

5903

5903

on Drag. Ch. 804

Form 504 Rev. June 1941	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Air Photographic Plane Table Hydrographic	Sheet Survey No. T-5903 (Field)
LOCALITY	
State <u>Florida</u>	
General locality <u>Martin County</u>	
Locality <u>Lake Okeechobee, vicinity of</u>	
<u>Chancy Bay and Vicinity</u>	
Photos taken <u>Jan. 9, 1940 1942</u>	
CHIEF OF PARTY	
Lieut. Comdr. Kenneth G. Crosby	

applied to ch. 1289 7/21/43 GHE

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.

REGISTER NO. T-5903

State Florida

General Locality Martin County

Locality Lake Okeechobee, vicinity of ^{Chancy} Chaney Bay and vicinity

Scale 1:10,000 Date of ^{Photos} ~~Survey~~ January 9, 19 40

Party ~~Vessel~~ Air Photographic Party No. 1

Chief of party Lieut. Comdr. Kenneth G. Crosby

Field Inspected by: George E. Varnadoe, Prin, Photogrammetric Aid

Inked by James 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, 19 40

Remarks:

SHEET No. T— 5903

SUPPLEMENTARY SURVEYS

	Name	Date	Hours
Control surveys.....	GEV	May	1
Planetable Surveys.....			
		Total	1

FIELD INSPECTION

SUPPLEMENTARY SURVEYS

Preparation of Photographs.....	JEH, CH, GEV	Oct. Nov. Dec.	5 $\frac{1}{4}$
Field Work.....	FHE, GEV	Feb. Mar. 42	23 $\frac{1}{2}$
Inking Notes.....			
Coast Pilot Notes.....			
Geographic Name Reports.....			
Land Marks for Charts.....			
Description Cards & Recovery Notes.....	GEV	Mar	6
		Total	34 $\frac{3}{4}$

MAIN RADIAL PLOT

Scale Plot.....	WHS	May	1
Projection on Base Sheet.....	} Washington Office		
Projection on Survey Sheet.....			
Control Plotted.....	RD	June	1 $\frac{1}{2}$
Control Checked.....	ALK	June	1 $\frac{1}{2}$
Control Trans. to Base Sheet.....	JEH	June	1 $\frac{1}{4}$
Transfer Checked.....			
Control Picked on Photograph.....	HCB	June	6
Control Checked on Photograph.....	JTW	June	3 $\frac{1}{2}$
Hydro & Topo. Stations Picked.....	HGB, JTW, LCB	June	6
Radial Points Picked.....	LCB	June	5
Adjacent Centers Picked.....	HUR, RDE	April	5
Templates.....	HGB	May	13
Radial Plot.....	X	June	6
Radial Points Transferred.....	KGC	June	1
Transfer Checked.....	RD	June	3
H & T Stations Scaled & Checked.....	JEH, BOB	July	1 $\frac{1}{4}$
Additional Radial Points.....	JTW	July	1
Investigation of Radial Points.....	JEH	July	7
		Total	60

DETAILING

Rough Draft.....	JEH, JTW	June, July	142 $\frac{1}{4}$
Smooth Draft.....			
		Total	142 $\frac{1}{4}$

COMPILATION

Name overlay.....	JEH	July	4 $\frac{3}{4}$
Descriptive Report.....	JEH	July	6
Field Review.....	RD	Sept.	8
			18 $\frac{3}{4}$
Total time spent on Sheet.....			256 $\frac{3}{4}$ hours

X=Several of Office Personnel

EXHIBIT NO. 3- 5903

PHOTOGRAPHS

Number	Date	Time	Stage of Tide
4598	1-9-40	11:56	No Tide
4599	"	11:57	
4600	"	11:58	
4601	"	11:59	

Details on this map are of the date of the photographs.

