

4873

U. S. COAST & GEODETIC SURVEY
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JAN 21 1935

Acc. No. _____

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic Sheet No. s 4873
~~Hydrographic~~

State Texas

LOCALITY

Corpus Christi Bay
Alta Vista
Alta Vista to Mustang Island

193 4

CHIEF OF PARTY

Earl O. Heaton

U. S. GOVERNMENT PRINTING OFFICE: 1934

4873

Graphic Control

*Alta Vista
in local.*

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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JAN 21 1935

Acc. No.

REG. NO. 4873

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form,
filled in as completely as possible, when the sheet is for-
warded to the Office.

Field No. s 4873

REGISTER NO.

State Texas
General locality Corpus Christi Bay ✓
Locality South Altavista to Mustang Island Corpus Christi Bay and Mustang Island
Scale 1 : 20,000 Date of survey April - June, 1934
~~Vessel~~ Project HT-118
Chief of party Earl O. Heaton
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 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 topographic 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 planetable 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. $97^{\circ} 20'$, 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. $97^{\circ} 17'$ to $97^{\circ} 20'$, 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 Fil and a point a short ^{distance} 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 is in 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. Shamrock Island is a narrow sand, shell, and marsh island sustaining a heavy growth of grass, with several groups of oleander, prickly-pear, salt cedars, mesquite, and a few scattered palms.

Auxillary 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 removed and should be deleted from chart #1286.

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:

Aber to Vista	7 meters	2.5 miles
*Callo to Aber	20 "	2.8 "
Callo to Brighton	14 "	2.8 "
Piper to 3 pt. fix SE of Flat	20 "	5.5 "
Piper to Knoll	10 "	3.1 "

*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

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

Respectfully submitted,

J. W. Somers

J. W. Somers, Topographer

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

January 11, 1935 _____, 193

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

POST-OFFICE ADDRESS: 230 Nixon Bldg.; Corpus Christi, Texas

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

JP22
Jo
82 ckg

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

March 14, 1935

20

103 MAR - 18 - PM 1:17

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 at 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

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

March 19, 1935

not carried

Sheet S₁ base. yet been received.

Card should be corrected

E.O.H.

The card has been corrected
in accordance with above

E.O.H.

Not received on Apr 4

REVIEW OF GRAPHIC CONTROL SURVEY T- 5365 , SCALE 1:20,000

Date of Review 12/12/35

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 T 5365 and review at back of report T 5365 regarding relocation of O. "Hig" Lat. $27^{\circ}42.1'$, Long $97^{\circ}16.9'$ and O "Aid" Lat $27^{\circ}44.8'$ Long $97^{\circ}22.5'$.
Note has been made on this sheet in green

B. G. Jones
12/12/35