

839
Vault

5912

Diag'd on Diag. Ch. No. 805 & 1255

2165

| | |
|----------------------------------|-----------------------|
| Form 504 | |
| U. S. COAST AND GEODETIC SURVEY | |
| DEPARTMENT OF COMMERCE | |
| DESCRIPTIVE REPORT | |
| Type of Survey | Planimetric Map |
| Field No. | T-5912 Office No. |
| LOCALITY | |
| State | Florida |
| General locality | Lake Okeechobee, Fla. |
| Locality | Port Mayaca, Florida |
| Photographs taken Jan. 9, 1940. | |
| Supplemented by other surveys to | |
| Feb. 1942. | 1942 |
| CHIEF OF PARTY | |
| Lt. Comdr. Kenneth G. Crosby | |
| LIBRARY & ARCHIVES | |
| DATE | Aug 22 - 1946 |

Applied to Chart 1289

7-23-43

G.T.E. (before review)

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.

~~XXXXXX~~ Sheet No. T-5912

REGISTER NO.

State Florida

General Locality Lake Okeechobee, Florida

Locality Port Mayaca, Florida
Photographs

Scale 1:10,000 Date of survey ~~XXXXX~~ January 9, 1940

~~Vessel~~ Air Photographic Party No. 1

Chief of party Lieut. Comdr. Kenneth G. Crosby

Field inspected by: Frank H. Elrod, Photogrammetric Aid
~~Surveyed by~~

Inked by J. E. Hundley, Sr. Photogrammetric Aid

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated April 3, 1940

Remarks:

SUPPLEMENTARY SURVEYS

| | Name | Date | Hours |
|-------------------------|------|------|-------|
| Control surveys..... | : | : | : |
| Planetable Surveys..... | : | : | : |

FIELD INSPECTION

Total 00

| | | | |
|---------------------------------|---------|----------------|----|
| Preparation of Photographs..... | CH, FHE | Oct. Nov. | 4 |
| Field Work..... | FHE JDT | Jan. Feb. Mar. | 49 |
| Inking Notes..... | ----- | : | : |
| Coast Pilot Notes..... | ----- | : | : |
| Geographic Name Reports..... | FHE | May | 2 |
| Land Marks for Charts..... | ----- | : | : |
| Description Cards..... and | FHE | Feb | 35 |
| Recovery Notes..... | ----- | : | : |
| Total | | | 90 |

MAIN RADIAL PLOT

| | | | |
|------------------------------------|-------------------|------------|--------|
| Scale Plot..... | JEH | March | 1 |
| Projection on Base Sheet..... | Washington Office | : | : |
| Projection on Survey Sheet..... | ----- | : | : |
| Control Plotted..... | K. G. C | April | 3/4 |
| Control Checked..... | WHS | " | 3 1/4 |
| Control Trans. to Base Sheet..... | KGC | " | 1/4 |
| Transfer Checked..... | WHS | " | 1/4 |
| Control Picked on Photograph..... | JHSB | " | 3 |
| Control Checked on Photograph..... | ERB | " | 2 |
| Hydro & Topo. Stations Picked..... | JHSB, ERB | " | 13 |
| Radial Points Picked..... | JHSB, LCB | " , May | 11 |
| Adjacent Contours Picked..... | JEH, CAJP, RDS | Feb, April | 12 1/2 |
| Templates..... | CAJP CLB | April, May | 20 1/2 |
| Radial Plot..... | KGC, WHS, JEH | April | 4 |
| Radial Points Transferred..... | JEH | " | 1 1/2 |
| Transfer checked..... | WHS JEH | " | 2 1/4 |
| H & T Stations Scaled & Checked.. | JEH RD | June | 7 1/2 |
| Additional Radial Points..... | JEH | May | 4 1/4 |
| Investigation of Radial Points... | ----- | : | : |
| Total | | | 84 1/4 |

DETAILING

| | | | |
|-------------------|------------|----------|--------|
| Rough Draft..... | XX FHE JEH | May June | 95 1/4 |
| Smooth Draft..... | : | : | : |

