4867

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic | *Sheet No.* G 4867
~~*Hydrographic*~~

State Texas

LOCALITY

Galveston Bay

Galveston Island to Moses Lake

193 3-4

CHIEF OF PARTY

Earl O. Heaton

U.S. GOVERNMENT PRINTING OFFICE: 1934

4867

Form 537a
Ed. Nov., 1929

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. G

REGISTER NO. 4867

State Texas

General locality Galveston Bay

Locality Galveston Island, to Moses Lake, [illegible] Pt.

Scale 1:20,000 Date of survey June 1933 to Jan., 1934

~~Vessels~~ Project: HT-118

Chief of party Earl O. Heaton

Surveyed by C. W. O'Melveny & W. T. White

Inked by W. T. White

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 G
GALVESTON ISLAND, VIRGINIA POINT, DOLLAR POINT, AND MILLER POINT
Scale: 1:20,000
Project HT-118, Galveston Bay
Surveyed June 1933 to January 1934
Earl O. Heaton, H. & G. Engr., Chief of Party
C.W.O'Melveny & W. T. White, Topographers
Instructions Dated Nov. 5, 1932

Description of Coast:

The land area in this vicinity is a flat coastal plain. There are no natural landmarks of any importance in this vicinity. In general the bayshore in this vicinity is a low bank back of which extends a flat grass area. Some of the bayshore, especially in the vicinity of bayous and lakes is covered with marsh. These areas are shown with the proper symbol on the topographic sheet. Scattered patches of low salt cedars are to be found occasionally along the shore. The Gulf shore is a wide sand beach back of which extends a line of small sand dunes and a flat grassy area. The most prominent landmarks in this vicinity are the Texas City R.R. Terminal Grain Elevator, Sugar Refinery smokestack in Texas City and the steel towers on the Galveston Causeway. Other landmarks of lesser importance are given under "Landmarks".

Landmarks:

Sugar Refinery Smokestack in Texas City
Texas City Municipal water tank.
East and west tanks of the Texas City Ry. Terminal Co.
Grain elevator owned by Texas City Ry. Terminal Co.
"O" (U.S.E.), 35 foot tripod signal on Pelican Island
Airway beacon (Aero) located near western limits of Galveston at the Fort Crockett airport.
Causeway towers
High Grade Packing Co. water tank

Control:

The control for this work consists of stations located by second and third order triangulation and supplemental stations located by plane-table triangulation, and plane-table traverse.

Traverse Closures and Methods of Adjustment:

Traverses	Closure Error (meters)	Distance (miles)
Moses to Moore	29	5.2
Moore to Miller Pt. windmill	11	2.1
Miller Pt. windmill to Moore	5	3.0
Moore to Texas City Municipal water tank	11	3.3
Galveston South Base to intermediate point located by traverse from Grain	10	2.9
Galveston South Base to 3-point fix , north end of causeway.	10	3.4
3-point fix north end of causeway to Jones	5	2.0
Jones to 3-point fix east end of Jones Lake	5	1.8
France to 3-point fix east end of Jones Lake	3	2.7

Traverse	Closure Error (meters)	Distance (miles)
3-point fix on Highland Bayou to France	5	1.9
Hitchcock to France	3	2.9
3-point fix on Gulf shore to Nass	10	2.6
Nass to Aero	6	3.6
Nass to windmill located by plane-table triangulation.	16	3.2
Galvez to 3-point fix on western extremity of West Bay Pt.	10	2.5
3-point fix on western extremity of West Bay Point to High Grade Packing Co. water tank	7	2.5
High Grade Packing Co. water tank to Offatts	11	3.0
Offatts to West Bay 3	26	3.5
West Bay 3 to 3-point fix near shooting box	4	1.5
Galvez to Brazos Valley R.R. Co. water tank	3	0.8
Brazos Valley R.R. Co. water tank to intermediate point located by traverse from water at Pier 40	4	0.7

All traverses were adjusted on the sheet in accordance with paragraph 12, part 1, Topographic Manual.

List of New Names:

Campbells Bayou is a well established local name for a large bayou leading out of Swan Lake.

