DESCRIPTIVE REPORT

U. S. COAST & GENELOCIC SURVEY
LIBRARY AND ARCHIVES

JUL 24, 1940

ACC. NO.

State: TEXAS

LOCALITY

WEST GULF OF MEXICO

PADRE ISLAND

193 g

CHIEF OF PARTY

G. C. MATTISON
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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 Letter T-1-A-B

REGISTER NO. 6703 a & b  T6703 a#b

State...... Texas

General locality..... West Gulf of Mexico

Locality....... Padre Island

Scale........ 1:20,000  Date of survey...... May, 1939

Vessel....... HYDROGRAPHER

Chief of Party....... G.C. Mattison

Surveyed by....... E.C. Baum

Inked by....... E.C. Baum and P.A. Weber

Heights in feet above...... to ground  to tops of trees

Contour Approximate contour Form line interval....... feet

Instructions dated....... February 17, 1937

Remarks: Project HT-2/4
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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 Letter T-2-A-B

REGISTER NO. 6704 a & b

State: TEXAS

General locality: West Gulf of Mexico

Locality: Padre Island

Scale: 1:25,000 Date of survey: May, 1939

Vessel: HYDROGRAPHER

Chief of Party: G. C. Mattison

Surveyed by: E. C. Baum

Inked by: E. C. Baum and P. A. Webber

Heights in feet above to ground to tops of trees

Contour Approximate contour Form line interval feet

Instructions dated: February 11, 1937

Remarks: Project H.T-214
DEPARTMENT OF COMMERCE
U. S. COAST AND GEOETIC SURVEY

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 Letter T-2-A-B

REGISTER NO. 6705 a & b T6705 a & b

State: TEXAS

General locality: West Gulf of Mexico

Locality: Padre Island

Scale: 1:20,000 Date of survey: May 1939

Vessel: HYDROGRAPHER

Chief of Party: G.C. Wattison

Surveyed by: E.C. Baum

Inked by: E.C. Baum and F.A. Weber

Heights in feet above tears to ground to tops of trees

Contour Approximate contour Form line interval 37 feet

Instructions dated: February 17, 1937

Remarks: Project H.T. 244

U. S. GOVERNMENT PRINTING OFFICE: 1937
DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

L. O. COLBERT, DIRECTOR

DESCRIPTIVE REPORT

TOPOGRAPHIC SHEETS 6703, 6704, 6705

WEST GULF

PADRE ISLAND

TEXAS

SHIP HYDROGRAPHER
GALVESTON, TEXAS

G. C. MATTISON
CHIEF OF PARTY
DESCRIPTIVE REPORT TO ACCOMPANY
TOPOGRAPHIC SHEETS 6703, 6704, 6705

AUTHORITY

Instructions dated February 17, 1937.

GENERAL

This report covers three sheets extending from latitude 27-00 to latitude 26-13. All three sheets are on Padre Island, which is in general, a low sandy island, with dunes of varying height scattered over its length. These are not prominent as landmarks, and shift position constantly.

There are no settlements of any kind on this part of the island.

Hydrographic Features:

The Gulf of Mexico lies to the east of all the land area on these sheets.

LANDMARKS

The only landmark is the boiler of a grounded boat in latitude 26 degs. 41 mins. 1257 meters; longitude 97 degs. 19 mins. 230 meters, which lies about 30 meters outside the high water line.

CONTROL

The sheets are controlled by triangulation stations spaced at convenient intervals.

Standard methods were used; along the beach where the visibility was poor due to haze caused by the wind blowing the sand, a 300 foot steel tape was used to measure between stations.

GEOGRAPHIC NAMES

All names on the sheet are well established.

CONCLUSION

Magnetic declinometer observations were taken at all stations marked magnetic.

Only the high water line on the Gulf side of the island was located; see Director's letter of January 5, 1939 copy attached.

Philip A. Weber

Forwarded Approved:

[Signature]
U.S. COAST AND GEODETIC SURVEY
L.O. COLEBRT DIRECTOR
CONTROL
FOR
HYDROGRAPHIC SURVEYS
TEXAS COAST
1939
PROJECT MT 24
SHIP HYDROGRAPHER
G.G. MATTHESON COMMANDING

LEGEND
TRIANGULATION STATION Δ
TOPOMORPHIC STATION ○
SURVEY BUOY ○
SONO-RADIO BUOY ○
SECTANT ANGLES ▲
TAUT WIRE AZIMUTH TRAVERSE ———
BOATS DISTANCE ———
TAUT WIRE TRAVERSE 1938 ———
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

January 5, 1939.

To: Commanding Officer,
U. S. Coast and Geodetic Survey
Ship HYDROGRAPHER,
P. O. Box 585,
Galveston, Texas.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Topography of Padre Island.