Total 95 1/4

COMPILATION

| | | | |
|-------------------------|-----|------------|----|
| Name overlay..... | JEH | June | 4 |
| Descriptive Report..... | JEH | " | 5 |
| Field Review..... | JAG | July, Aug. | 24 |
| Total | | | 33 |

Total time spent on Sheet..... 302 1/2 hours

| Number | Date | Appx Time | Stage of Tide |
|--------|-------------|-----------|---------------|
| 4598 | Jan 9, 1940 | 11:56 | None |
| 4561 | " " " | 11:22 | |
| 4562 | " " " | 11:23 | |
| 4563 | " " " | 11:24 | |
| 4564 | " " " | 11:25 | |
| 4565 | " " " | 11:26 | |
| 4566 | " " " | 11:27 | |

Tide from predicted tables for:

None

Camera: U. S. Coast and Geodetic Survey Nine-Lens (focal length 8 1/2 inches)
Negative on file at the Washington Office.

Scale

Mean scale of Photographs..... 1: 10,000 - 0.9900
Scale of Survey Sheet..... 1: 10,000

STATISTICS

| | | |
|--|------|----------------------|
| Area (land) | 21.1 | Square statute miles |
| Shoreline (more than 200 m. from opposite shore) | 5.2 | Statute miles |
| Shoreline (creek) | 5.5 | Statute miles |
| Roads, streets, trails, and railroads..... | 78.2 | Statute miles |

REFERENCE STATION

Station: Port Mayaca Water Tank (1934) Latitude: 26° 59' 09" 012 (277.4 meters)
Datum: N.A. 1927 Longitude: 80° 36' 20" 403 (562.6 meters)

193
50

Fla. E Zone

$$X = 628,421.46 \text{ ft.}$$
$$y = 964,182.11 \text{ ft.}$$

DESCRIPTIVE REPORT
TO ACCOMPANY
SHEET T - 5912

GENERAL

This sheet was compiled in accordance with, " Instructions for Drafting Air Photographic Surveys Project H.T. 242, dated April 3, 1940 ."

The general locality of the area covered by this survey sheet is Lake Okeechobee, in the immediate vicinity of Port Mayaca on the St. Lucie Canal.

The terrain along the shoreline of Lake Okeechobee north of the St. Lucie Canal is low and is covered with grass and scattered palmetto and brush.

Along the north shoreline of the St. Lucie Canal there is a Spoil Bank, consisting mostly of sand, whose base is approximately 200 meters wide and is covered with scattered pine and palmetto. The inland terrain east of the shoreline of Lake Okeechobee and north of the spoil banks on the St. Lucie Canal is comparatively low and is covered with numerous grassy ponds, intermittent ponds and flooded areas. The vegetation consists entirely of grass, brush, scattered pine and palmetto.

There is a dyke on the shoreline of Lake Okeechobee south of the St. Lucie Canal built of gravel; average elevation is approx. 25 feet which is approximately 20 feet higher than the inland terrain. This dyke was built to protect the cultivated land directly behind it in an easterly direction.

There is a Spoil Bank on the southern shoreline of the St. Lucie Canal that is covered with grass, scattered pine and palmetto.

The inland terrain south of the St. Lucie Canal and east of Lake Okeechobee is low and consists entirely of grassy ponds, intermittent ponds and flooded areas with the exception of that area known as the Bessemer property which extends from the dyke on Lake Okeechobee east to Longitude 80° 35' approximately, and from the St. Lucie Canal to the southern extremities of the detail limits. This latter mentioned area is all under cultivation and consists of citrus groves and vegetable farms. The remainder of the terrain in this area mentioned at the beginning of the above paragraph is covered with grass, scattered pine, palm and palmetto.

There are two State Highways shown on this sheet, i.e., State Highway No. 194 running near the shore line of Lake Okeechobee from a north westerly to a south easterly direction and State Highway No. 109 making a junction with State Highway No. 194, near the entrance of the St. Lucie Canal with Lake Okeechobee, and running in a north easterly direction to limits of this sheet.

