite by the field inspection party and descriptions on Form 524 have been submitted:

<u>NAME</u>	<u>DESCRIPTION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
Tank (Elevated water tank)(d)		27°-43.2'✓	97°-25.1'✓
Side (Road intersection)(d)		27°-42.8'✓	97°-26.4'✓
Cude (Windmill) (d)		27°-39.7'✓	97°-21.1'✓

7. 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 roads, streets, etc. may be slightly exaggerated in order that the detail may be kept clear and from photographing as a solid line in the photo-lithographic process. The area and detail along the waterfront of Corpus Christi is covered by the 1:10,000 Plane Table Sheet "R"; the position of Nueces Bay by the 1:20,000 Plane Table Sheet "Q"; and Corpus Christi Bay, from Alta Vista to Flour Bluff Point by the 1:20,000 Plane Table Sheet "S"; therefore no further surveys of the region covered by Sheet Reg. No. 5365 are recommended at this time.

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. H. Burwell
W. H. Burwell

Note The accuracy of location of 5 to 10 meters is high for work on this scale (1:20,000). A better estimate is an accuracy of location of 5 to 10 meters for intersected points and 5 to 15 meters for other detail.

B.G.J. 12/12/35

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, TexasMarch 21, 1935

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 Reg. No. 5305
" Field No. 15Ensign T. M. Price Jr.

Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETERMINATION	CHARTS AFFECTED	
	LATITUDE			LONGITUDE					DATUM
	°	'	D. M. METERS	°	'	D. P. METERS			
TANK (ELEVATED) (Port of Corpus Christi Tank 1931)	27	48	+1209.0	97	23	+1301.1	N. A. 1927	Triang.	No. 1286
TANK (ELEVATED) (Aransas Compress Co. Tank 1931)	27	48	+1122.7	97	23	+1297.7	"	"	" "
*S. I ON BUILDING (red lighted) (Plaza Hotel Sign 1931)	27	47	+1421.4	97	23	+1281.5	"	"	" "
CUPOLA (Stucco House)	27	45	+1131.0	97	22	+1120.0	"	Plane Table	" "
Inspected from Corpus Christi Bay									
Note: See also lists submitted in reports T 4904, T 4873, and T 6230.									
						Checked by V. L. Riehl			

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

~~Corpus Christi, Texas~~

March 21, 1935

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

Field No. 15

~~Ensign T. M. Price Jr.~~

Chief of Party.

[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.

FIELD INSPECTION ON REPORT
FOR
Corpus Christi & Adjoining Bays

This report covers the territory adjacent to Corpus Christi Bay, Nueces Bay, Callo del Oso, Redfish Bay, Laguna Madre and Harbor Island. The following notes are submitted to act as a guide in the compilation of the sheets for this area, including Mustang Island, and that land which falls within the middle half of the wing prints, about 4 miles inland from the coast line. The following is compiled from notes and sketches made by the field party and through knowledge of this locality obtained by the field inspector in locating control on the aerial photographs and establishing supplementary 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 draftsman assisted in the field inspection of the area covered by their compilation.

To interpret photographs of a territory which was impractical for the field party to visit, the draftsman is cautioned to thoroughly study the interpretation of the photographs of territories not covered in detail. Sufficient field inspection was done to enable the draftsman, by this method of comparison, to extend the interpretation into those areas difficult to reach.

MUSTANG ISLAND

This narrow stretch of land separating Laguna Madre and Corpus Christi Bay from the Gulf of Mexico runs N. E. by N. from Corpus Christi Pass (Lat. 27-35; Long. 97-12) to Aransas Pass (Lat. 27-50; Long. 97-04). In general the M. H. W. line on the Gulf side is determined by a difference in color of the sand which shows on the photographs as the outermost (seaward) uniform line. On the bay side, the M. H. W. line is usually determined by the marsh grass line or by the bright sand strips at the water's edge. The M. H. W. line on the bay side is difficult to determine in certain places due to the sand flats and certain marshes which are only a little above or below the n. h. w.

On the gulf side of the island are sand dunes averaging about 20-25 feet in height. This is true of the entire stretch of island with the exception of an area about 1 3/4 miles north and east of station "Crane" which is without dunes. From the foot of the dunes, which are lightly covered with grass, to the M.H.W. on the gulf side is a broad sand beach. On the bay side of the dunes are marshes, sand spots, and small bodies of intermittent water.

