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

DESCRIPTIVE REPORT

Topographic } Sheet No. U
Hydrographic }

State Texas

LOCALITY
Gulf of Mexico
~~Texas Coast~~

Aransas Pass & Vicinity

1934

CHIEF OF PARTY

Earl O. Heaton

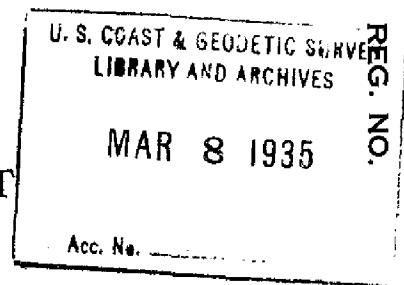
U. S. GOVERNMENT PRINTING OFFICE: 1934

6229

Graphic Control

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. U

REGISTER NO. 6229

State Texas

General locality ~~Texas Coast~~ Gulf of Mexico

Locality Aransas Pass & Vicinity

Scale 1 : 10,000 Date of survey June, 1934

~~Project:~~ 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, with supplemental instructions dated Nov. 16, 1933, 19____

Remarks: _____

①

DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET U
ARANSAS PASS

Surveyed June 1934
E. O. Heaton, H. & G. Engr., Chief of Party
W. T. White, Topographer
Instructions dated Nov. 5, 1932 with supplementary instructions dated Nov. 16, 1933

General Description of the Coast:

This sheet covers Aransas Pass and portions of the islands in this vicinity. Aransas Pass lies between Saint Joseph Island on the north and Mustang Island on the south. Harbor Island is directly opposite the inner end of the pass. A dredged channel enters from the Gulf of Mexico between two jetties, extends thru the pass and continues to Corpus Christi. The entire channel is well marked by buoys, beacons, and ranges. } ←

On making the land by day, the mariner first sights the 155 ft. black elevated water tank of the Aransas Pass Warehouse & Terminal Co. and then the 72 ft. red brick tower of the Aransas Pass lighthouse. These two objects appear sharply on the flat coast. Nearing the land from the northeast or east the mariner next sights the aluminum colored oil tanks on Harbor Island, the white Coast Guard Station and the high steel-tower ranges. Nearing the land from a southerly direction the oil tanks and Coast Guard Station are partly obscured by a continuous range of sand dunes on Mustang Island.

The part of Saint Joseph Island shown on this sheet is a low sand flat, being almost entirely bare of vegetation. A hard sand beach about 150 meters wide extends along the Gulf shore. A beach generally narrower, but of very irregular width extends along the St. Joseph shore of Lydia Ann Channel. The interior of the island is partly covered by intermittent ponds with hard sand washes between them. At the south end of the island there are a few small sand dunes which have an elevation of 14 to 18 ft. above m.h.w. The remaining areas which are usually dry have many scattered sand drifts of loose shifting sand, with an elevation not exceeding 5 ft. above m.h.w. A riprap dike is situated in the center of the island. This dike is in very poor repair and the two parallel lines delineating it merely represent the average width of the area over which the rocks are scattered.

That part of Mustang Island shown on this sheet is a sand and grass covered area. A wide sand beach extends along the Gulf shore. Back of this beach is a range of grass covered sand dunes (or knolls). These dunes vary in height up to 25 or 30 ft. and are prevented from shifting by a growth of grass. The dunes are of small lateral dimensions and are very numerous; hence time was not taken to delineate the positions of individual dunes. Their general extent is shown by a broken line and a few characteristic dunes are shown in their proper places. Elevations of some of the higher dunes were determined from vertical-angle readings. As the dunes extend inland their character changes from small "choppy" dunes to "rolling" mounds and ridges of about 15 feet elevation. The intermittent lake shown on Mustang Island is filled during some seasons by storm tides and by rainfall. The town of Fort Aransas is situated on Mustang Island. The buildings are small and unimportant as landmarks, except the U.S. Coast Guard Station which is useful for inshore navigation.

Harbor Island is a low sand and marsh covered island. Much of the island has been mapped by this survey as being barely covered at m.h.w. At mean high water the island appears to be largely covered with water, but fringed around the edge with a growth of marsh grass and dotted in the interior with a number of scattered patches of grass. The highest points of land

on the island are in the vicinity of the tank farm and at the Aransas Pass Lighthouse. The Humble Oil and Refining Co. and the Atlantic Pipe Line Co. maintain tank farms and loading docks on Harbor Island. The Harbor Island Transportation Co. maintains a causeway and rail connections to the town of Aransas Pass on the mainland.

