

4863

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. F 4863
State Texas	
LOCALITY	
Bolivar Peninsula and	
City of Galveston.	
1933	
CHIEF OF PARTY	
Earl O. Heaton	

U. S. GOVERNMENT PRINTING OFFICE: 1934

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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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.

4863

Field No. 7

REGISTER NO. 4863

Texas

State _____

General locality Galveston Bay

Locality Bolivar Peninsula and ~~Galveston~~ Galveston

Scale 1:20,000 Date of survey Jan. to August, 1933

~~Vessel~~ Project: HT-118

Chief of party Earl O. Manton

Surveyed by J. W. Somers

Inked by J. W. Somers

Heights in feet above M.H.W. to ground ~~to tops of trees~~

Contour, Approximate contour, Form line interval _____ feet

Instructions dated November 5, 1932

Remarks: _____

DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET "F"
BOLIVAR PENINSULA AND CITY OF GALVESTON

Scale: 1:20,000

Project: HT-118, Galveston Bay

Surveyed Jan. to August 1933

E. O. Heaton, H. & G. Engineer, Chief of Party

J. W. Somers, Topographer

Instructions Dated Nov. 5, 1932

General Description of the Coast:

The gulf coast of Bolivar Peninsula has a wide sandy beach backed by low sand dunes behind which is low, sandy, grass covered land. The East Bay shore is marsh land and sand flats which were formed by the spoil dump of the Texas-Louisiana Intracoastal Waterway. This spoil bank is about 8 ft. in height and is very light yellow in color. The coast line at Galveston has a narrow beach back of which is a 16 ft. concrete seawall. A boulevard, 31 meters wide, extends the entire length of the seawall.

There are buildings of various types and colors built along the northwest side of the boulevard; the most prominent of these are the Buccaneer and Galvez Hotels, the Jr. High School, and the hospital at Fort Crockett. Two pleasure piers are built on piles SE of the seawall near the Buccaneer Hotel.

Approaching the entrance to Galveston Harbor from the east the first objects sighted are Buccaneer Hotel, the Bolivar Lighthouse, the South Jetty Lighthouse, the Galveston Wharf Co. Elevator "B", a 240 ft. concrete structure at 28th st., and the clubhouse on North Jetty.

The Bolivar Lighthouse is a conical, horizontally striped concrete structure. The light station has been discontinued, but the tower has been left standing to serve as a beacon and army observation tower.

Approaching Galveston harbor from the southeast the first objects sighted are the Galveston Wharf Co Elevator "B", the Buccaneer Hotel, the South Jetty Lighthouse, and the Aero Beacon at Fort Crockett after dark.

An area about $\frac{3}{4}$ mile wide extending northward from Galveston North Jetty and along the beach is strewn with wreckage.

Landmarks:

- △ TOWER - pyramidal, slatted, white (△"P", U.S.E.)
 - * TOWER - (Bolivar Pt. Lt. - light discontinued)
 - △ STACK - white concrete (△Galvez stack) (See note below)
 - BUILDING - Galvez Hotel "chart outline"
 - * BUILDING - Buccaneer Hotel (△Buccaneer - on elevator shaft) "chart Outline"
 - △ RADIO MASTS - at Fort Crockett
 - △ AERO - aero beacon (△Aero)
- Note: Hotel extends too far east on chart. △STACK is located at E end of Hotel.

Landmarks - Aids to Navigation:

- * GALVESTON JETTY LIGHT - (△South Jetty Light)
- BEACON 4 - (△Houston Ship Channel Bn. 4)
- BEACON 1 - (△East Bay Pass Bn. 1)
- BEACON 3 - (△East Bay Pass Bn. 3)
- TRIPOD - tripod of R.R. rails.
- TRIPOD - tripod of R.R. rails
- TRIPOD - tripod of R.R. rails

Character of Control Used:

This sheet is controlled by twenty two triangulation station of second

and third order accuracy as follows: Parrs Grove, Travis, San, Wall, Bucanneer, "P", U.S.E., Bolivar Point Lt. (tower), Inland, Water, East Bay Bn. 1, East Bay Bn. 2, Hanna, Houston Ship Ch. Bn. 4, South Jetty Light-house, Galvez Stack, Crockett (E. Radio Tower), Aero, Brazos Valley R.R. Co. water tank, Moody Press water tank, Cotton Mill chimney, St. Patricks spire, Standpipe; and plane table traverse for intermediate control.