Your letter of December 5, 1938 has received careful consideration. It has been decided that air photographic surveys of the barrier islands between Corpus Christi Pass and the Rio Grande are not necessary at this time and that, owing to the pressure for work in other localities, the expense involved is unwarranted. The air photographic surveys of this area are accordingly being deferred until some future date. However, in view of the conditions mentioned in your letter, paragraph 8 of the instructions for Project HT-214, dated February 17, 1937, is hereby modified to the extent that for the remainder of your topographic work along those barrier islands a delineation of the shore line on the Gulf side of these two islands is all that is desired except that in the case of indentations or breaks in the shore line the shore line at such places shall be surveyed a reasonable distance back from the general trend of the coast line.

(Signed) L. O. Colbert
Director.
Statistics for Topographic Sheets T-6703a & b, T-6704a & b
and T-6705a & b.

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\[ \text{Note:} \quad L. H. \text{ Record on 4/9/40} \]
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L. Heck 9/9/40
MEMORANDUM
IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT PHOTOSTAT OF
No. T T6703 a & b
T6704 a & b
T6705 a & b
received July 24, 1940
registered July 26, 1940
verified reviewed approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

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RETURN TO

82 T. B. Reed

[Signature]

[Handwritten notes]
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks, be charted on the charts indicated.

The positions given have been checked after listing.

<table>
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<th>NAME AND DESCRIPTION</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DATUM</th>
<th>METHOD OF LOCATION</th>
<th>DATE OF LOCATION</th>
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<td>97 19</td>
<td>1827</td>
<td>Topo</td>
<td>1939</td>
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This form shall be prepared in accordance with 1934 Field Memorandum, “LANDMARKS FOR CHARTS.” The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
DIVISION OF CHARTS
Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEYS NO. 6703a to 6705b (1939)
FIELD NO. T-1A to T-3B

Texas, Gulf of Mexico, Padre Island
Surveyed in May 1939, Scale 1:20,000
Instructions dated February 17, 1937 (HYDROGRAPHER)

Plane Table Survey

Chief of Party - G. C. Mattison.
Surveyed by - E. C. Baum.
Inked by - E. C. Baum; P. A. Weber.
Reviewed by - J. A. McCormick, August 16, 1940.
Inspected by - H. R. Edmonston.

1. Junctions with Contemporary Surveys.

T-6703a (1939), most northerly of the six surveys, 
joins satisfactorily with the tape traverse shore-
line plotted directly on H-6397 (1938). The junction
of T-6705b (1939) with T-6706a (1939) on the south
is also satisfactory. The six subject surveys are
in excellent agreement where they join each other.

2. Comparison with Prior Surveys.

T-1476a & b (1879-80) 1:20,000; T-1477a & b (1879-80),
1:20,000; T-1676 (1879-81) 1:20,000; T-1677 (1879-81),
1:20,000; T-1678 (1881), 1:20,000.

Shoreline changes in varying amounts have taken place
in the interim between old and new surveys. South of
latitude 26° 25', the recession averages about 200
meters. North of latitude 26° 25' the recession
gradually decreases to good agreement at latitude
26° 45'. Thence northward begins an advance which
increases to a maximum of 70 meters at the limits of
T-6703a. The 200 meter recession in latitude 26° 20'
places the Gulf coast of the island back of the
1879-81 determination of the Laguna Madre side.
Geological Survey maps (Padre Island quadrangles 1
to 3) show a considerable widening of the barrier
beach at this point since 1879-81. It is interesting
to note that the Geological Survey maps, which were
compiled in 1930 from aerial photographs, show the
shoreline on the Gulf side of the island differing in
some places from that of the present surveys by amounts
approaching those between the present surveys and the
surveys of 1879-81. This might indicate that the
changes have been most pronounced since 1930 but it
is also probable that advances and recessions are more or less periodic. The present survey satisfactorily delineates the Gulf shoreline of the island and supersedes the surveys of 1879-81 in the common area.

3. **Comparison with Chart 1287 (New Print of Feb. 4, 1935)**
   **Chart 1288 (New Print of Nov. 3, 1939)**

   Topography charted in the area covered by the present survey is from surveys of 1879-81 discussed in the preceding paragraph. It is noted that the buff color has been omitted on both charts from form lines indicating sand dunes, thus giving the impression of innumerable small lakes on the barrier island.

4. **Condition of Survey.**
   Satisfactory.

5. **Compliance with Instructions for the Project.**

   Strict compliance with instructions for the project and with those contained in the Director’s letter of January 5, 1939 (copy attached to descriptive report) would have required resurvey of the Laguna Madre shoreline in the vicinity of latitude 26° 20' but Geological Survey maps discussed in paragraph 2 supply sufficient information for present chart compilation. It is evident, however, that the deferred air photographic surveys (Director’s letter) will reveal extensive changes in the unsurveyed area.

6. **Additional Field Work Recommended.**
   See preceding paragraph.

7. **Superseded Surveys.**

   T-1476a & b in part      T-1677 in part
   T-1477a & b in part      T-1678 in part
   T-1676 in part

   Examined and approved:

   T. B. Reed,
   Chief, Section of Field Records.

   T. B. Bond
   Chief, Division of Charts.

   Raymond L. Lanman
   Chief, Section of Field Work.

   Chief, Division of H. & T.