List of Plane-table Positions:

Wind - 30 ft. windmill on southeastern shore of Moses Lake.
Silo - concrete silo 20 feet high on Dollar Pt.
Dot - northeast corner of two-story yellow house situated between Dollar Pt. and Texas City.
Arm - semaphore block signal No. 91 on G.C.& S.F.Ry.
Nail - " " " " 82 " "
Job - " " " " 81 " "
Mule - " " " " 72 " "
Rope - " " " " 61 " "
Gin - center of roof ridge, Virginia Pt. signal tower.
Way - " " " " Island " "
Wood - flag pole south end grandstand situated on northeastern shore of Offatts Bayou.
Stuck - flag pole south side John's Oyster Resort situated on north shore of Offatts Bayou.
Slim - tank on 20 ft. stand situated on western extremity of West Bay Pt.
Golf - north peak of green top golf club house situated on south shore of Offatts Bayou.
Beer - northeast corner of red house situated near Anderson Ways settlement.
Legs - northwest corner of tin roof yellow house situated in Anderson Ways settlement.
Kip - finial of yellow tank situated in Anderson Ways settlement.
Talk - peak of rrof on unpainted square house situated near Lat. 29° 13.9', Long. 94° 55.1'.
Pipe - iron pipe situated near Lat. 29° 14.1', Long. 94° 56.0'.
Midge - 25 foot windmill situated on Gulf shore.
Herb - 30 foot windmill situated on Gulf shore at the Sunset Camp.
Mill - 25 foot windmill situated on Gulf shore.
Wind - 20 foot windmill situated on Gulf shore.
Gray - 30 foot windmill situated on Gulf shore.
Peg - northeast corner of two-story white house near Dollar Pt.

Changes of Coast Line:

This sheet was compared with U.S.C.& G.S. chart No. 1282 and the following changes were noted:

There exists a discrepancy along the south shore of Moses Lake of about 60 meters. This discrepancy may be partly due to erosion, but by checking similar points of land, indications are that the discrepancy is due to poor control for the earlier survey.

Discrepancies exist in the location of the shoreline features in the vicinity of Jones Lake and Highland Bayou. The size and shape of the features are unchanged, but their positions with respect to latitude and longitude are considerably changed. Thus the discrepancies are undoubtly due to change of datum or poor control in the case of the earlier survey. In this vicinity, a line of spoil banks has been thrown up in West Bay from the dredging of the Louisiana-Texas Intracoastal Waterway.

Some of the small islands in the vicinity of the Deer Islands are no longer bare at mean high water. Many of these former islands now exist as shell reefs bare only at mean lower low water.

Remaining parts of the old causeway footings have been located just southwest of the present causeway. These are not shown on chart 1282.

Offatts Bayou has been changed considerably in shape, size and depth. This is partly due to erosion but mostly due to dredging operations. The sand was pumped out of Offatts Bayou and spread over the City of Galveston to give it more elevation. The east end has been filled in by the city dump. The bayous in the vicinity of latitude 29° 14.5', longitude 94° 56.0' have changed considerably in size and shape. The changes probably are due to errors in the earlier survey and partly due to erosion.

The Gulf shore as shown on this sheet has been eroded only slightly. The irregularities in the Gulf shore as shown on chart 1282 have been cut off until a straight shoreline exists. In comparing the former width of Galveston Island with its present width, it is found that there has been practically no change in width.

West Bay beacons are inaccurately located on chart 1282. These should be re-charted according to the triangulation records and this topographic sheet.

From a comparison of this topographic sheet with a 1929 U.S.G.S. map of this area, the following discrepancy was noted:

The point of land on Galveston Island at latitude 29° 16.4', longitude 94° 53.0' is located about 210 meters too far inshore on the U.S.G.S. map. This is definitely a mistake on the U.S.G.S.sheet, as the location of the shore line in this vicinity on this topographic sheet was well controlled by triangulation station Offatts.

In general all other parts of the shore line checked very well.

Character of Marsh:

The area delineated as marsh on this sheet is covered with low marsh vegetation. A tide one foot above mean high water will cover about 40% of the marsh area. After high tides and during rainy seasons the marsh area is partly covered with water and is very boggy.

Features to be Removed from Present Charts:

The G.& W.R.R. extending from the city of Galveston down part of the island is no longer in existance and should be removed from the chart.

Station Symbols:

Recovered triangulation stations are marked with a triangle ins-

cribed in a circle. After the name of these stations, two dates are given. The date enclosed in parenthesis is the date of original establishment of the station while the other date is the date of the recent relocation of the station. The change of datum in 1927 caused a change in geographic position of these stations. The 1933 date is the date of location which is plotted on the sheet.

Approved -

Earl O. Heaton

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

Respectfully submitted,

W. T. White

W. T. White,
Observer

To: Mr. Bacon
From L.S.S.

Date. Oct 16, 1934

GEOGRAPHIC NAMES
TEXAS

Survey No. T 4857

Chart No. 1282

Diagram No. 1282

Names underlined in red approved Oct 17 1934 H.B.

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

¢, Not Approved by the Division of Geographic Names, Department of Interior.

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

All names on the survey are accepted as correct unless otherwise stated. H.B.