There is no cultivation on Mustang Island and no trees. Some of the land on the NE end is used for grazing.

HARBOR ISLAND

This island is practically all marsh with extensive sand flats on its south end. Most of the island is below M. H. W. and the remainder is only a few inches above. Harbor Island is a composite of innumerable small marsh islands usually with grass and with occasional sand flats which are slightly above M. H. W. This territory was carefully studied by the field inspection party when the tide was approximately at mean high. Numerous notes were made on the photographs for the interpretation of the M. H. W. line on this island. Due to its difficult topography special caution must be used in the office compilation of this locality. There are neither trees nor cultivation on Harbor Island.

CORPUS CHRISTI BAY

With the following exceptions the shore line of Corpus Christi Bay is characterized by bluffs (the various approximate heights will be determined in the descriptive report for the area): (1) the peninsula west of McGloins Bluff and the (2) peninsulas at the juncture with Nueces Bay, where marsh flats are the predominating feature (3) East shore (Mustang Island) is marsh (4) vicinity of Flour Bluff which is sand dunes. The high water line can be readily determined from the photographs with the aid of notes by the field inspection party. It is to be noted that occasional sloughs cut thru the bluffs to provide drainage for the interior. On the southwest side of Corpus Christi Bay are found growths of scrub oak, mesquite, catclaw and thickets of similar brush and low trees. The land is largely cultivated and the delineation between cultivated fields and grazing lands is easily made. In the vicinity of Callo del Oso are found scrub trees, a low bluff and extensive sand flats. The north side of Corpus Christi Bay contains similar trees, cultivated fields and grazing lands, however there should be no confusion in distinguishing each characteristic after consulting notes shown on the field photographs.

REDFISH BAY

The land bordering Redfish Bay is mostly marsh. High water line determination is difficult due to the low marsh and sand flats but can be obtained by picking up the faint outline of the beach grass on the bright white sand. The M. H. W. is about halfway between the outside of the beach grass on the outside bright white line. MHW and the shell shore under the MHW. About the only way to determine the MHW line where there is no difference in color in the white shell bottom and the whitesand strips on the beach is to pick out the faint beach grass. Where dark marsh grass lines the bay, the MHW line can be determined more easily as outlines on the field photos. Redfish Bay is a shallow lagoon varying in depth from 8 inches to 18 inches. The bottom is composed of varying colored short grass which shows on the photographs due to the shallowness of the bay.

The interior land in this vicinity, N.W. of the McGloin Bluff-Aransas Pass line, is heavily wooded with trees about 25 feet high, altho the surface is mostly sand. A few scattering patches of cultivated fields are found between the marsh areas and the trees. A few trails can be found thru the trees in this vicinity altho passage over them is difficult due to the sand.

NUECES BAY

The shoreline in the vicinity of Nueces Bay is mostly marsh. On the N. & S. sides of the bay, high bluffs varying in height to about 45 feet, are found immediately back of the marsh strips adjacent to the water. In the vicinity of Stations Koonce and Fay and the South and east part of White Point, the marsh disappears and the high bluffs extend almost to the water's edge. On the two peninsulas at the east end of Nueces Bay, over the entire west side of the bay and in the vicinity of Long. 97-27-30 on the north side, marsh predominates and there are extensive sand flats with intermittent water and small lakes. Mean high water is relatively easy to find on the photographs due to the bluffs and the marsh lines. Trees and cultivated fields are found extending inland from the bluff lines. Sufficient classes of culture have been noted on the field photographs to meet the needs of interpretation in this locality.

Maps of Corpus Christi, San Patricio County, and the Humble Oil Co. at Ingleside have been procured to assist the draftsmen. Access is easily made to the Nueces County map. These are intended as aids only and are not to be relied upon for accuracy of detail.

18

-5-

CONTROL

Triangulation executed by the party of Lieut. E. O. Heaton in 1933-34 and the first order 1931 triangulation by Lieut. F. L. Gallen form the principal control for the area covered in this report. Theodolite 3 point fixes were executed by the field inspection party. 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. The location of these supplementary points was marked on the photographs and by only a temporary mark on the ground.

