DESCRIPTIVE REPORT

Topographic Sheet No. 4873

State: Texas

LOCALITY

Corpus Christi Bay
Alto Vista

CHIEF OF PARTY

Earl O. Heaton
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. 4873

REGISTER NO.

State Texas

General locality Corpus Christi Bay

Locality Southwesterly to Mustang Island

Scale 1:20,000 Date of survey April - June 1934

Project HT-119

Chief of party Earl O. Reaton

Surveyed by J. W. Somers

Inked by J. W. Somers

Heights in feet above M.H.W. to ground

Contour, Approximate contour, Form line interval feet

Instructions dated Nov. 5, 1932 & Nov. 16, 1933 19

Remarks:
DESCRIPTIVE REPORT
TO ACCOMPANY PLANE-TABLE CONTROL SHEET 'S'
SOUTH PORTION OF CORPUS CHRISTI BAY AND MUSTANG ISLAND
Surveyed April to June 1934
E. O. Heaton, H. & G. Engineer, Chief of Party
J. W. Somers, Topographer
Instructions dated November 5, 1932 & Nov. 16, 1933

Purpose of Survey:
This survey was executed primarily to furnish supplemental control
for hydrographic work and secondarily to aid in the control of photo topo-
graphic sheets Register Nos. 5365 and 5368 compiled by Ensign T. M. Price.
If it had not been desirable to start hydrographic work before the photo
compilation had been completed this sheet would not have been necessary.
In addition to signals located for hydrographic work the low water line
was established and in places the high water line was obtained as an aid
in the compilation of photographs. A few planestable positions were used
from this sheet as control for the photo compilations.

General Description of the Coast:
The shore from Alta Vista SE to the westernmost opening of Cala del
Oso into Corpus Christi Bay, near Long. 97° 20', is a narrow sand and shell
beach at the foot of a black clay bluff bank which varies in height from
20 ft. at Alta Vista to about 10 ft. near the Cala del Oso. The Bay shore
in the Cala del Oso area, Long. 97° 17' to 97° 20', is broken by several
small bayous which form the mouth of the Cala del Oso. The shoreline in
this area ranges up to about 8 ft. in height. The shore of Flour Bluff Point
is a sand and shell beach somewhat wider than the beach NW of the Cala del
Oso. Inshore from the beach between signal Pil and a point a short east of
signal Meat, a high ridge of sand dunes rises, in some places to a height
of 30 ft. This area is covered with a heavy growth of chaparral.

A large two story house near the point at Alta Vista is located and
described as a landmark which may be useful to navigation in Corpus Christi
Bay. The Gulf shore of Mustang Island is a wide sand beach. A range of sand
dunes run parallel to and about 125 m. NW of the shoreline. These dunes are
15 to 30 ft. high and are covered with grass. At the time of this survey
there were no objects of any description in this section that would be of any
use to navigation in the Gulf or in Corpus Christi Bay. The west shore of
Mustang Island in is general a wide sand flat with a few scattered sand dunes
extending to the Bay shore. These dunes vary in height from 5 to 15 ft. and
are subject to changes in position and appearance due to the wind and in some
cases to flood tides. Shemrock Island is a narrow sand, shell, and marsh
island sustaining a heavy growth of grass, with several groups of oleander,
prickley-pear, salt cedars, mesquite, and a few scattered palms.

Auxiliary Surveying:
Several topographic stations were located on the west shore of Mustang
Island by three point fixes. These stations were located for hydrographic
control. Station Yuca, a large yucca plant, was also used for control in
compiling the Photo Topographic Sheet, Register No. 5368.

Changes in Prominent Objects:
The Alta Vista Hotel, located on the point at Alta Vista, has been re-
moved and should be deleted from chart #1266.

A new building, a 2 story stucco house, has recently been completed near
the site of the old Alta Vista Hotel. The cupola near the N. side of this
house was located and used as a topographic station (station Man). This position
should be added to the chart as a landmark.
Comparison with Other Surveys:

This survey was compared with the Photo Topographic compilation of sheets, Register Nos. 5365 and 5368, and was found to agree very well with them. Slight discrepancies have been satisfactorily adjusted in the field.

Geographic Names:

New names and changes in old names are not discussed in this report. See report for photo topographic sheets, Register Nos. 5365 and 5368.

Landmarks:

Two story house, on point of land at Alta Vista.

Character of Control Used:

Sheet "S" is controlled by nine second order and third order triangulation stations and by plane table traverse.