Status	Name on Survey	Name on Chart or other Maps	New Names in local use	Names assigned by Field	Location
	Campbells Bayou		Campbells Bayou		29° 20.2' 94° 53.6'
	Offatts Bayou	Offatts Bayou Offatt Bayou (USGS.)			29° 16.9 94° 51.3
	~~Change to conform to U.S.G.S. H.B.~~				
	Basford Bayou (From U.S.G.S.)				29° 17.9' 94° 57.1
	The exact limits of Moses Lake are in doubt. On U.S.G.S. maps the eastern end is called Dollar Bay. Inquiry is being made as to this name. H.B.				

(M 100)

T-1867 Topo sheet G.

Form 567
Rev. Jan., 1933

DIVISION OF CHARTS, FILE NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

June 23, 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				DATUM	METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE				
	° ′	D. M. METERS	° ′	D. P. METERS			
(3) Texas City Sugar Refinery Smokestack	29 22	1528.8	94 53	605.5	1927	Triangulation	1282
(3) East Causeway Tower	29 17	1485.0	94 53	193.1	"	"	" 886 Helmen
(3) Texas City Municipal water tank	29 23	1120.6	94 54	751.2	"	"	" 886 Helmen
(3) 35 foot tripod signal "C" on Pelican Island	29 21	346.2	94 49	716.2	"	"	" 886 Helmen
(1,2,3) Aero. airway beacon	29 16	260.9	94 50	366.2	"	"	" 1117
(3) Grain Elevator, Texas City	29 22	970.6	94 53	1051.7	"	"	" 886 Helmen (on Desc Rep T-8944) 1934
(3) East Water Tank, Texas City Terminal Ry. Co.	29 22	966.3	94 53	1260.4	"	"	" 886 Helmen
(3) West Water Tank, Texas City Terminal Ry. Co.	29 22	969.4	94 53	1323.1	"	"	" 886 Helmen
(3) High Grade Packing Co. Tank	29 17	589.7	94 50	918.1	"	"	" 886 Helmen

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 indentification. 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.

U. S. GOVERNMENT PRINTING OFFICE: 1933

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 4867 (1933)

Galveston Island to Moses Lake, Galveston Bay, Texas
Surveyed: June, 1933, to January, 1934
Instructions dated: November 5, 1932 (HEATON)

Plane Table Survey — Cloth Mounted

Chief of Party: E. O. Heaton.
Surveyed by: C. W. O'Melveny and W. T. White.

1. Condition of Records.

The records conform to the requirements of the Topographic Manual, with the following exceptions:

a. Scaled one-half meter distances were not laid off for distortion checking.

2. Compliance with Instructions for the Project.

The survey complies with instructions.

3. Junctions with Contemporary Surveys.

Satisfactory junctions were made with T-4852, T-4860, T-4863, T-6051, and T-6054.

4. Comparison with Prior Surveys.

a. T-283 (1850).

A comparison of this survey with the present survey shows a good general agreement. Some discrepancies exist in Swan Lake, Jones Lake, and Dollar Bay but they are probably due to lack of control on the old survey. However, it appears that there has been erosion along the Galveston Bay shore. Miller Point has eroded away about 100 meters. The shoreline at Dollar Point is now about 30 meters inshore from its former position. In general, changes are substantially as described in the Descriptive Report.

b. T-328 (1851).

A comparison of this survey with the present survey shows good agreement in general trend of the shoreline. The greatest change which has occurred is on the outer coast where the shoreline has been shifted inshore a maximum of 125 meters at long. 94°52.5'. The islands and bars in the vicinity of Deer Islands have undergone change due to natural forces. Various other discrepancies caused by construction and dredging were found to be as described in the Descriptive Report.

5. Field Drafting.

The field inking of the survey is very good.

6. Additional Field Work Recommended.

The survey is complete and no additional field work is required.

7. Superseding Old Surveys.

Insofar as the topography actually included on the present survey is concerned, it supersedes the following surveys for charting purposes:

T-283 (1850) in part.
T-328 (1851) " "

8. Note to Compiler.

Attention is called to the Descriptive Report, Page 3, Paragraph 8, "beacons inaccurately charted."

9. Reviewed by - A. F. Jankowski, November, 1934.

Examined and approved:

C. K. Green, C. K. Green
Chief, Section of Field Records.

K. T. Adams
Acting Chief, Division of Charts.

Frank S. Borden
Chief, Section of Field Work.

G. T. Rude
Chief, Division of H. & T.

Applied to new compilation of Chart No. 520 by J. Fleming, May 21, 1935, G.H.S.

NAUTICAL CHARTS BRANCH

SURVEY NO. T-4867

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3/27/50	886	Helmer	~~Before~~ After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.