

6276a

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1923

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: TEXAS

DESCRIPTIVE REPORT

Topographic }  
Hydrographic } Sheet No. A

LOCALITY

Intracoastal ~~Canal~~ Waterway  
East Bay Bayou and Mud Bayou.  
~~Vicinity of High Island~~

Longitude ~~94° 21.5'~~ to

Longitude ~~94° 27.5'~~

193 5

CHIEF OF PARTY

R. F. Luce

U. S. GOVERNMENT PRINTING OFFICE: 1923

6276a

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

REG. NO.

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. A

REGISTER NO. 01702

State TEXAS

General locality Intracoastal ~~San~~ Waterway

Locality East Bay Bayou and Mud Bayou  
Vicinity of High Island

Scale 1:20,000 Date of survey Jan. 3-4, 7-11, 19 35.

Vessel Hydrographer (Subparty on launch FARIS)

Chief of party R. F. LUCE

Surveyed by O. B. HARTZOG

Inked by O. B. HARTZOG

Heights in feet above - to ground to tops of trees

Contour, Approximate contour, Form line interval - feet

Instructions dated October 23, 19 34.

Remarks:

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC  
SHEET A  
Intracoastal Canal -- Vicinity of High Island  
Longitude 94° 21.5' to Longitude 94° 27.5'

- - - -  
1 9 3 5  
- - - -

INSTRUCTIONS

The instructions for this work were dated October 23, 1934.

LOCALITY and LIMITS

This sheet joins the work of E. O. Heaton on the west, at Longitude 94° 27.5, and makes a junction with sheet B at triangulation station GATE. It covers 8 statute miles of canal and 7-1/2 miles of Bayous.

GENERAL DESCRIPTION

The general aspect of the country represented on this sheet is flat and marshy. There are no natural objects of any prominence. Visibility was obtained by setting up on the highest portions of the spoil bank as close to the shore line of the canal as possible. These spoil banks are still rather new, and subject to erosion by rain, so no effort was made to delineate them accurately, or to get the elevations. They were rarely over four or five feet above the high water level. Detail (Bayous etc.) was obtained only to a limit of about 1/4 mile on either side of each plane table set up.

The canal is crossed by two bridges about one mile east of triangulation station BEND. Each bridge swings on a center pier, located on the south shore of the canal. The bridges, (when open) the piers, and the canal bank, in the vicinity of the bridges, is well protected by cribbing, with dolphins at each end. The Highway bridge was still in process of construction when the survey was made.

To the west of the Highway Bridge (located by two small black squares) are two transmission towers, for carrying a power line across the canal. These towers are 7.5 meters square at the base.

From this point on, the canal offers nothing but marsh and Bayous.

#### CONTROL

Control was obtained by the use of five triangulation stations. Station Northwest Bend (1861-1931) was discovered by the rodman while rodding the bayou upon which it is located. The position was taken by stadia, and the geographic position plotted later. The two coincided to within a very few meters, giving a good check on the accuracy of the work in that section. The description of this station, as given in Special Publication No. 17, is still good.

#### METHODS and ADJUSTMENTS

A traverse, running west, was started at triangulation station Bend, keeping to the high ground, and as near the canal proper, as possible. When approximately opposite station Northwest Bend (before it was known that station was there) station Highland 2 (1872-1935) came into sight.

A three point fix was obtained with Bend, Highland 2, and Brant, a difference of about 20 meters being noted between the two positions. A simple traverse adjustment was later made of this discrepancy. The error was later discovered to be due to an erroneous correction to the rod reading. When this was eliminated no further trouble was encountered. From this point on, another traverse was



run, with constant resection check on Highland 2, and tied in to station Brant. A small closing error of 18 meters in a run of 3.3 miles was noted, and adjusted as before.

The work was taken up again at Bend, and the same method employed to station Gate. On the set-up at the Highway Bridge, as soon as Highland 2 could be seen, a three point fix was obtained and found to differ from the traverse position by about twelve meters. It was then that the rod was re-checked, along the road, and the cause of the error found. From this point on to Gate, constant checks were to be had on Highland 2 and Turn (1934). The closure at Gate was perfect.

