DESCRIPTIVE REPORT

Topographic Sheet No. E 4862

State: Texas

Locality: Galveston Bay
(East Bay)

1933

Chief of Party: Earl O. Heaton
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. [Blank]
REGISTER NO. 4862

State...Texas
General locality...Galveston Bay
Locality...East Bay
Scale...1:20,000 Date of survey...Apr. 15 to June 5, 1935

Project: MT-118

Chief of party...J. O. Heaton
Surveyed by...J. W. Somers
Inked by...J. W. Somers

Heights in feet above m.s.l., to ground..., to tops of trees
Contour, Approximate contour, Form line interval...feet
Instructions dated...Nov. 5, 1932

Remarks:

...
DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET E
EAST BAY AND BOLIVAR PENINSULA
Scale: 1:10,000
Project: HT-118; Galveston Bay
Surveyed April 16 to June 5, 1933
E. O. Heaton, H. & G. Engr., Chief of Party
J. W. Somers, Topographer
Instructions Dated Nov. 5, 1932

General Description of the Coast:
The shore of East Bay is marsh and low prairie land, with the
exception of a low sand and shell ridge, which begins about 1/2 miles
east of Moody's ranch house and extends eastward to Robinson Bayou.
This ridge is sparsely covered with mesquite bushes and a heavy gro-

The vegetation on the East Bay shore is salt grass, mesquite, and salt cedars. The Gulf shore has a sand and shell beach
which extends inshore about 100 meters to sand dunes. The average
height of these dunes is about 5 feet, except from Caplen to Patton
where they are about 10 feet high. On Bolivar Peninsula the vege-
tation is salt grass, salt cedars, and mesquite, and along the high-
way truck farming. The only substantial stand of timber in this sec-
tion is at Elm Grove, located 1 mile NW of Flake station, on the
G.C. & S.F.R.R.

The Intracoastal waterway enters East Bay at a point 450 meters
south of the mouth of East Bay Bayou on a bearing of S. 32½° W.,
crosses a small cove of East Bay for a distance of 1000 meters and
then cuts across the marsh for a distance of 1½ miles to a point
north of Gilchrist B. R. Station. It again enters East Bay on a
bearing of S. 67 1/3° W., and continues for about 1½ miles to a point
where the marsh is again entered and through which the waterway ex-
tends to the west edge of sheet E. The cuts through the bay are
marked by small beacons of a temporary nature consisting of 2" x 2" and
2" x 4" stakes with a cross slat at the top.

Landmarks:
Hildebrants house at Oyster Bayou
Two story pink house owned by J. Cook Wilson at Caplen, Texas
Small house 1/4 miles SE of East Bay Bn. #3.

Character of Control Used:
The control for this sheet consists of six second order triangula-
tion stations, seven third order triangulation stations, and plane-
table stadia traverse. Two dates are shown on this sheet at station
Parr's Grove, which was recovered. The date of original establish-
ment is shown in addition to the date of the last occupation. This was done
because the datum was changed in 1927 and the last date is the one
which represents the plotted position.

Closing Errors of Traverses and Methods of Adjustment:

<table>
<thead>
<tr>
<th>Station</th>
<th>Closure error</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moody to station Cattle</td>
<td>16</td>
<td>3.7</td>
</tr>
<tr>
<td>Station Cattle to station Robinson Bayou</td>
<td>6</td>
<td>2.7</td>
</tr>
<tr>
<td>Station Robinson Bayou to Station Shell</td>
<td>15</td>
<td>4.0</td>
</tr>
<tr>
<td>Station</td>
<td>Closure Error (meters)</td>
<td>Distance (miles)</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Shell to station Brant</td>
<td>10</td>
<td>3.7</td>
</tr>
<tr>
<td>Brant to station Gilchrist</td>
<td>12</td>
<td>3.5</td>
</tr>
<tr>
<td>Gilchrist to station Belt</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>Belt to station Slipper</td>
<td>8</td>
<td>3.7</td>
</tr>
<tr>
<td>Slipper to station Cox</td>
<td>6</td>
<td>2.5</td>
</tr>
<tr>
<td>Cox to station Way</td>
<td>5</td>
<td>1.2</td>
</tr>
<tr>
<td>Cox to station Pete</td>
<td>10</td>
<td>3.2</td>
</tr>
<tr>
<td>Pete to station Elm</td>
<td>4</td>
<td>2.3</td>
</tr>
<tr>
<td>Elm to station Club</td>
<td>10</td>
<td>1.2</td>
</tr>
<tr>
<td>Club to station Parr's Grove</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>Gilchrist to station Pill</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>Gilchrist to station Caplen</td>
<td>7</td>
<td>2.7</td>
</tr>
<tr>
<td>Caplen to station Patton</td>
<td>12</td>
<td>6.5</td>
</tr>
<tr>
<td>Patton to station Parr's Grove</td>
<td>8</td>
<td>4.7</td>
</tr>
</tbody>
</table>

All traverse lines were adjusted in accordance with instructions in the Topographic Manual, paragraph 12, part I.