Landmarks:

U. S. Coast Guard Station, Port Aransas.
Water tank of the Aransas Pass Warehouse & Terminal Co.
Aransas Pass Lighthouse

Character of Control Used:

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

Traverse Closures and Methods of Adjustment:

Traverses:	Closing Error (meters)	Distance (miles)
U.S. Weather Bureau Mast to Rad	4	2.3
Rad to U.S.C.G. Sta. cupola	5	1.3
U.S.W.B. Mast - A.P. Whse. & Term. tank	2	1.8
Isle to A.P.R.R. Bn.	3	3.6
A.P.R.R. Bn. to Pogy	2	1.3
Pogy to three-point-fix at Lat. $25^{\circ} 52.6'$ Long. $97^{\circ} 03.0'$	9	2.6

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

Auxiliary Surveying Methods:

The topography in the vicinity of the oil tank farms, the Aransas Channel and the Harbor Island shore of Lydia Ann Channel was surveyed with the plane-table. Other topographic features on Harbor Island were transferred from a photo-topographic sheet, Field No. 19, Register No. 5369, compiled by a party under Ensign T. M. Price, Jr. These features were placed temporarily on the photo-topographic sheet and removed therefrom after being transferred to the plane-table sheet.

Discrepancies:

Comparison was made with chart 1286 dated Feb. 15, 1934 as representing all previous surveys and also with photo-topographic sheets register numbers 6368 and 5369 which are now being compiled.

The street layout of Port Aransas should be corrected on chart 1286 to agree with the plane-table sheet.

That part of the "old jetty" shown on chart 1286 at Lat. $27^{\circ} 50' 1''$, Long. $97^{\circ} 02' 7''$ which is on land has been removed. In February 1935 the U.S. Engineers were removing some of the submerged rocks of the part of the "old jetty" which extends into the pass.

Two small lakes shown on chart 1286 at Lat. $27^{\circ} 50.2'$, Long. $97^{\circ} 02.9'$ and Lat. $27^{\circ} 50.4'$, Long. $97^{\circ} 03.4'$ no longer exist.

Wharfs not shown on chart 1286 have been constructed at Port Aransas. Also a pier not shown on chart 1286 has been constructed on the Gulf shore at Lat. $27^{\circ} 50.0'$, Long. $97^{\circ} 02.7'$.

An intermittent lake was mapped by this survey SW of Port Aransas. This should be shown on chart 1286.

The area covered with sand dunes has been definitely mapped by this survey. Chart 1286 should be corrected accordingly.

An eleven foot mound shown on chart 1286 at Lat. $27^{\circ} 51.8'$, Long. $97^{\circ} 02.9'$ no longer exists. The fifteen ft. mound shown on chart 1286 at Lat. $27^{\circ} 50.8'$, Long. $97^{\circ} 03.2'$ no longer exists; however other mounds (or sand dunes) have been located in this vicinity.

A small pier located west of triangulation station Pogy is useful in landing with small boats.

On Harbor Island the location of roads, railways, buildings, tanks, etc. should be corrected on chart 1286 to agree with the plane-table sheet.

Slight discrepancies were found in joining with the photo-topographic sheets, but these have been satisfactorily adjusted by the topographer and the photo compilation draftsman.

New Names:

The channel extending from the inner basin northerly along the west side of Lydia Ann Island is well known locally as Lydia Ann Channel. It is recommended that this name be adopted.

The small boat channel extending from the inner basin NW to the town of Aransas Pass is well known locally as Aransas Channel. As this is a fairly important channel for the fishing industry, it is recommended that this name be adopted.

The northernmost point of land on Mustang Island is well known locally as Cline Point. This name had been adopted by the Lighthouse Service in naming beacons and buoys in this vicinity; hence it is recommended that this name be adopted for charting.

It is recommended that the name "Lydia Ann Island" be adopted instead of "Lydia Ann Islands" for the small island situated between Harbor Island and St. Joseph Island. This change would conform to local usage and also the area formerly mapped as two islands is now joined as one island. The U.S.G.S. quadrangle for Aransas Pass, Texas has adopted the name "Lydia Ann I."