The shore line of the canal was carefully rodded in, and as many shots taken on the bayous as could be, from the set-ups along the canal bank. The marsh and spoil banks were sketched in.

#### COMPARISON WITH OTHER SURVEYS

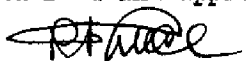
The junction of this sheet, on the west, with the work of E. O. Heaton, was satisfactory. No bromides of previous work along this section are aboard this ship. What little comparison can be made with Chart 1280 seems to check very well.

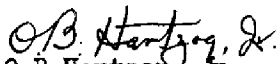
#### LIST OF PLANE-TABLE POSITIONS

No topographic stations were needed on this sheet, the triangulation stations furnished adequate control for present or future needs.

Respectfully submitted,

Examined and approved.

  
R.F. Luce, Commander,  
Coast and Geodetic Survey,  
Chief of Party.

  
O.B. Hartzog, Jr., Aid,  
Coast and Geodetic Survey.

STATISTICS  
FOR  
TOPOGRAPHIC SHEET A  
1935

|            |                    |
|------------|--------------------|
| Shore line | 8 statute miles    |
| Bayous     | $7\frac{1}{2}$ " " |
| Area       | 4 sq. mi. statute  |

Diagram No. 1280

Approved by the Division of Geographic Names, Department of Interior. ✱

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

[illegible]



## REVIEW OF TOPOGRAPHIC SURVEY No. 6276a.

Title (Par. 56) *Intracoastal Waterway - East Bay Bayou & Mud Bayou, Texas*

Chief of Party *R.F. Luce* Surveyed by *O.B. Hartzog* Inked by *O.B. Hartzog*

Ship *Hydrographer* Instructions dated *Oct 23-1934* Surveyed in *January - 1935*

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓
2. The character and scope of the survey satisfy the instructions. ✓
3. The control and closures of traverses were adequate. (Par. 12, 29.) ✓
4. ~~The amount of vertical control that the Manual specifies for contours-formlines was accomplished. (Par. 18, 19, 20, 21, 22, 23.)~~
5. ~~The delineation of contours-formlines is satisfactory. (Par. 49, 50.)~~
6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) *None Submitted*
7. High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
8. The representation of low water lines, reefs, ~~coral reefs and rocks~~, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.)
9. ~~Reefs and~~ other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.)
10. The span, draw and clearance of bridges are shown. (Par. 16c.) *2 Bridges swinging from side of canal shown with no clearances or spans. It is evident that they must be opened for all classes of water traffic*
11. ~~Locations and elevations of summits are given. (Par. 19, 51.)~~
12. ~~The tree line was shown on mountains. (Par. 16g.)~~

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.



13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) ✓
14. ~~The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.~~
15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of IMs and DPs, 68.) *None submitted*
16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) *None submitted*
17. The magnetic meridian was shown and declination was checked. (Par. 17, 52.) ✓
18. The geographic datum of the sheet is *N.A. 1927 (Unadjusted)* and the reference station is correctly noted. (Par. 34.) ✓
19. Junctions with contemporary surveys are adequate. ✓
20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.) ✓
21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) ✓
22. No additional surveying is recommended. ✓
23. The Chief of Party inspected and approved the sheet and the descriptive report ~~after review by~~ ✓
24. Remarks:

Reviewed in office by *Chas. R. Bunk Jr.* May 14, 1936

Examined and approved:

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

*L. O. Tolbert*  
Chief, Division of Charts

*Fred. L. Pearson*  
Chief, Section of Field Work

*Glade*  
Chief, Division of Hyd. and Top.

6276b

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| Form 504<br>Ed. June, 1928  |                    |
| DEPARTMENT OF COMMERCE  |                    |
| U. S. COAST AND GEODETIC SURVEY   |                    |
| R. S. Patton, Director  |                    |
| <div style="border: 1px solid black; width: 100px; height: 80px; margin: 10px auto;"></div> |                    |
| State: <u>TEXAS</u>   |                    |
| <b>DESCRIPTIVE REPORT</b>   |                    |
| Topographic<br><del>Hydrographic</del>  | Sheet No. <u>B</u> |
| <b>LOCALITY</b>   |                    |
| <del>EAST COAST</del>   |                    |
| INTRACOASTAL CANAL Waterway<br>West of Star Lake  |                    |
| <del>Lat. 29-36 to 29-41</del>  |                    |
| <del>Long. 94-12 to 94-21</del>   |                    |
| 19 <u>35</u> .  |                    |
| <b>CHIEF OF PARTY</b>   |                    |
| R. F. LUCE  |                    |

U. S. GOVERNMENT PRINTING OFFICE: 1926

6276b





DESCRIPTIVE REPORT TO ACCOMPANY

SHEET B

Instructions of October 23, 1934.