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.

n A plane table party of Lieut. E. O. Heaton had located a number of points on the shore of Corpus Christi and Nueces Bay for hydrographic use prior to the receipt of photographs by this party. The points thus located, that were prominent on the photographs and well distributed were picked on the photograph as possible supplemental control and for comparison.

In addition, the field inspection party selected certain well distributed points for recoverable topographic stations, the position to be determined by radial line plot.

CHANGES IN MAPS & PUBLICATIONS

There are two piers at Portland extending into Corpus Christi Bay and one at Whites Point extending into Nueces Bay. There are a number of small piers adjacent to Corpus Christi Bay that should be shown on future charts, especially at Flour Bluff. For their location, and for notes regarding the other changes, reference is made to the individual aerial photographic sheets of this area.

CORRECTIONS TO COAST PILOT NOTES

The town of "Ingleside" in which is located the Humble Oil Co. Refinery is about 3 miles north of "Ingleside-on-the-Bay", the fishing village. There is no channel from Corpus Christi Bay to the oil refinery at Ingleside. Page 131 paragraph 3 line 5 of the Inside Route Pilot, Key West to the Rio Grande should read Ingleside-on-the-Bay instead of Ingleside.

The nearest marine hospital is located at Galveston, Texas rather than New Orleans, La. Page 194 of the Coast Pilot should be changed accordingly.

There are no storm warnings displayed at Aransas Pass. Page 195 of the Coast Pilot and page 132 of the Inside Route Pilot should be corrected accordingly.

There is no standard U. S. Weather Bureau light and flag storm warning mast or tower at Aransas Pass but signals are displayed from a 30 ft. pole by the local inhabitants from advice received from the Weather Bureau office at Corpus Christi

Pages 1 and 2 of 4873 promulgated does not

4904

623. due to copies checked water front

as seen from entering harbor

GEOGRAPHIC NAMES

Date. May 22, 1935

Chart No. 1286 -1117

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-5365

Scale 1:20,000.

Comparison with Graphic Control Surveys.

T-4904 Scale 1:20,000 (1934)

T-4904 covers Nueces Bay. Numerous topographic stations for control of hydrography appear on this survey. All these topographic stations now appear on the compilation except:

PT Center Line Track
PC Center Line Track

These stations are not described and are not of a recoverable nature.

Stations transferred to this compilation by *R. M. Berry*
and checked by *B. G. Jones*

There is no conflict between T-4904 and the compilation.

See page 1 report T-4904 for description of the Corpus Christi Turning Basin and adjacent area.

T-4873 Scale 1:20,000 (1934)

T-4873 covers the western shore of Corpus Christi Bay from Corpus Christi to Laguna Madre.

Numerous topographic stations located for the control of hydrography appear on this survey. These stations are recoverable but are so closely grouped that only sufficient stations to give a spacing of one station every mile have been transferred to the compilation. All described stations submitted with this survey were transferred. Form 524 cards for these stations are filed under T-4873.

See Page 12 of the preceding descriptive report for discussion of differences in location of topographic (d) stations "Aid" and "Hig". The photo locations are accepted in view of the investigation made by the compilation party. A note has been made in green on T-4873.

Stations transferred by *R. M. Berry* and checked by *B. G. Jones*

See Pages 1 and 2 report T-4873 for description of shoreline southeast of Corpus Christi and recommendation for deletion of Alta Vista Hotel at Alta Vista Point from Chart 1286.

Comparison with Contemporary Topographic Survey.T-6230 Scale 1:10,000 (1934)

T-6230 covers the waterfront and turning basin of Corpus Christi and area north to Rincon Point. The area covered by this sheet was left blank on the compilation although T-6230 was controlled in part by the photographs. T-6230 was reduced and transferred in toto to the compilation, except for the following:

T-6230 is a very detailed survey of waterfront detail on scale 1:10,000 and should be referred to where a scale larger than this compilation (1:20,000) is needed.

1. Names of topographic stations.
2. Size and elevation of piling (all are above H.W.)
3. Characteristics of lights and beacons.
4. Magnetic Meridian.

There is no conflict between T-6230 and the compilation.

Detail and stations transferred and plotted by R. M. Berry, *R. M. Berry*
and checked by B. G. Jones, *B. G. Jones*

See report T-6230, page 1 for description of Corpus Christi Water Front as view from the Bay.