Tide from predicted tables for: None

CAMERA: U. S. Coast and Geodetic Survey Nine-Lens (focal length $8\frac{1}{2}$ inches)

SCALE

Mean scale of Photographs..... 1:10,000 \pm 1.007
Scale of Survey Sheet..... 1:10,000

STATISTICS

Area (land)..... 10.7 Square statute miles
Shoreline (more than 200 m. from opposite shore)... 6.3 Statute miles
Shoreline (creeks)..... Statute miles
Roads, streets, trails, and railroads..... 13.8 Statute miles

REFERENCE STATION

Station: Chan, 1924 r 1933, 1935

Latitude: $27^{\circ} 04' 27.192''$ (836.3-m.)

Datum: N.A. 1927 (adjusted)

Longitude: $80^{\circ} 39' 18.998''$ (523.5-m.)

E-151 132

Fla. E Zone
X = 612,176.47 FT.
Y = 996,261.81 FT.

DESCRIPTIVE REPORT
TO ACCOMPANY
SHEET No. T-5903

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 Chan^y Bay, in Martin County, Florida.

The terrain along the shoreline of Lake Okeechobee is low and marshy. The inland terrain is also low and consists of approximately 25% cultivated land, 75% glade land, swamps, marshes and bushy areas.

The Florida State Road No. 194 runs approximately North and South near the shoreline of the Lake.

The Florida East Coast Railway line runs from the Northern limits of detail to the southern limits of detail at or near the eastern limits of this sheet.

The vegetation in other than cultivated areas consists mainly of grass, brush, cypress, scattered pine and palmetto.

The cultivated areas have numerous drainage ditches.

All roads shown by centerline only, should be drawn 0.6 m.m. wide.

CONTROL

The following Triangulation Stations are within the tracing limits of this sheet:

NAME	YEAR	ESTABLISHED BY
CHAN	1924	L. D. Graham
SAND	1924	E. B. Roberts

The position of the azimuth mark at triangulation station, Chan, 1924, was determined by the main radial plot. The azimuth position was checked 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 these stations in the photographs.

MAIN RADIAL PLOT

A continuous radial plot was run on June 14-16 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-5900 to 5903 inclusive. All photographs in the area were used. It extends northerly and westerly along the eastern shore of Lake Okeechobee, Florida. Photographs 4563 and 4598 are the southeast limits and photographs 4612 and 4615 are the northwest limits.

The plot consisted of 18 templates, all being for nine-lens photographs and being controlled by triangulation stations as follows: 2 templates by 4; 2 by 3; 7 by 2; 2 by 1; 5 by 0. 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-5900, T-5902 and T-5903. There was no triangulation control on sheet T-5901, and the field season was closed before additional observations could be made by this Party.

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 grids 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 laying of the plot began on sheet T-5900 and proceeded to triangulation station Ute, 1924, on sheet T-5902. Sheet T-5900 was adequately controlled by triangulation. Sheet T-5901 did not have any triangulation on it and the plot was laid by holding to previously located intersections of radial lines and azimuth. Due to lack of control this part of the plot had to be relaid several times before a satisfactory "tie-in" could be made at triangulation station Ute, 1924. The remainder of the plot - sheets T-5902 and T-5903 - was laid by starting with the templates for photographs 4563 and 4598 and working North to triangulation station Ute, 1924. Photographs 4563 and 4598 were used in the previous plot which covered sheets T-5912 to T-5919 inclusive. Therefore, the radial points already on them were used to tie these plots together. In proceeding with the laying of the templates on sheets T-5903, it was found that the location of the monument for triangulation station Sand, 1924, was doubtful as the recovery card for this station says that it apparently has been moved. The location of the point as picked on the photographs failed to form an intersection at the plotted position of station Sand, 1924, on the base grid, but by holding intersections of radial lines and azimuth and other triangulation control in the area the plot is satisfactory for accurate detailing of the area covered by sheet T-5903.

The agreement along the flight line and the intersection of radial lines was good on sheet T-5900. In 12 instances where the radial lines failed to form good intersections the "cuts" were put on the survey sheet for further investigation by the draftsman. In 15 instances where only 2 cuts could be obtained they were also put on the survey sheet for the draftsman to determine their accuracy.

Agreement along the flight line was only fair on sheets T-5901 and T-5902. About 50 percent of the cuts failed to form good intersections and these were penciled on the survey sheet to be investigated by the draftsman.

