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

DESCRIPTIVE REPORT

Topographic Sheet No. **N 4853**
~~*Hydrographic*~~

State Texas

LOCALITY

Galveston Island

Vicinity of San Luis Pass

1933

CHIEF OF PARTY

Earl O. Heaton

U. S. GOVERNMENT PRINTING OFFICE: 1934

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4853

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. N 4853

REGISTER NO.

State Texas

General locality Galveston Island

Locality Vicinity of San Luis Pass

Scale 1:10,000 Date of survey Oct. 1933 to Nov. 1933

~~Vessel~~ Project: HT-118

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 rocks~~

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Nov. 5, 1932, 19____

Remarks: _____

DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET "N"
SAN LUIS PASS
Scale 1:10,000

Project: HT-118, Galveston Bay
Surveyed October 1933 to November 1933
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 San Luis Pass and the land area in that vicinity. San Luis Pass leads from the Gulf of Mexico to the southwestern end of West Bay. The entire area in this vicinity is flat and there are no prominent land falls. The Gulf shore in this vicinity is a wide sand beach back of which extends a flat area covered with grass and marsh vegetation and a few clumps of low salt cedars. The most prominent object in this vicinity is the San Luis Coast Guard Station, a large white building located on Galveston Island. Other objects which may be seen a short distance offshore are listed under "landmarks". A channel, which forms a link in the old inland waterway system through West Bay, has been dredged through the northern part of Mud Island. The channel entrance is marked with day beacons. Day beacon #1, located by triangulation, at the entrance cut through Mud Island, is a black rectangular day mark on pile about 15' high. Two other channel markers are located on hydrographic smooth sheet 14 by sextant angles. These markers are single piles about 6 feet high.

Landmarks:

San Luis Coast Guard Station located on Galveston Island.
House located near southwestern end of Galveston Island.
Shack (topographic signal "Pearl") located on San Luis Island.
House (or hunting lodge) located on Titlum-Tatlum Island.

Control:

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

Traverse Closures and Methods of Adjustment:

TRAVERSES	CLOSURE ERROR (meters)	DISTANCE (miles)
Motto to San Luis Coast Guard Station	3	2.3
Motto to 3 point fix on West Bay shore	3	1.0
Wreck to Tatlum	7	2.5
Tatlum to Mud Island Channel Beacon 1	9	4.3
Wreck to Mud Island Channel Beacon 1	9	2.4
Wreck to Titlum-Tatlum Is. Hunting Lodge chimney	4	1.5
Titlum-Tatlum Is. Hunting Lodge chimney to traverse station located by traverse from Tatlum to Mud Is. Channel Beacon 1	4	1.2

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

New Names:

Well-established local names which have not hitherto appeared on the charts are:

Titlum-Tatlum Island - a long irregular shaped island just south of Mud Island.

Cold Pass - a large bayou connecting West Bay to Oyster Bay. OK
JMB

List of Plane-table Positions:

Tip - 25 foot windmill located on southwestern end of Galveston Island.

Pearl - northeast corner of lone shack on San Luis Island.

Line - center of lone shack on eastern shore of Oyster Bay.

Changes in Coast Line:

A comparison of this sheet with U.S.C. & G.S. chart 1282 indicates that the Gulf of Mexico shore line has been affected considerably by erosion. The comparison shows that this shore line has receded approximately 135 meters. The comparison further indicates that the shoreline of Mud Island and the West Bay shore of Galveston Island has hardly been affected by erosion. The positions of the several small islands south of Mud Island are generally the same. Two small islands at the western entrance to Cold Pass are not shown on chart 1282, but have been mapped by this survey. The southwestern end of Galveston Island is a bare sand flat and its shape is affected considerably by high tides and storms; thus this survey does not agree with chart 1282 as to the shape of this particular area. The small island northeast of Mud Island is considerably larger than chart 1282 shows it to be. The north and east shore of San Luis Island has been cut back approximately 130 meters by wave action. Also a recent storm cut a small bayou through the southern part of this island. The Gulf shore entrance of this bayou is very shallow and will likely be filled in by sand unless storm tides come often enough to keep it open. The small islands shown in Cold Pass on chart 1282 have been considerably changed.

A comparison of this sheet with a recent U. S. Geological Survey map of Galveston County shows that the shore line of Galveston Island, with the exception of the southwestern end, has not been appreciably changed in the last three or four years. The sand flat at the southwestern end of the island has been considerably reduced in size by high tides and storms. A series of high tides will considerably change the location of both the mean high and mean low water line of this sand flat.

Character of Marsh:

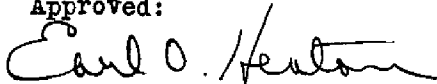
The areas delineated as marsh on this sheet are covered with low marsh vegetation. A few low mounds and ridges are to be found on some of the islands, but these are widely scattered and are of small extent. It is estimated that a tide $1\frac{1}{2}$ feet above mean high water will cover 75% of the marsh area.

Station Symbols:

Recovered triangulation stations are marked with a triangle incrimed 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.

Respectfully submitted,

Approved:



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



W. T. White,
Observer.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

May 21

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 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.

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 4853 (1933)

Vicinity of San Luis Pass, Galveston Island, Texas
Surveyed: October - November, 1933
Instructions dated: November 5, 1932 (E. O. Heaton)

Plane Table Survey

Cloth Mounted

Chief of Party - E. O. Heaton.

Surveyed and Inked by - W. T. White.

1. Condition of Records.

The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

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

2. Compliance with Instructions for the Project.

The survey complies with the instructions.

3. Junction with Contemporary Surveys.

Satisfactory junctions were made with T-4852 (1933) on the north and with T-4866 (1934) on the west.

4. Comparison with Prior Surveys.

a. T-374 (1852).

A comparison of this survey with the present survey shows that the Gulf Shore has receded about 150 m. at the west end of Galveston Island.

The shore has built out about one-half mile into San Luis Pass. The Descriptive Report states this section is subject to changes during every storm.

b. T-375 (1852).

The general appearance of this survey is quite similar to the present survey. Some changes have occurred in the size and shape of the islands. The new survey is in much better agreement with Chart #1282 which represents surveys more recent than T-375.

5. Field Drafting.

The field inking is good.

6. Additional Field Work Recommended.

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-374 (1852) in part. -

T-375 (1852) " " -

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

Examined and approved:

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

R. O. Dolbuit
Chief, Division of Charts.

T. Borden
Chief, Section of Field Work.

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