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

DESCRIPTIVE REPORT

Topographic } *Sheet No.* X
Hydrographic }

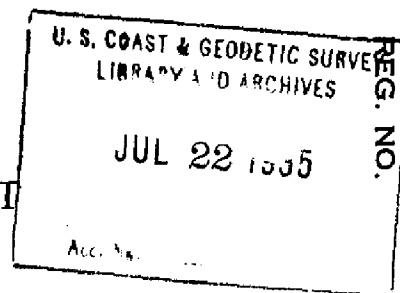
State Texas

LOCALITY
Gulf Coast
Brazos River Entrance

1935

CHIEF OF PARTY
Earl O. Henton

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 No. X

REGISTER NO. **6326**

State Texas

General locality Gulf
~~TEXAS COAST~~

Locality Brazos River Entrance

Scale 1:10,000 Date of survey March, 1935

~~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 trees~~

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Nov. 5, 1932, Supp. Nov. 16, 1933

Remarks: _____

DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET X
BRAZOS RIVER ENTRANCE, TEXAS
Surveyed March, 1935
E. O. Heaton, H. & G. Engineer, Chief of Party
W. T. White, Topographer
Instructions dated Nov. 5, 1932; Supp. Nov. 16, 1933.

General Description of the Coast:

This sheet covers the Brazos River Entrance and the channel to Freeport.

On a clear day mariners proceeding toward the Brazos River entrance first sight the derricks, stacks, and rising smoke at the sulphur mines at Bryan Mound, 4 miles westward of the entrance (beyond the limits of this sheet). The 98 foot lighthouse and the elevated sulphur dock and conveyor at Brazosport are seen on nearer approach. Two aluminum painted elevated water tanks in Freeport and small buildings in this vicinity are recognizable from a short distance off shore. Spoil mounds in this vicinity show prominently from a short distance off shore.

The entrance to the river is obstructed by a bar which has been improved by the construction of two parallel jetties and by dredging in the channel. Buoys, some of which are lighted, mark the entrance.

The Gulf shore in this vicinity is a narrow sand beach, back of which extends a low flat grass covered area. At high water a portion of the Gulf shore is flooded and appears as a shallow bay. This is a natural low spot and the interior of this small bay is filled with soft mud from dredging operations.

The Intracoastal Waterway extends about parallel to the coast a short distance inland and crosses the Brazos River at Brazosport. The banks of the river and waterway are low bluff banks covered with a growth of grass except where covered by spoil from dredging.

Landmarks:

Brazos River Lighthouse.
Elevated sulphur dock.
East Freeport, Stafford Chemical Co. tank.
Freeport Municipal tank.

Traverse Closure and Methods of Adjustment:

Traverses	Closure Error (meters)	Distance (mi.)
Freeport Municipal tank to Keg	5	4 1/4
Freeport Municipal tank to East Freeport Stafford Chemical Co. tank	2	3/4
East Freeport Stafford Chemical Co. tank to Venus	4	2
Venus to Brazos River Lighthouse	3	1 1/2
Brazos River lighthouse to Coast Guard	2	3/4
Coast Guard to Well	3	2
Well to Brazos River lighthouse	4	2
Keg to Brazos River Lighthouse	6	5

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

Character of Control Used:

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

Auxiliary Surveying Methods:

Shoreline connection was made with the work of the air-photo compilation party of Ensign T. M. Price, Jr. The Gulf shore in the vicinity of Lat. $28^{\circ} 54.5'$, Long. $95^{\circ} 20.8'$ had emerged considerable since the pictures were taken, and therefore a poor junction was obtained with the air-photo sheet in this vicinity. To correct this discrepancy a traverse was extended from triangulation station Keg westward to a point on the Gulf shore not changed by emergence. Lines were drawn to triangulation objects for a three-point fix and the traverse was closed on this position. Since this work extended beyond the limit of this sheet, it was necessary arbitrarily to place the work on the back of the sheet and later in the office transfer the information to the air photo sheet. Then the information was removed from the back of this sheet.

List of New Names:

"Quintana" is the name of a town at the N.W. end of the jetties on the southwesterly side. This town has very few inhabitants; however this locality is well known as Quintana by persons in Freeport and the entire locality and the name should be adopted.

The inland waterway extending from Galveston through this section is well known by both the U.S. Engineers and local residents as the "Intra-coastal Waterway". The section of the waterway northeast of the river is also known as the Galveston and Brazos Canal.

A small bayou in the vicinity of Lat. $28^{\circ} 57.5'$, Long. $95^{\circ} 18.1'$ is well known locally as "East Union Bayou". This name should be adopted.