Closing Errors and Methods of Adjustment:

<table>
<thead>
<tr>
<th>Aber to Vista</th>
<th>7 meters</th>
<th>2.5 miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Calle to Aber</td>
<td>20 &quot;</td>
<td>2.8 &quot;</td>
</tr>
<tr>
<td>Calle to Brighton</td>
<td>14 &quot;</td>
<td>2.8 &quot;</td>
</tr>
<tr>
<td>Piper to 3 pt. fix SE of Flat</td>
<td>20 &quot;</td>
<td>3.5 &quot;</td>
</tr>
<tr>
<td>Piper to Knoll</td>
<td>10 &quot;</td>
<td>3.1 &quot;</td>
</tr>
</tbody>
</table>

*Adjusted in field by rerunning line to a point of agreement.

Other traverse lines adjusted as prescribed on page 57 in publication 144.

List of Plane Table Positions:

| Roof -- peak of brown tile roof of grey brick house. |
| Man -- cupola, stucco house. |
| Cent -- chimney, center of 2 story house. |
| Aid -- chimney, south side of 2 story house. |
| Sou -- SE corner of brown house. |
| Car -- SE corner of white apartment house. |
| Now -- NE corner of white house (one story). |
| Win -- Windmill. |
| Mid -- chimney, center of house. |
| Con -- SE corner of concrete house (unfinished). |
| Him -- chimney, center of house. |
| Hig -- windmill, 40 ft. high at Cala del Oso camp. |
| Yel -- east gable yellow house (one story). |
| Yuca -- large yucca plant about 10 ft. high. |
| Sop -- small, lone yucca plant. |

Other topographic stations which were located are poorly built houses or objects of a temporary nature which will not be of much value on future surveys.

Changes of the Coast Line:

The shoreline of Corpus Christi Bay on this sheet was compared with the shoreline of the original Hydrographic Survey of 1868-69 and with chart #1286. Due to differences in the datum and probably lack of control on the original survey, the shoreline of the original survey differs from the shoreline of this survey as follows: From Alta Vista to the Cala del Oso the original shore line is from 10 to 40 meters SW of the shore line of this survey; from the Cala del Oso to Flour Bluff Point the original shoreline is from 10 to 30 meters north of the present shoreline. No comparison of the Mustang Island shores was made.

(For this comparison see report for photo topographic sheet, Register No. 5368). It is very evident that the southwest shore of Corpus Christi Bay recedes considerably with each severe tropical storm, but very little recession
is due to normal wave action. There was no way of determining the exact amount of this recession.

Character of Marshes:
See report for photo topographic sheet, Register No. 5368, for description of marsh land.

Dates on Triangulation Stations:
Two dates are shown on this sheet for stations which have been recovered. The date of original establishment is shown in parenthesis and the last date of occupation is also shown. This was done because the datum was changed in 1927. The last date is the one which represents the plotted position.

Inspected and approved: 

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

Respectfully submitted,

J. W. Somers, Topographer
DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY  
LANDMARKS FOR CHARTS  
Corpus Christi, Texas  
January 11, 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:

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>POSITION</th>
<th>METHOD OF DETERMINATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUFOLA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cupola of stucco house</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C Man)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>27 45</td>
<td>1131</td>
<td></td>
</tr>
<tr>
<td></td>
<td>97 22</td>
<td>1120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>H.A. 1927</td>
<td>Topography</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1286</td>
</tr>
</tbody>
</table>

This object is visible from the water.

Checked and verified by: Warren L. Moore

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
March 14, 1935

To: The Director,
Coast & Geodetic Survey,
Washington, D. C.

From: Earl O. Heaton, Lieut., C. & G. S.

Subject: Correction of description for Recoverable
Topographic Station "Aid", Topographic Sheet S. T-4873

The description for Recoverable Topographic
Station "Aid", Topographic Sheet S (Project HT-118) should
be corrected as follows:

The distance referred to in the description as:
"130 ft. north of the center line of a shell side road ex-
tending from the bayshore concrete highway toward and be-
yond the Castle Night Club"
should be 229 ft. instead of 130 ft.

Earl O. Heaton,
Lieut., C. & G. S.

March 19, 1935

Card has been corrected
in accordance with above.

Instrument on April 4
1. This survey has been reviewed in connection with Air Photo Compilation Nos. T-5365, with particular attention to the following details:

-(a) Projection has been checked in the Field.

-(b) Accuracy of location of plane table control points.

-(c) Discrepancies between detail on this survey and the air photo compilations listed above.

-(d) Discrepancies found in descriptions submitted on Form 524 when compared with the air photo compilations listed above.

2. Refer to the reviews and descriptive reports of air photo compilations Nos. T-5365, for a more complete discussion of any errors or discrepancies found.

Any material errors found on this survey are noted in subsequent paragraphs of this review, and these have been reported to the Field Records Section and the Cartographic Section.

Notes and corrections resulting from the review are shown on this survey in green.

See Page 12 report T5365 and review at back of report T5365 regarding relocation of O "Hig" Lat. 27°42.1', Long 97°16.9', and O "Aid" Lat 27°44.8', Long 97°22.5'.

Note has been made on this sheet in green

B.G. Jones
12/12/35