**Failure to Join with Former Work (Chart 1282):**

At Marsh Pt., chart #1282 shows south shore of East Bay 50 meters south of position given on sheet E. At the southernmost point of Yates Bayou and a small marsh bayou, the position as shown on chart #1282 is 120 meters west and 60 meters south of the position as given on sheet E. At the mouth of a bayou ½ mile west of Elm Grove Pt., the position as shown on chart #1282 is 180 meters west of the position given on sheet E. No difference in Latitude noted. The position of East Bay Bn. #3 as shown on chart #1282 is 280 meters west and 60 meters south of the 1933 triangulation position as given on sheet E. The north shore of East Bay as shown on chart 1282 at latitude 29° 33' and longitude 94° 36' is 120 meters south of the position as shown on sheet E. A point in Robinson Bayou as shown on chart #1282 is 100 meters west and 60 meters south of the position as given on sheet E.

There is evidence of some erosion in this area, but the greater part of the above differences are probably due to difference in the datum used for chart #1282 and sheet E.

**List of Plane-table Positions:**

- S. end of concrete water trough, 2.2 miles E. of Moody's ranch house.
- 3" pipe, fence between Moody's and Canada's ranch.
- 8" post, 1½ miles E. of mouth of Robinson Bayou.
- 2" pipe, on Frozen Pt.
- Sta. Hill, Hildebrants house.
- Sta. Sta., E. gable Gilchrist R. R. Station.
- Sta. Gin, peak of roof of J. C. Wilson house, Caplen.
- Sta. Win, windmill
- Sta. Don, windmill.
- Sta. La, flagpole.
- Sta. Fip, windmill.
- Sta. Turn, S.E. corner house, 2½ miles SW of Patton R.R. Station.
- E pile of wrecked dock.
- Sta. Ken, windmill.
- Sta. El, windmill.
- Sta. Boyt, windmill.
- Sta. Fish, NW corner of house, 1½ miles SE of Bn. 3 East Bay Pass.
Changes in Shore Line:
The north shore of East Bay and the Gulf shore are receding at a fairly rapid rate. In searching for old marks along these shores this was plainly evident in cases where the marks had been washed away. Local information also confirmed the fact that recession is taking place. The south shore of East Bay does not show any change.

Character of Marshes:
The north shore of East Bay, 1 mile east of station Cattle to point 1 mile north of station Shell is covered from 1 to 4 inches by high summer tides. The average width of the flooded section is about 200 meters. Another such flooded section begins 1 mile east of triangulation station Shell and extends eastward about 1 mile. The triangular shaped island formed by the eastern reaches of East Bay, the Intra-coastal Canal and East Bay Bayou is also covered at high tides about 1 to 2 inches. The south shore of East Bay from the Bollover end of the canal westward to 1 mile south of Yates Bayou is covered about 2 inches as far inland as 1 mile. The same condition exists on Elm Grove point. The remaining sections of marsh land are covered only by storm tides.

Approved:

Respectfully submitted,

Carl O. Heaton,  
Chief of Party, C. & G.S.                        J. W. Somers,  
Observer.
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.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>POSITION</th>
<th>METHOD OF DETERMINATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEACON 3 (△ East Bay Pass Bn. 3)</td>
<td>29° 28' 110° 6'</td>
<td>Triangulation</td>
<td>1262</td>
</tr>
<tr>
<td>TRIPOD, tripod of R.R. rails</td>
<td>29° 28' 119° 1'</td>
<td>Topography</td>
<td>1282</td>
</tr>
</tbody>
</table>

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 steeple, 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.
**LANDMARKS FOR CHARTS**

Corpus Christi, Texas

**June 8, 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:

**Small unpainted house on S.E. shore East Bay, 1/4 mi. S.S.E. Capt. W.**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>POSITION</th>
<th>METHOD OF DETERMINATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small unpainted house on S.E. shore East Bay, 1/4 mi. S.S.E. Capt. W.</td>
<td>29° 27' 1172 94° 41' 1073 1927 Plano-table</td>
<td>1252</td>
<td></td>
</tr>
</tbody>
</table>