List of Plane-table Positions:

ICE, steel stack on ice plant.
RAIL, railway signal tower.
EEL, steel stack school heating plant.
FLAG, flag pole north of railway station in Freeport.
U.S.E. B.M. 115
U.S.E. B.M. 113
NIT, steel stack near Oyster Creek.
CUP, U.S.C.G. cupola
CENT, center of small house on elevated pipe line.
VET, central axis bridge tower near Quintana.
AL, central axis bridge tower near Lake Bryan.
JUPITER, U.S.E. tripod signal.
NO. 2, U.S.E. tripod signal.

(No descriptions were written of recoverable H. & T. stations, since the area is adequately covered with triangulation stations).

Changes of Coast Line:

A tracing was made of the 1:10,000 scale C. & G.S. Chart 525 in order to make a comparison with the topo sheet. It was practically impossible to make a comparison of the change in shore line with any degree of certainty. When the tracing was orientated with the latitude and longitude lines natural and artificial features not subject to change were greatly out of place; hence it could not be expected that features subject to change were shown correctly in their changed position. When an attempt was made to orientate the tracing by use of the natural and artificial objects not subject to change, no satisfactory adjustment was possible between the several points used.

The inland bay on the Gulf shore has been filled in considerably by dredging on its northeast end. Some of the apparent change may be due to a difference in high water datum, because the shore is very flat and a slight difference in datum makes a considerable difference in the position of the high water line. Also it is noted that the mouth of this small bay has moved westward about 1100 meters.

Discrepancies found on C. & G.S. Chart 525 (March 30, 1934):

West Union Bayou no longer exists as a physical feature. Residents of this locality state that the bayou ceased to exist about twenty-five years ago as a result of dredging operations.

The East Union Bayou was not mapped by the previous survey; hence it is added as a new feature.

The dam at Lat. $28^{\circ} 57.6'$, Long. $95^{\circ} 17.3'$ no longer exists.

The "road to Velasco" at Lat. $28^{\circ} 57.4'$, Long. $95^{\circ} 18.0'$ has been abandoned for a number of years and no longer exists as a feature to be mapped.

The railway ferry at Lat. $28^{\circ} 57.0'$, Long $97^{\circ} 20.3'$ remains only in a state of ruins.

The sand hills extending southwesterly from Lat. $28^{\circ} 55.8'$, Long. $95^{\circ} 18.2'$ do not exist as definite features and were not mapped by this survey. A gentle slope extends along the coast in this vicinity, but it has no definite characteristics that could be mapped.

The hatchures in the vicinity of Lat. $28^{\circ} 57.4'$, Long $95^{\circ} 16.7'$ represent no definite feature and should be removed from the chart.

The lake at Lat. $28^{\circ} 55.8'$ Long. $95^{\circ} 18.0'$ does not exist.

Most of the marsh area in the vicinity of the Big Bend and the jetty has been covered with spoil flow from dredging.

The river banks are not covered with trees as shown on the present chart.

At Brazosport only one tank shows well enough to be used for any sort of a landmark. This tank is given on the sheet "Landmarks for Charts".

It is understood that buoy No. 2 at Lat. $28^{\circ} 55.1'$, Long. $95^{\circ} 17.6'$ has drifted considerably out of position. Also certain other buoys are said to be out of position and will be re-located when dredging operations have been completed; hence buoy locations on this sheet are of doubtful value for charting.

This survey together with the air photo compilation was intended to be complete; hence all other features not in agreement with the recent survey should be adjusted accordingly.

Character of Marshes:

The two marsh spots on the topo sheet are covered only at extreme high tides. Generally their marshy characteristic is a result of poor drainage and the accumulation of water from rainfall.

Portion of Sheet Incomplete:

Lake Bryan, marsh areas and small lakes in the vicinity of the Intracoastal Waterway and certain other features were furnished to the Washington Office on a small tracing during June 1935. This tracing was made from a temporary air-photo compilation by Ensign T. M. Price, Jr. It is understood that the features shown on this tracing are to be placed on the air-photo compilation sheet in the Washington Office.

Inspected and
Approved:

Clarence R. Reed

Clarence R. Reed,
Aid, C. & G. Survey.

Respectfully submitted,

W. T. White

W. T. White,
Surveyor.

Forwarded:

E. B. Roberts
Chief of Party

TEXAS

Survey No. T6326

Chart No. 1283 - 593

Diagram No. 1283

Under investigation. Q

[illegible]