There is only one railroad company operating a line appearing on this sheet, i.e., Florida East Coast running approximately in a north to south direction across the street.

All roads shown by center line only should be drawn 0.6 m.m. wide.

The measurements shown for vertical clearances on the state highway and railroad bridges at or near Port Mayaca crossing the St. Lucie Canal were made February, 3, 1942. Since the measurements were taken the water level has been raised, in the St. Lucie Canal, by the construction of new locks by approximately three feet. Therefore, the vertical clearances, as shown on this sheet, for the bridges mentioned above have clearances which are approximately 3 feet less than shown on this drawing.

No information concerning the vertical clearances, as they now stand, was available at the time this sheet was compiled.

CONTROL

The following triangulation stations are within the tracing limits of this sheet.

| <u>NAME OF STATION</u> | <u>YEAR</u> | <u>ESTABLISHED BY:</u> |
|------------------------|-------------|------------------------|
| Hole | 1924 | E. B. R. |
| Mayaca | 1935 | J. B. Jr. |
| Port Mayaca W. T. | 1934 | J. B. Jr. |
| Dorothy | 1935 | J. B. Jr. |

The position of the azimuth mark at triangulation station, Dorothy, 1935, was determined by the main radial plot. The azimuth position was checked by plotting the published geodetic azimuth with a three arm metal protractor, reading to minutes, and was found in good agreement. No other stations have azimuth marks.

No errors were found in the location of the control stations on this sheet, nor in the plotting of those stations on the photographs.

MAIN RADIAL PLOT

A continuous radial plot was run on April 22 - 24, 1942 inclusive, for the purpose of locating all photograph centers, all hydrographic stations, topographic stations, bench marks, azimuth marks, and radial points. The plot extended over the area covered by sheets T-5912 to T-5919, inclusive. All photographs in the area were used. It extends along the St. Lucie Canal from Stuart, Florida, south and westward to Lake Okeechobee at Port Mayaca. Photographs 4591, 4583 and 4584 are the northeast limits and photograph 4564 forms the westerly limits.

The plot consisted of 37 templates all being for 9-lens photographs and being controlled by triangulation stations as follows: 1 by 0; 12 by 1-2; 9 by 3; 8 by 4-8; 7 by 9-13. These templates were made in accordance with "Notes on radial plotting of nine-lens photographs," dated April 9, 1940.

The control afforded by first and second order triangulation was sufficient on sheets T-5919, T-5918, T-5917 and T-5912. Triangulation control was very meagre on sheets T-5913, T-5914, T-5915 and T-5916, but it was felt that additional field observations were not necessary.

The usual practice of laying the plot was followed. This consisted of plotting the control on the survey sheets and then transferring it to the base grid sheets by matching grid squares. The agreement between the grid lines on the survey sheet and those on the base grid was excellent and no adjustment was necessary. After laying the plot, the intersections of the radial lines were transferred to the survey sheet by again matching grid squares as previously described.

The plot was laid only once with the exception of those templates on sheets T-5914 and T-5915. The laying of the plot began with the templates on sheets T-5917, T-5918 and T-5919 and proceeded southwest to triangulation station "Allen" on sheet T-5916. These templates were rigidly controlled. From that point to sheet T-5912 the templates were laid by holding intersections of radial lines and azimuth, and due to lack of control the templates on sheets T-5914 and T-5915 had to be layed three times before a satisfactory tie-in of control on sheet T-5912.

The agreement along the flight line and the intersections of radial lines to adjacent photographs was excellent, with exceptions as noted in this paragraph. About 98 per cent of the points established by the plot resulted from the intersection at a common point, of three to six radial lines. The remaining two per cent are instances where only two "cuts" could be obtained. These are mostly out on the wings of the photographs and while the value of the intersections will be determined by the draftsman, it is believed that the majority of them will be outside the detailing limits. In six or eight instances the point was selected at the center of gravity where the radial lines did not form a common intersection. In no case were the sides of the triangle of error greater than 0.25 m.m. away from the point selected.