Agreement along the flight line and the agreement of the intersection of radial lines was good on sheet T-5903. There were 15 instances where only 2 cuts could be obtained and these cuts were penciled on the survey sheet, so that the draftsman could determine their strength. In four instances a satisfactory intersection was not formed by the radial lines and the cuts were penciled on the survey sheet for further investigation by draftsman.

All points established by the common intersection of 3 to 6 radial lines

See memorandum in Desc. Report T-5901

were picked, and it is believed that all picked points are within 0.25 m.m. of their true position.

This plot cannot be called "strong". However, the sheets on both ends are rigidly controlled by triangulation. This allows an accurate "tie-in" of sheet T-5903 with the previous plot and insures a good tie between sheet T-5900 of this plot and T-5899 of the next plot on the west side of Lake Okeechobee.

Various colored inks were used on the photographs and survey sheets to designate control, topographic stations and radial points.

The following key is furnished for reference:

Photographs

Triangulation and Traverse Stations.....2.5 m.m. blue circle
Hydrographic and Topographic Stations.....2.5 m.m. green circle
Radial Points in the Main Plot.....2.5 m.m. red circle
Radial Points (Additional).....3.5 m.m. red circle
Photograph Centers.....Double white circle

Survey Sheet

Triangulation and Traverse Stations.....3.5 m.m. high black triangle
Hydrographic and Topographic Stations....2.5 m.m. black circle
Radial Points on Main Plot.....2.5 m.m. blue circle on back of sheet
Radial Points (Additional).....3.5 m.m. 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 was made by George Varmose, Principal Photogrammetric Aid, during February and March, 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 reinking was necessary.

The detail which appears on this survey sheet was taken from photographs 4598, 4599, 4600 and 4601, all of which were in poor scale.

After detailing Florida State Road No. 194 in its proper place from the photographs it was discovered that the distances given from triangulation stations Chan, 1924 and Sand, 1924 did not agree. This was caused by the triangulation stations being moved while the road was under construction.

Symbols have been used, in a few cases, to indicate density.

JUNCTIONS

This sheet joins sheet No. T-5902 on the North and sheet No. T-5912 on the South and all junctions are in agreement.

COMPARISON WITH OTHER SURVEYS

A comparison with Sheet No. T-4125 surveyed in 1924-25 on scale 1:20,000 was attempted but changes have been so extensive in this section that no accurate comparison could be made.

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 to the Washington Office May 30, 1942 by Harold A. Duffy, Senior Photogrammetric Aid.

LANDMARKS

There are no prominent objects appearing on this sheet suitable for charting as landmarks.

Respectfully submitted,

James E. Hundley
James E. Hundley, ^{INC}
Senior Photogrammetric Aid.

Forwarded by:

Kenneth G. Crosby,
Chief of Party...

LEGEND USED FOR FIELD DESCRIPTION AND DRAFTING
PROJECT 643 - 1948

TREES

Pl - Pine
Cy - Cypress
Pal - Palmetto
Pals - Palis
D T - Deciduous trees (broad leaf)
Cit - Citrus (orchard)
Mix - Pine, cypress & Dec. trees
(Density)
Sc. - Scattered
t.w. - Thinly wooded
h.w. - Heavily wooded
Scr. - Scrub trees

VEGETATION

C - Cultivation
Gr - Grass
T Gr - Tall Tropical Grass
M - Marsh (dashed blue line on
inshore limits)
Mf - Marsh grass in water (dashed blue
line on offshore limits)
Sw - Swamp
Mg - Mangrove
Hdg - Hedge

STREAMS

Ca - Canal (width)
Cr - Creek
D - Ditch (width)
I S - Intermittent Stream
FD - Probable drainage unsurveyed
Brg - Bridge or symbol
CV - Culvert
Ley - Levee

FOS - Florida Ocenatic Survey
USE - U. S. Engineers
USBS - U. S. Biological Survey

