

8052

SUPPLEMENT

Form 504
U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE
DESCRIPTIVE REPORT
Type of Survey <u>Topographic</u>
Field No. _____ Office No. <u>T-6052</u>
LOCALITY
State <u>Texas</u>
General locality <u>Galveston</u>
Locality <u>Bolivar Roads</u>
<u>1947</u>
CHIEF OF PARTY
<u>Ross A. Gilmore</u>
LIBRARY & ARCHIVES
DATE _____

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

REGISTRY No. T- 6052

Field No. _____

Scale 1: 10,000

State Texas General locality Galveston

Specific locality Bolivar Roads

Dates: Survey began 25 September 1947 Completed 25 September 1947

Photography _____, Supplemented by ground surveys to _____

Project No. Ph 14 (46) Instructions dated Undated (suppl. 1, 7-22-47)

~~Vassar~~ Party } or Photogrammetric Chief of party Ross A. Gilmore

Field work by John S. Howell Office work by John S. Howell

Final inking by John S. Howell

Ground elevations } in feet above { M. H. W.
Treetop elevations } or { _____

Contours } by { Planetable } Interval _____ ft.
Approximate contours } { Multiplex }
Form lines } { _____ }

REMARKS Sheet used only to locate new spoil banks not visible on
existing photographs.

DESCRIPTIVE REPORT TO ACCOMPANY
TOPOGRAPHIC SHEET OFFICE NO. 6052

PROJECT: Ph-14(46)

DATUM: NA 1927

DATE OF INSTRUCTIONS: undated
Supplement 1, dated 22 July 1947

DATE OF FIELD WORK: September 1947

SCALE: 1:10,000

PURPOSE: The sheet was used to locate MHWL of new spoil banks that have come into existence subsequent to the date of photography.


METHODS: Standard planetable methods were used. A point on the spoil banks was located from which the MHWL was rodged in.

CONTROL: Previously plotted horizontal control stations were used as follows:


M 1933 (USE 1900)
O 1933 (USE 1900)
BOLIVAR POINT LIGHT (TOWER) 1933 (USE 1900)
FORT POINT LIGHT BELL-OLD TOWER 1933 (USE 1900)

RESULTS: Four new spoil banks were located and delineated on the sheet in orange ink per project instructions. See nine-lens photograph 18427 for additional spoil in this area.

Submitted by:


John S. Howell
Cartographer

Approved and forwarded:


Ross A. Gilmore
Chief of Party

6052

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAY 21 1934

Accr. No. _____

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R.S. Patton, Director

State: Texas

DESCRIPTIVE REPORT

Topographic

~~EXCESSIVE~~

Sheet No. J

LOCALITY

6052

Galveston Bay

(Bolivar Point and Pelican Island)

1933-34

CHIEF OF PARTY

Earl O. Heaton

U. S. GOVERNMENT PRINTING OFFICE: 1921

6052

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

Registry No. **T- 6052**

Field No. _____

Scale **1: 10,000**

State **Texas** General locality **Galveston**

Specific locality **Boliver Roads**

Dates: Survey began **25 September 1947** Completed **25 September 1947**

Photography _____, Supplemented by ground surveys to _____

Project No. **Ph 14 (46)** Instructions dated **Undated (suppl. 1, 7-22-47)**

~~Vessel~~ or **Photogrammetric** Party } Chief of party **Ross A. Gilmore**

Field work by **John S. Howell** Office work by **John S. Howell**

Final inking by **John S. Howell**

Ground elevations } in feet above { **M. H. W.**
Treetop elevations } or { _____

Contours } by { **Planetable**
Approximate contours } **Multiplex** } Interval _____ ft.
Form lines } _____ }

REMARKS **Sheet used only to locate new spoil banks not visible on existing photographs.**

Since topo work on Sheet J was completed,
Buoy #8 has been moved as noted in Notice to
Mariners, dated May 9, 1934.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 6052

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. J

REGISTER NO. 6052

State Texas

General locality Galveston Bay

Locality Bolivar Point and Pelican Island

Scale 1:10,000 Date of survey Oct. 1933 to Jan., 19 34

Project: HT-118 Galveston Bay

~~Vessel~~

Chief of party Earl O. Heaton

Surveyed by 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, 19 32

Remarks: _____

DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET "J"
BOLIVAR POINT AND PELICAN ISLAND
Scale 1:10,000

Project: HT-118, Galveston Bay
Surveyed October 1933 to January 1934
E. O. Heaton, H. & G. Engineer, Chief of Party
W. T. White, Topographer
Instructions Dated Nov. 5, 1932

General Description of the Coast:

This sheet covers Bolivar Point, Pelican Island, east end of Texas City Dike and the junctions of the Galveston, Texas City, Houston and Port Bolivar channels.