The conditions in the preceeding paragraph apply to seven of the eight sheets of this plot. The other sheet (T-5914) was the "weakest" of the plot, insofar, as control is concerned, and a common intersection of radial lines was not obtained in some instances on the northern half of the sheet. There are fourteen of these instances and in each case the "cuts" were transferred to the survey sheet for further investigation by the draftsman. The points on the southern part of the sheet were picked at common intersections and after the draftsman has made further investigation, it is believed the detailing will be accomplished with the desired accuracy.

To summarize - the plot is considered "strong"; no large or unusual adjustments were necessary; and that all points are picked with 0.25 m.m. of their true position.

Various colored inks were used on the photographs and survey sheet to designate triangulation stations, topographic and hydrographic stations, and radial points.

The following key is furnished for future reference::

Photographs

| | |
|--|---------------------|
| Triangulation and traverse stations | 2.5 mm blue circle |
| Hydrographic and topographic stations..... | 2.5 mm green circle |
| Radial points in main plot | 2.5 mm red circle |

Survey Sheet

| | |
|--|---|
| Triangulation and Traverse Stations..... | 3.5 mm high black triangle |
| Hydrographic and topographic stations..... | 2.5 mm black circle |
| Radial Points on main plot..... | 2.5 mm blue circle on back of sheet. |
| Radial points (additional) | 3.5 mm blue circle on back of sheet. |
| Photograph Centers..... | Double blue circle on back of sheet. |

INTERPRETATION OF PHOTOGRAPHS

The photographs were clear and accurate interpretation was obtained with no unusual conditions prevailing.

FIELD INSPECTION

Field inspection of this area covered by this sheet was made by Frank H. Elrod, during the month of February, 1942. The field inspection was done on 1:10,000 scale photographs. Notes were sufficient for accurate interpretation of all detail.

DETAILING

This sheet was detailed in accordance with the current instructions for the project. Before detailing, magnesium carbonate was applied and then washed off. No additional cleaning or re-inking was necessary.

The detail which appears on this sheet was taken from photographs 4561, 4562, 4563, 4598, 4564, 4565, and 4566. Photograph 4564 was used sparingly since the scale of this photograph was worse than others mentioned above. However, none of the photographs used to detail this sheet was in good scale, therefore, approximately equal amounts were taken from each photograph.

Several additional radials were added to the photographs covering the area of the Bessemer property in order that the detail could be taken from the photographs withing the maximum limits of adjustment between radial points.

Symbols have been used in a few instances, where it was more convenient to show symbols than write legend.

The legend used by the field inspection party and by the draftsman is made a part of this report.

JUNCTIONS

This sheet joins sheet No. T-5903 (1:10,000) on the north and No. T-5911 (1:10,000) on the south which have not been detailed. However, the junctions will be made at a later date. Note: See descriptive report on No. T-5903 and No. T-5911.

This sheet joins sheet No. T-5913 (1:10,000) on the east and is in good agreement.

COMPARISON WITH OTHER SURVEYS:

No old topographic maps were available to check comparison in this area.

GEOGRAPHIC NAMES

The geographic names for this area are the subject of a special report entitled, "Investigation of Geographic names, Florida East Coast, St. Lucie River, Cross State Waterway and Lake Okeechobee, submitted by Harold A. Duffy, Sr. Photogrammetric Aid, to the Washington Office dated May 30, 1942.

LANDMARKS

Port Mayaca water tank, 135 feet tall, aluminum painted, is very prominent and is recommended to be charted as a landmark.

Respectfully submitted,

James E. Hundley
James E. Hundley,
Sr. Photogrammetric Aid

Forwarded:

Kenneth G. Crosby
Kenneth G. Crosby,
Chief of Party

LANDMARKS FOR CHARTS

TO BE CHARTED

STRIKE OUT ONE

[illegible]

I recommend that the following objects which have ~~(have not)~~ been inspected from seaward to determine their value as landmarks, be charted on ~~(deleted from)~~ the charts indicated.