Comparison with Contemporary Hydrographic Surveys.H-5612 Scale 1:10,000 (1934).

H-5612 covers the area in the vicinity of Corpus Christi.

The power plant water intake shown on T-6230 and on this compilation at latitude $27^{\circ} 47.5'$, longitude $97^{\circ} 23.4'$ was not shown on H-5612. A pencil notation was made on the smooth sheet. H-5612 has not been reviewed.

The row of piles shown on T-6230 and on this compilation at latitude $27^{\circ} 47.5'$, longitude $97^{\circ} 23.4'$ was not shown on H-5612. A pencil notation was made on the smooth sheet. H-5612 has not been reviewed.

The row of piles shown on T-6230 and on this compilation marking the north side of Corpus Christi channel is continued eastward on H-5612. No additions were made to the compilation.

A group of piles and a wreck shown on H-5612 just north of the end of the fish pier at Corpus Christi were not shown on T-6230. As they could not be seen on the photographs, they were not transferred to the compilation. There is no conflict between H-5612 and the compilation.

H-5694 Scale 1:20,000 (1934-1935).

H-5694 covers Corpus Christi Bay except for the area covered by H-5612.

There is no conflict between H-5694 and the compilation.

Comparison with Previous Topographic Surveys.

T-1513 Scale 1:20,000 (1882).

T-1513 covers Neuces Bay and vicinity.

Extensive changes in shoreline and in culture have taken place since the date of this survey. The most extensive of these is the filling in of the bay west of Rincon Point and the dredging of the ship channel and turning basin to the plant of the Southern Alkali Company at Avery Point.

Comparison with old surveys in this area is given in the Descriptive Report for planetable sheet T-4904.

Except for contours, the compilation is adequate to supersede T-1513 in all points of detail within the area common to the two surveys.

T-1043 Scale 1:20,000 (1867).

T-1043 covers the shoreline at Corpus Christi Bay from Rincon Point nearly to Cala del Oso.

Several major cultural changes are noted as follows:

1. Turning basin at Corpus Christi.
2. Nueces Bay bridges at Rincon Point.
3. Breakwater at Corpus Christi.
4. Development of town at Corpus Christi.

The shoreline has changed very little.

Except for contours, the compilation is adequate to supersede T-1043 in all points of detail within the area common to the two surveys.

Comparison with Chart 1286.

A very complete and detailed comparison with the chart is given on pages 10 and 11 of the Descriptive Report for the compilation. Comparisons are also given on page 2 of the report for T-4873 and on page 2 of the report for T-4904.

Landmarks and Aids to Navigation.

Triangulation station Corpus Christi, Plaza Hotel elevator pent house, center ~~at~~^{of} sign, 1934 was plotted on the compilation instead of triangulation station Plaza, 1933 (3.8 meters distant) since the sign is listed in the list of landmarks.

Chart 1286 shows a signal tower in line with the municipal pier and three blocks distant from the shoreline. The two triangulation stations City Hall Radio Masts plot in this position and in the absence of any statement to the contrary, it is assumed that they have replaced this tower.

Plane table sheet T-4904 (now transferred to the compilation) shows a range (daymarks) for leaving the turning basin. This range is not shown on chart 1286.

Respectfully submitted,

Ralph M. Berry

Ralph M. Berry.

B.G. Jones

REVIEW OF AIR PHOTO COMPILATION NO. 5365

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

See page 2 of
Compiled by: descriptive
report.

Project: Aerial Photo Comp. Party # 20

Instructions dated: November 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, ~~extant~~, 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)
- ✓ 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.
Except in Nueces Bay, where the hydrography has not been done.
- ✓ 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.
- ✓ 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, ~~contours~~ ~~reefs~~ and ~~rocks~~, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)
All low water was transferred to this sheet from plane table sheets.
- ✓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)
- ✓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)
- ✓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.
- ✓ 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:

See preceding pages 1 to 4 for detailed discussion of the office review.

Reviewed in office by: *Berry* ✓ *B.G. Jones*

Examined and approved:

C. H. Green
Chief, Section of Field Records
L. O. Abbott
Chief, Division of Charts

J. B. Borden
Chief, Section of Field Work
G. W. Wade
Chief, Division of Hydrography and Topography.