ROADS & RAILROADS

Rd 1 - 1st class road (paved)
Rd 2 - 2nd class road
Tr - Trail
R R - Railroad
O P - Overpass (state the kind)
U P - Underpass (state the kind)
X - Abandoned trail, road, etc.
H ab - P.R. abandoned (grade only)

ZONES

P - Pond
Cy P - Cypress Pond
I P - Intermittent Pond

SHORELINE

H.W.L. - mean high waterline (solid red
line - fast land)
L.W.L. - low waterline (dashed red line)
L.L. - Light line (solid blue line for
mean high water line on marsh)

Dk - Dock
Pr - Pier
Gw - Gwallow
Hhd - Bulkhead
Cmc - Concrete
Wo - Wooden
Jet - Jetty
Dol - Dolphin
Pile - Pile (give type)
S - Sand
Lnd - Land
Rk - Rock or Rocky
Sty - Stony
W - Water
Hf - Bluff (height)
H

BUILDINGS

H - House, barn or building
Ch - Church (give name)
Ct H - Court House (give name)
Bo H - Boat House
P.O. - Post Office (give name)
RR Sta - Railroad station (give name)
Hos - Hospital (give name)
Sch - School (give name)

MISCELLANEOUS

F - Fence
FB - Fire Break (maintained)
FUX - Fire Break (abandoned)
Cem - Cemetery
Park - Park (give name)
P.T. - Fire tower
T.T. - Transmission tower (tall steel)
P.L. - Power Line
Shoal - Approx. limits by long dashed
line for use by hydrographer.

MANUAL USED FOR FIELD ILLUSTRATION AND DRAFTING PROJECT 243 - 1942

TREES

P - Pine
 Cy - Cypress
 Palo - Palmetto
 Pal - Palm
 D T - Deciduous trees (broad leaf)
 Cit - Citrus (orchard)
 Mix - Pine, cypress & loc. trees
 (Density)
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 mean high water line on marsh)
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 Rhd - Railroad
 Conc - Concrete
 Wo - wooden
 Jet - Jetty
 Dol - Dolphin
 Pile - Pile (give type)
 S - Sand
 Mud - Mud
 R - Rock or Rocky
 St - Stony
 W - Water
 Blf - Bluff (height)

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 line for use by hydrographer.

T-5903

Remarks.

Decisions

1		269806-08 USGB
2		270806-08
3		Railway Guide
4		1941 Off. Road Map
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GEOGRAPHIC NAMES

Survey No. T-5903

GEOGRAPHIC NAMES											
Survey No. T-5903											
Name on Survey											
	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K		
Lake Okeechobee											1
Chancy Bay											2
Florida East Coast Ry											3
Florida Highway No. 194											4 ✓
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M 234

L HOOK 12/29/42

Division of Photogrammetry

Review of Planimetric Map T-5903

This map was compiled in the Tampa Office and submitted to Washington in September 1942, but the Washington Office processing was delayed by war map work of the Bureau. The map was reviewed in 1943, drafted in 1944, printed in 1945, and registered in 1947.

Main Radial Plot.

The main radial plot in this general area is discussed in the descriptive report and was not entirely satisfactory. An attempt to relay this radial plot was made in the Washington Office, but it was decided to accept the plot as originally made in the Tampa Office. The Washington Office check of the radial plot is discussed in the review report for T-5901.

The accuracy of position of details on the map is accepted as adequate for charting. Well-defined details are within $1\frac{1}{2}$ millimeter of correct geographic position.

Field Inspection and Detailing.

Adequate.

Comparison with Previous Surveys.

T-5903 supersedes T-4125, 1:20,000, 1924.

Comparison with Nautical Charts.

T-5903 was applied to chart 1289 prior to this review. Changes made on the manuscript during review do not affect the chart.

Reviewed under the direction of D. H. Benson.

This report prepared by B. G. Jones from reviewer's notes, May 1947.

APPROVED BY:

B. J. Jones 5/47
Technical Assistant to the
Chief, Div. of Photogrammetry

J. E. Rutledge
Chief, Nautical Chart Br.
Division of Charts

K. T. Adams
Chief, Div. of Photogrammetry

C. K. Green
Chief, Div. of Coastal
Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. T-5903

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.