General Description:

This sheet, sheet B, is the second sheet in a series of five sheets covering the Intracoastal Canal from East Bay, Galveston, to Port Arthur ship canal, Port Arthur, Texas. This is part of the INTRACOASTAL WATERWAY route from New Orleans, La. through Larose, Lockport, Houma, Morgan City at the Atchafalaya River, Intracoastal City at the Vermilion River, past the Mermen-tau and Calcasieu Rivers all in Louisiana, and through Orange, Port Arthur, Galveston, Freeport, Port O'Conner to Corpus Christi, Texas. The Canal in general follows the coast line, roughly paralleling it, taking advantage of the larger bayous and rivers but avoiding the lakes. Short cuts are dredged across the marshes and these sections are either circular curves or tangents.

Except for the spoil bank, formed by dredging operations, and deposited close along one side of the canal, the country is quite flat. The Canal runs through the salt marshes, as well as the oil fields of East Texas. At these latter places a forest of derricks breaks the monotony of the marsh. Occasionally a lone tree, or clump of trees, or a lone derrick may show up very prominently. As these make good points for aerial control they are located where coming within the limits of the sheets. Mile posts beginning at New Orleans and marking every five mile have been placed along the waterway as far as Lake Calcasieu. They will eventually be carried to Corpus Christi.



Landmarks:

On sheet B the only prominent landmark is an oil derrick about  $2 \frac{1}{8}$  miles northwest from the canal at NEEL (1934). ~~Until~~ Until this is surrounded by other derricks it will remain a prominent object.

Character of control used:

Second-order triangulation control was established by the Hydrographer in 1934-35. One side of the control was carried along the canal bank and stations were located in close proximity to former U. S. Engineer's traverse stations. Such of these engineer's stations as were found were located as permanent topographic stations. I used on this sheet, stations GATE (1934), NEEL (1934), FAIR (1934) and WAY (1934). Triangulation towers of about 35' were still in place and by extending them with 2" by 2" poles with banners, it was possible to orient the planetable at any station setup along the canal.

Closing errors of traverse run and how adjusted:

This sheet was the joint work of Mr. O. B. Hartzog and myself; Mr. Hartzog running the traverse from GATE (1934) to NEEL (1934), while I continued it from NEEL (1934) to WAY (1934). Mr. Hartzog's closure at NEEL (1934) was perfect. I ran traverses from NEEL to FAIR, and from FAIR to WAY, setting up at stations NEEL and FAIR and on the bank opposite WAY and distant about 320 m. My closure from NEEL to FAIR was perfect at FAIR and from FAIR to WAY was within 5 m. No adjusting was necessary. The canal through here is a straight line and the coast stations SHELL (1934) and ROAD (1934) were visible throughout the survey, making a resection check at each planetable

setup possible. The stations averaged about 1000 m. apart with intermediate fixed points half way, read both backward and forward from adjoining stations. Stadia rod readings were used for the traverse as well as for points along the canal, only check readings were taken at traverse points.