The south shore of Bolivar Point is a wide sandy beach back of which extends a flat prairie covered with grass and scattered patches of small bushes and salt cedars. The Bolivar Point light tower is located on the point at the northerly side of the entrance to Galveston Bay. This is a white and black, horizontally banded, conical tower 117 feet high. At present this tower is not used as a lighthouse. Fort Travis Military Reservation is located on the south shore of Bolivar Point. The reservation is enclosed by a 15 foot concrete seawall. The Galveston-Bolivar Point ^{auto} ferry landing is at the southwest corner of the reservation. The ferry channel is marked with a line of 12 foot beacons constructed of a single pile with cross arm. It is likely that all of these beacons are supposed to be lighted, but at present only a part of them have lights. These are shown on the sheet with the "lighted beacon" symbol. The Gulf and Intercoast Railroad ferry landing is at the western end of the point. A 45' wooden tower and a 45' black water tank are located just east of the railroad ferry slip and are prominent objects in this vicinity. The Galveston Bay entrance of the Louisiana-Texas Intra-Coastal Waterway is on the northwest side of Bolivar Point. A steel sheet pile dike at this entrance was under construction in January 1934. A plan of this dike is submitted with this sheet (see blueprint from U.S. Engineer Office, Galveston, Texas dated May 8th, 1933, file number 16-2-85). The town of Port Bolivar is scattered over Bolivar Point, with the larger part located 3/4 mile north of the Port Bolivar docks. The northwest shore of Bolivar Point is a narrow sand beach back of which rises a low bank from 2 to 5 feet high, covered with grass and a few patches of small bushes. Some marsh is south of a small bayou and around a lake in the central part of the point. The spire on the white wooden church is a prominent object which may be seen several miles off-shore in Galveston Bay.

Pelican Island is a low flat island covered entirely by marsh, with the exception of a narrow strip of sand beach along the north shore. Two 35 foot tripod signals maintained on the island by the U. S. Engineers are useful as landmarks in this vicinity. Two wrecked ships 0.7 mile apart are aground in shallow water about 1/2 mile north of the island. The easternmost wreck is the hull of a concrete ship 18 m. wide amidship and 120 m. long; the forward end of the hull is bare 25 feet above m.h.w. while the aft end is bare 10 feet above m.h.w. The westernmost wreck is the hull of a tree-masted wooden schooner,

10 m. wide amidship and 50 m. long; the forward end of the hull is bare 6 feet above m.h.w. while the aft end is bare 10 feet above m.h.w. (These measurements were obtained by a skiff-hydrographic party).

The eastern end of the Texas City dike is located on this sheet. The dike is constructed of timber and earth and is covered with spoil mounds of heights varying from 4 to 18 feet above m.h.w. A red granite riprap jetty extends along the south side of the dike.

The entrances to the Galveston, Texas City, Houston, and Port Bolivar channels are located on this sheet. The entrance to each of these channels is marked with buoys, some of which are lighted.

Landmarks:

Bolivar Point Lighthouse (tower).
 Tower - dark wooden tower 45 ft. high located near G. & I.R.R. ferry slip.
 Tank - black metal tank 45 ft. high, located near G. & I.R.R. ferry slip.
 Spire - spire of white wooden church at Port Bolivar.
 M - 35 foot tripod signal on north central part of Pelican Island.
 O - 35 foot tripod signal on west end of Pelican Island.
 Fort Point Lt. Bell - old tower.

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 Closure and Methods of Adjustment:

Traverses	Closure Error (meters)	Distance (stat. miles)
Travis to intermediate point located by plane-table traverse from Beta.	1	0.4
Travis to Bolivar Point Lt.	3	1.1
Bolivar Pt.Lt. to Bolivar Pt.Lt.	6	2.9
"O" to "M"	3	1.6
"M" to "3-point fix" near small bayou on northeast part of Pelican Island.	3	0.8
"O" to "3-point fix" western extremity of Pelican Island.	0	0.4
"O" to "3-point fix" on southwestern part of island.	3	1.5
Tex to intermediate station located by plane-table traverse from City	2	0.7

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

List of Plane-table Positions:

Gun - a 25 foot windmill on Fort Travis Reservation.
 Shell - finial of tank on Fort Travis Reservation.
 Ben - finial of 45 foot black tank on property of G. & I.R.R.Co.