The positions given have been checked after listing

East. Lloyd. Kenneth O. Smith

Chief of Party.

[illegible]

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field surveys. Information under each column heading should be given.

U. S. GOVERNMENT PRINTING OFFICE 16-27869-1

T-5912

Remarks

Decisions

| | | |
|----|--|-------------------------|
| 1 | | 269806-08 USGB |
| 2 | | " |
| 3 | | " |
| 4 | | " |
| 5 | | " |
| 6 | | " |
| 7 | | " |
| 8 | | 270803-05 |
| 9 | | 270806-08 |
| 10 | | |
| 11 | | Railway Guide |
| 12 | | 1941 Off. Road Map Fla. |
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GEOGRAPHIC NAMES

Survey No. T-5912

| GEOGRAPHIC NAMES | | | | | | | | | | | |
|--------------------------------|----|----|----|----|----|----|----|----|----|--|----|
| Survey No. T-5912 | | | | | | | | | | | |
| Name on Survey | | | | | | | | | | | |
| | A. | B. | C. | D. | E. | F. | G. | H. | K. | | |
| <u>Lake Okeechobee</u> | | | | | | | | | | | 1 |
| <u>Port Mayaca</u> | | | | | | | | | | | 2 |
| <u>St. Lucie Canal</u> | | | | | | | | | | | 3 |
| <u>Culvert No. 11</u> | | | | | | | | | | | 4 |
| <u>Mayaca Airport</u> | | | | | | | | | | | 5 |
| <u>Spillway Mayaca</u> | | | | | | | | | | | 6 |
| <u>Spillway A</u> | | | | | | | | | | | 7 |
| <u>Spillway B</u> | | | | | | | | | | | 8 |
| <u>Hole in the Wall Creek</u> | | | | | | | | | | | 9 |
| | | | | | | | | | | | 10 |
| <u>Florida East Coast Ry.</u> | | | | | | | | | | | 11 |
| <u>Florida Highway No. 109</u> | | | | | | | | | | | 12 |
| <u>Florida Highway No. 194</u> | | | | | | | | | | | 13 |
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Names underlined in red approved
by L. A. Heck on 1-30-41

M 234

Names underlined in red approved
by L. A. Heck on 11/30/41

DIVISION OF PHOTOGRAMMETRY
REVIEW OF PLANIMETRIC MAP T-5912

Radial Plot:

The plot is described in detail in the descriptive report. It was accepted as adequate and not checked during review.

Field Inspection and Detailing:

Adequate, except for minor omissions of road fills at the west end of St. Lucie Canal and trails, which have been added to the manuscript in red during review.

Control:

A number of USE traverse stations along the canal were identified on the photographs, located by the radial plot, and are shown as topographic stations. These are not discussed in this descriptive report, but in other reports in this area the photogrammetric office states that an effort was made to convert the Engineer coordinates to geographic positions. However, this was not successful and the stations could not be used for control of the plot. After receipt of the map in this area in the Washington Office, an effort was made to obtain additional data from the Engineer Office at Jacksonville and to compute geographic positions for these stations. This also was not successful and, therefore, the radial plot positions are shown on the registered print.

Comparison with Previous Surveys:

T-5912 has been compared with T-4145, 1:20,000, 1925, and is complete and adequate to supersede that part of the older survey which it covers.

Comparison with Nautical Charts:

T-5912 was applied to Chart 1289 prior to this review. The only changes made in the manuscript during review are the addition of trails and road fills, as shown in red on the manuscript.

Reviewed by Courtney Williams

Under the direction of D. H. Benson, Dec. 1943.

APPROVED BY:

B. G. Jones 7/46
B. G. Jones, Tech. Asst.
Division of Photogrammetry

K. T. Adams
Chief, Div. of Photogrammetry

Robert W. Rux
Nautical Chart Branch
Division of Charts

Raymond L. Egan
Chief, Div. of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. T-5912

Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.