Detail Description:

Except for the curve starting on Sheet A and extending 100 m. northeast of GATE, the shore of the canal is nearly a straight line. Any deviation from this tangent is probably due to caving in of the banks and is scarcely noticeable on a 1:20,000 scale. The wash of fast moving launches causes some caving in all the time, as the shoreline is all marsh. A narrow levee runs along the canal on the north side and is about 5' high above the canal bank. The water during a high wind may be flush with the banks or higher but is usually about three feet below the banks. Drainage gates with a 48" concrete pipe outlet are located at intervals through this levee and serve to drain the adjoining marsh land when the water level is above that of the canal. A valve with vertical-opening control is fixed on the land end while an ordinary swing valve opens towards the canal at the canal end. These drainage sluices or gates are not reinforced and were put in hurriedly so many are broken or cracked and not of much use in their present condition. The spoil bank along the south side of the canal is of irregular width, averaging about 75 m. and from ten to twenty feet in height. A cattle pass or crossing is fixed about 350 m. southwest of NEEL (1934). Cattle run in the marshes on both sides of the canal and arrangements have been made for their crossing at a few places. This is the only completed one along the

canal at the time of the survey. It is floored of reinforced concrete, about 15 m. along the canal and 4 m. at right angles with light steel rails projecting 1" and spaced about 1' apart.

The magnetic meridian on this sheet was drawn from a plane table station, about 2 miles east of NEEL (1934). It was taken in the afternoon of the 28th of January, 1935 and measures about  $70^{\circ} 30'$  east of north.

Between the time the traverse from GATE to NEEL was run and the traverse from NEEL to WAY, about the 20th January, 1935, a severe norther accompanied with sleet killed many thousands of cattle along both sides of the canal. By the latter part of January the dead bodies of these cattle were piled in places three deep along the north bank of the canal. The cattle turned tail to the wind and headed for warm water when the norther struck, and went till stopped by bayous, or canal or waters of the Gulf. The majority of those dead bodies lay along the surf. The latter fact, together with a south wind when the survey was in progress, made it possible to complete the survey along here at this time, running the traverse on the spoil bank on the south side of the canal.

*Everett E. Mumaw*

Everett E. Mumaw, Topographer,  
Surveyor, U.S.C. & G. Survey.

Approved:

*R. F. Luce*

R. F. Luce, Commander,  
U.S.C. & G. Survey,  
Chief of Party.

S T A T I S T I C S  
F O R  
T O P O G R A P H I C S H E E T B  
1 9 3 5

|            |                           |
|------------|---------------------------|
| Shore line | 10.2 statute miles        |
| Bayous     | 0.0                       |
| Area       | 5.0 square miles, statute |



Date. May 14, 1935

Chart No. 1280

Under investigation. Q

M-136



## REVIEW OF TOPOGRAPHIC SURVEY No. 62766

Title (Par. 56) *Intra coastal Waterway, W. of Star Lake, Texas*Chief of Party *R.F. Luce* Surveyed by *O.B. Hartzog*  
*E.E. Mumaw* Inked by *E.E. Mumaw*Ship *Hydrographer* Instructions dated *Oct 23-1934* Surveyed in *January 1935*

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓
2. The character and scope of the survey satisfy the instructions. ✓
3. The control and closures of traverses were adequate. (Par. 12, 29.) ✓
4. ~~The amount of vertical control that the Manual specifies for contours-formlines was accomplished. (Par. 18, 19, 20, 21, 22, 23.)~~
5. ~~The delineation of contours-formlines is satisfactory. (Par. 49, 50.)~~
6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) *None Submitted*
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
8. The representation of low water lines, ~~reefs, coral reefs and rocks,~~ and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.)
9. ~~Reefs and~~ other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.)
10. The span, draw and clearance of bridges are shown. (Par. 16c.)  
*None on this sheet*
11. ~~Locations and elevations of summits are given. (Par. 19, 51.)~~
12. ~~The tree line was shown on mountains. (Par. 16g.)~~

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.



13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) ✓
14. ~~The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.~~
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16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) ✓
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18. The geographic datum of the sheet is *N.A. 1927 (Unadjusted)* and the reference station is correctly noted. (Par. 34.) ✓
19. Junctions with contemporary surveys are adequate. ✓
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21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) ✓
22. No additional surveying is recommended. ✓
23. The Chief of Party inspected and approved the sheet and the descriptive report ~~after review by~~ ✓
24. Remarks:

Reviewed in office by *Chas. R. Bush Jr.* *May 14, 1926*

Examined and approved:

*E. H. Green*  
Chief, Section of Field Records

*L. O. Pollock*  
Chief, Division of Charts

*Fred. L. Peacock*  
Chief, Section of Field Work

*G. H. Wade*  
Chief, Division of Hyd. and Top.