Dull - central axis of dark wooden tower near G. & I.R.R. ferry slip.
Duck - a 35 foot windmill near store of R.C. Bouse.
Stone - stone chimney on two story unpainted house near bay shore.
Min - center of small white shack at end of road to bay shore.
Spire - spire of white wooden church (Methodist Church)

Changes of Coast Line:

The area between Pelican Island and Pelican Spit has been filled in from the dredging of ship channels in this vicinity. This area is shown on U.S.C. & G.S. charts as shallow water, but it has been filled in to such an extent that at present it is bare at mean high water and appears as a low flat marsh area. It would seem that the name Pelican Spit should be eliminated and the entire Island be referred to as Pelican Island.

Spoil mounds of red clay and fine sand from dredging the Texas City channel are located one-half mile north of Pelican Island. Some of these mounds are bare as much as ten feet above m.h.w.

Spoil mounds of sand and shell from dredging the Louisiana-Texas Intracoastal Waterway are located just north of Bolivar Point. These mounds are bare two feet above mean high water.

Most of the shore line on this sheet has been affected considerably by erosion due to wave action. That part of the shore line of Bolivar Point shown on this sheet has receded an average of 75 m. The north shore line of Pelican Island has receded an average of 100 m. while the south shore of Pelican Island, being less subjected to wave action, has not been affected appreciably by erosion. This data on shore line change was obtained by a comparison of the topographic sheet with U.S.C. & G.S. chart 520.

A comparison of this sheet with the Galveston Quadrangle of the Galveston County, Texas, U.S. Geological Survey map shows that the general shape of the Texas City dike, Pelican Island and most of Bolivar Point is the same. There is approximately 75 m. difference in the mean high water line along the sand flat southeast of the Port Bolivar docks. It is understood that the U.S. Geological Survey map was made from aerial photographs; thus the above 75 m. difference probably resulted from the photographs being taken at a time when the tide was above mean high water. There is a definite error in the relative position of the Texas City dike, Pelican Island, and Bolivar Point. This error is probably due to lack of control in the compilation of the U.S. Geological Survey map from aerial photographs. Considerable difference is noted in the delineation of areas on Pelican Island and Bolivar Point as marsh and sand. This difference is probably due to a lack of proper field inspection on photographs in the compilation of the U.S. Geological Survey map.

Character of Marsh:

The marsh area shown on Bolivar Point is covered with low marsh vegetation. About 50% of this area is covered with water when the tide is one foot above mean high water.

Pelican Island is almost entirely covered by marsh. A storm tide sometimes covers 75% of the island and leaves many scatter-

ed ponds which remain filled with a few inches of water for a long period of time. Very soft mud, pumped in from recent dredging of ship channels, covers the southern part of the island to a depth of from one-half foot to four feet. Scattered patches of marsh grass partly cover this mud filled area.

Station Symbols:

Recovered triangulation stations are marked with a triangle inscribed 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 the 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,
H. & G. Engineer, C. & G. S.

Respectfully submitted,

W. T. White
W. T. White,
Observer

Applied to chart #520 of J. Fleming.

May 15, 1935
J. H. S.

U. S. COAST & GEODETIC SURVEY
DIVISION OF CHARTS, FILE NO. _____
LIBRARY AND ARCHIVES

MAY 22 1934

Acc. No. _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

March 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

Chief of Party.

[illegible]

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, 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 of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstuffs and like objects are not sufficiently permanent to chart.

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6052 (1934)

Bolivar Point and Pelican Island, Galveston Bay, Texas

Surveyed October, 1933 - January, 1934

Instructions dated November 5, 1932 (HEATON)

Plane Table Survey

Aluminum Mounted

Chief of Party - E. O. Heaton.

Surveyed by - W. T. White.

1. Condition of Records.

The records conform to the requirements of the Topographic Manual in every respect.

2. Compliance with Instructions for the Project.

The survey complies with instructions.

3. Junction with Contemporary Surveys.

Satisfactory junctions were made with T-4863 (1933), T-6051 (1934), T-6053 (1934), and T-6054 (1934).

4. Comparison with Prior Surveys.

a. T-282 (1852).

Since the time of this survey, the entire shoreline has been changed due to jetty construction and other improvements. For that reason no detailed comparison of this survey was made with the present survey.

b. Chart No. 520.

A comparison of this chart with the present survey shows good agreement in general features. Pelican Island and Pelican Spit shown as two separate islands on the chart are now joined as one island.

5. Field Drafting.

The field inking of the survey is very good.

6. Additional Field Work Recommended.

No additional field work is required.

7. Superseding Old Surveys.

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

T-282 (1850) in part.

8. Reviewed by - A. F. Jankowski, October, 1934.

Examined and approved:

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

L. O. Pollock
Chief, Division of Charts.

F. S. Borden
Chief, Section of Field Work.

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