List of Plane-table Positions:

MAL, tank (elevated)
TANK, tank (elevated)
SIG, day signal on spur dike
USE, cupola U.S.E. field office
PA, tank (back of U.S.E. field office)
KING, cupola Silver King Cafe
TAT, U.S.E. Δ Cc
AL, steel tower at Aransas Pass Lighthouse
BN. 2, red slatted day beacon in Lydia Ann Channel.
LARD, wreck-beacon in Lydia Ann Channel

Changes of Coast Line:

The following comparison was made with the 1:40,000 scale insert on chart 1286. No scaled shore line comparison was made with the 1:80,000 scale main chart, because a discrepancy exists in the location of part of the shore line on the insert when compared to the location of the same shoreline on the main chart. It was assumed that the insert was taken from the most recent survey, and therefore more likely correct.

The scaled comparisons have been adjusted for the difference in the 1906 triangulation datum and the 1927 datum.

(minus sign represents recession; plus sign represents growth)

Lat. $27^{\circ} 50.44'$, Long. $97^{\circ} 04.00'$	-75 m.
Lat. $27^{\circ} 50.00'$, Long. $97^{\circ} 02.77'$	-100 m.
Lat. $27^{\circ} 49.50'$, Long. $97^{\circ} 03.34'$	-45 m.
Lat. $27^{\circ} 49.00'$, Long. $97^{\circ} 03.80'$	+160 m.

(7)

The above data indicates that the shore line of Mustang Island has receded to some extent; however a considerable part of the above apparent recession is most likely due to a difference in the high water datum and the fact the U.S. Engineer surveys have probably been applied to this portion of the chart. The 160 meter growth of shore line mentioned above is probably due to the application of Engineer Surveys.

The east end of the South Jetty is incorrectly shown on chart 1286; the jetty is shown 150 meters too long.

Lat. 27° 52.00'	Long. 97° 02.04'	+ 45 m.
" " 51.00'	" " 02.55'	0 m.
" " 51.00'	" " 03.30'	0 m.
" " 51.25'	" " 03.19'	+ 135 m.
" " 52.00'	" " 02.90'	+ 10 m.

The above data indicates that there has been a general growth in the shore line of St. Joseph Island. Also the island has built up in the interior until there is no longer a high water line extending down parallel to the dike. This area, which was formerly covered by mean high water is now partly covered by intermittent lakes.

The east end of the North Jetty has been charted 200 meters too long and the west end has also been charted 300 meters too long on chart 1286.

A recently constructed riprap dike 4 ft. wide at the top is shown at the southern end of Saint Joseph Island. Additional work is being done from time to time on this dike and for that reason the proposed extension of the dike is shown with a pencil dash-line.

The general location of the main shore of Harbor Island is unchanged; however there has been a considerable change in the surface nature of the island. This area was formerly mapped as mostly marsh bare at mean high water. Now, it appears to be largely an extensive shoal area of sand and mud flats covered with very shallow water and scattered growths of marsh grass either awash or slightly bare at mean high water.

The channel extending northwesterly through Harbor Island is located about 80 meters too far NE on chart 1286.

The wreck shown on chart 1286 at Lat. 27° 51.0', Long. 97° 03.6' was not bare at mean low water, and therefore was not located by the topographic party. The wreck was investigated by the hydrographic party and reference is made to the descriptive report for hydrographic sheet 3 for information about its present condition.

Character of Marshes:

Harbor Island is an extensive sand-flat, mud and marsh area. At mean high water approximately 75% of the island is barely covered with water and many scattered patches of marsh are shown as being bare or awash at this stage of the tide.

Lydia Ann Island is partly covered with marsh. This marsh area is bare about $\frac{1}{2}$ ft. at mean high water.

Inspected and approved,

Earl O. Heaton

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

Respectfully submitted,

W. T. White

W. T. White,
Observer.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

February 21, 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:

Carl 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.

Topo sheet U

U. S. COAST & GEODETIC SURVEY
DIVISION OF CHARTS FILE NO. 1135
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Acknowledged

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

February 21, 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:

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.

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TEXAS

Diagram No. 1286

Under investigation. Q

(M-138)