**Summer home of J.C. Wilson (2) 2 story, pink, peak roof**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>POSITION</th>
<th>METHOD OF DETERMINATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer home of J.C. Wilson (2) 2 story, pink, peak roof</td>
<td>29° 30' 230 94° 50' 958</td>
<td>1220</td>
<td></td>
</tr>
</tbody>
</table>

**B. Hildebrandt's house built on piles, high peaked roof.**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>POSITION</th>
<th>METHOD OF DETERMINATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Hildebrandt's house built on piles, high peaked roof.</td>
<td>29° 33' 754 94° 28' 962</td>
<td>1220</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Status</th>
<th>Name on Survey</th>
<th>Name on Chart</th>
<th>New Names in local use</th>
<th>Names assigned by Field USGS</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gulf Of Mexico</td>
<td>Same</td>
<td>---</td>
<td>---</td>
<td>29° 22' 96&quot;</td>
</tr>
<tr>
<td></td>
<td>East Bay</td>
<td>Same</td>
<td>T-329</td>
<td>---</td>
<td>29° 31' 04&quot;</td>
</tr>
<tr>
<td></td>
<td>Intracoastal Waterway</td>
<td>On 1283 Intracoastal Waterway</td>
<td>---</td>
<td>---</td>
<td>29° 22' 86&quot;</td>
</tr>
<tr>
<td></td>
<td>Elm Grove Pt.</td>
<td>Elm Grove on T-329</td>
<td>---</td>
<td>---</td>
<td>29° 30' 1'</td>
</tr>
<tr>
<td></td>
<td>Yates Bayou</td>
<td>Same</td>
<td>T-329</td>
<td>---</td>
<td>29° 31' 9&quot;</td>
</tr>
<tr>
<td></td>
<td>Marsh Pt.</td>
<td>Same</td>
<td>T-329</td>
<td>---</td>
<td>29° 32' 5&quot;</td>
</tr>
<tr>
<td></td>
<td>Frozen Pt.</td>
<td>Same</td>
<td>T-329</td>
<td>---</td>
<td>29° 32' 1&quot;</td>
</tr>
<tr>
<td></td>
<td>Mussel Pt. USGS decision Same Muscle Pt on T-329</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>29° 33' 6&quot;</td>
</tr>
<tr>
<td></td>
<td>East Bay Bayou</td>
<td>Same</td>
<td>T-329</td>
<td>---</td>
<td>29° 34' 4&quot;</td>
</tr>
<tr>
<td></td>
<td>Robinson Bayou</td>
<td>Same</td>
<td>T-329</td>
<td>---</td>
<td>29° 33' 6&quot;</td>
</tr>
<tr>
<td></td>
<td>Oyster Bayou</td>
<td>Same</td>
<td>T-329</td>
<td>---</td>
<td>29° 30' 6&quot;</td>
</tr>
</tbody>
</table>

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Bolivar Pen

Pasture Bayou 12.80

Gilchrist 13.00 R.R.G

Caplen 13.00 R.R.G

Patton 15.72 R.R.G

Names underlined in red approved by NE on 9/3/57
Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 4862 (1933)

East Bay, Galveston Bay, Texas
Surveyed: April - June, 1933
Instructions dated: November 5, 1932 (HEATON)

Plane Table Survey

Chief of Party: E. O. Heaton.
Surveyed by: J. W. Somers.

Cloth Mounted


The records conform to the requirements of the Topographic Manual.

2. Compliance with Instructions for the Project.

The survey complies with instructions in every respect.

3. Junctions with Contemporary Surveys.

Satisfactory junctions were made with T-4861 (1933) and with T-4863 (1933).


a. T-329 (1851).

This survey is in good agreement with the present survey, particularly in the general delineation of detail. Minor discrepancies in geographic location are very probably due to lack of sufficient control for the old survey.

b. T-1636 (1886) and T-1637 (1881).

These surveys are in good agreement with the present survey.

5. Field Drafting.

The field inking is good.

6. Additional Field Work Recommended.

The shoreline detail is complete and no additional field work is required.

7. Superseding Old Surveys.

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

T-329 (1851) in part.
T-1636 (1886) " "
T-1637 (1881) " "
8. **Magnetic Meridian.**

There are four magnetic meridians shown on the sheet which vary from 11°08' at Triangulation Station Gilchrist to 7°58'. The other two are 6°33' and 8°24'. It is probable that the meridian at Triangulation Station Gilchrist was affected by local disturbance.


Examined and approved:

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

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

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

Chief, Division of H. & T.

Applied to chart 1280, Sept. 13, 1937, G. H. S.