Closing Errors and Method of Adjusting:

	Closure (meters)	Distance (miles)
Parrs Grove to "P", U.S.E	7	3.3
"P", U.S.E. to Travis	5	3.0
Water to Inland	5	3.2
Inland to Church Spire	10	2.5
Crockett to Aero	12	2.3
Crockett to Galvez Stack	5	1.5
Wall to San	6	1.3

All traverse was adjusted as prescribed in Special Publication 144.

Dates on Triangulation Stations:

Two dates are shown on this sheet at triangulation stations which have been recovered. The date of original establishment is shown and the last date of occupation. This was done because the datum was changed in 1927 and the last date of occupation is the one which represents the plotted position. Three of the stations on this sheet were determined in 1900, and their positions were adjusted to the 1927 datum before plotting.

Failure to Agree with Former Work:

This sheet was compared to U.S.C. & G.S. chart 1282 and the following discrepancies were noted. The gulf shore east of Δ Parrs Grove is 30 m. NW of its position on the chart. Beginning at a point about 1 mile SW of Δ Parrs Grove and extending to a sand point $1\frac{1}{2}$ miles NE of Δ Travis, the shore has built out seaward. This building up amounts to about 20 m. 1 mile S of Δ Parrs Grove and 50 m. at the sand point.

The West Bay shore of Bolivar Peninsula shows a general displacement of about 25 m. SE of the shore line as shown on the chart.

The gulf shore at Galveston has not changed except at the south end of 61 st. St. at the west end of the seawall, where a recession of 20 m. was found.

These discrepancies are due partially to wave action and partially due to the fact that the chart was made up on the old datum whereas this sheet is on the 1927 datum.

Hanna Reef shows some change in details of topography although its general appearance is the same as shown on the chart. These changes were due to wave action. A general displacement of 100 m. to the N. is also noted, which undoubtedly is due to poor control on the former surveys.

East Bay Bn. 1 shows a displacement of 455 m. to the NE as compared with its position on the chart. A similar displacement of 310 m. was found at East Bay Bn. 3.

Four new islands were located near Lat. $29^{\circ} 23'$, Long. $94^{\circ} 49'$. These islands were formed by the spoil dump of dredging operations in the Houston Ship Channel.

List of Plane-table Positions:

Fish - see report of sheet E
Hans - peak of roof S gable, Andrew Johnson's house
Hos - windmill
Bud - windmill
Church Spire - see report sheet L
Sui - pagoda, Sui Jen Cafe
Mar - tower on office of Miramar Courts
End - street light pole N side of street, W end of seawall

Changes in Coast Line:

No radical changes are apparent in the shore line in this area, although some erosion has taken place. The extent of this erosion was not determined.

Character of Marsh:

The marsh area east and south of station Fish is from 2 to 6 inches above M.H.W. and is flooded only at moderately high tides. The soil of this marsh section is black mud, containing some sand and shell.

Approved:

Earl O. Heaton
Earl O. Heaton,
Chief of Party, C. & G.S.

Respectfully submitted,

J. W. Somers
J. W. Somers,
Observer.

*applied to new compilation of chart #520 by J. Fleming
May 21, 1935 J.H.S.*

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

T-4863

Corpus Christi, Texas

August 29, 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:

Earl O. Heaton
Earl O. Heaton

Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE			LONGITUDE		DATUM		
	°	'	D.M. METERS	°	'			
(2) TOWER - pyramidal, slatted, white. (Δ "P", U.S.E.)	29	23	958.2	94	43	823.1	1927 Triang.	586 Helmer 1282, 520
*TOWER (✓verified) (1,2,3) (Δ Bolivar Point Lt.) (light discontinued)	29	21	1835.4	94	46	7.1	"	1117, 1282, 520 586 Helmer
(2) STACK - white, concrete (Δ Galvez Stack)	29	17	1041.6	94	47	173.3	"	1282, 520
(2) BUILDING - NW corner Galvez Hotel - "chart outline" (see note below)	29	17	1006.0	94	47	306.5	" Topo.	1282, 520
*BUILDING (✓verified) (1,2) Buccaneer Hotel - "chart outline" (Δ Buccaneer - top of elevator shaft)	29	17	757.9	94	47	460.5	" Triang.	1117, 1282, 520
(2) RADIO MAST (Δ Crockett, east mast)	29	16	1311.5	94	48	530.2	" Triang.	1282, 520
(2) RADIO MAST west mast	29	16	1246.2	94	48	630.3	" Topo.	1282, 520
(1,2) AERO - aero beacon (Δ Aero) (✓verified)	29	16	260.9	94	50	366.2	" Triangu.	1117, 1007 1282, 520

Note: Hotel extends too far east on chart STACK is located at east end of Hotel.

All objects are visible from the water.

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.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

August 29

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:

Carl O. Hertner

Earl O. Henton

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

REVIEW OF TOPOGRAPHIC SURVEY No. 4863

Title (Par. 56) *Bolivar Peninsula and Galveston, Texas*Chief of Party *E.O. Heaton* Surveyed by *J.W. Somers* Inked by *J.W. Somers*Ship *Shore Party* Instructions dated *Nov. 5, 1932* Surveyed in

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓
2. The character and scope of the survey satisfy the instructions.
Aluminum sheet not used as per instructions
3. The control and closures of traverses were adequate. ✓ (Par. 12, 29.)
4. ~~The amount of vertical control that the Manual specifies for contours and lines was accomplished. (Par. 18, 19, 20, 21, 22, 23.)~~
5. ~~The delineation of contours and lines is satisfactory. (Par. 49, 50.)~~
6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) *None submitted - Instructions called for coordinating work with that of U.S. Geological Survey and U.S. Engineers. No mention made of this in report.*
7. ~~High water line on marshy and mangrove coast~~ is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
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.) ✓
9. ~~Rocks and~~ other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.)
See Reverse Side
10. ~~The span, draw and clearance of bridges are shown. (Par. 16c.)~~
11. ~~Locations and elevations of summits are given. (Par. 19, 51.)~~
12. ~~The tree line was shown on mountains. (Par. 16g.)~~

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

Paragraph 9

A discussion of T329 (1851), T1636 (1882) and T282 (1850) and Chart 1282 as compared with T4863 (1933) is very thorough and well taken care of under "Failure to agree with Former Work."

Hanna Reef has no doubt changed and broken up due to wind and wave action.

The H. W. Line in the vicinity of Galveston has changed somewhat due to the building of the retaining wall.

The H. W. Line of Bolivar Peninsular has receded in places and built out in others but the general trend of the shore line checks that of the former surveys very closely.

On T4863 the H. W. Line N.E. of the inshore end of the North Jetty is somewhat different from that on Chart 1282. This, no doubt, is very changeable.

T4863 supersedes previous surveys.

13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) ✓
No special mention of geographic names.
No points to check distortion given
14. ~~The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.~~
15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DPs, 68.) *6 cards submitted*
16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) ✓
17. The magnetic meridian was shown and declination was checked. (Par. 17, 52.) *No magnetic meridian shown.*
18. The geographic datum of the sheet is *N.A. 1927 (Adjusted)* and the reference station is correctly noted. (Par. 34.)
19. Junctions with contemporary surveys are adequate. ✓
20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.) *No special mention of geographic names but all prominent names used in the report.*
21. The quality of the drafting is ^{Fair}~~good~~. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) —
22. No additional surveying is recommended. ✓
23. The Chief of Party inspected and approved the sheet and the descriptive report ~~after review by~~ —
24. Remarks:

Reviewed in office by *Chas. R. Bush Jr. May 21, 1936.*

Examined and approved:

E. K. Green
Chief, Section of Field Records

L. O. Zolbat.
Chief, Division of Charts

Fred. L. Peacock
Chief, Section of Field Work

G. H. Hilde
Chief, Division of Hyd. and Top.

NAUTICAL CHARTS BRANCH

SURVEY NO. T-4863

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.