

5919

Form 504
Rev. June 1941
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Air Photographic Sheet
Plane Table Survey No. T-5919
Hydrographic (Field)

LOCALITY

State Florida

General locality East Coast

Locality St. Lucie Inlet

and Vicinity
Photos taken 1/9/1940
1942

CHIEF OF PARTY

Lieut. Comdr. Kenneth G. Crosby

5919

Applied to Chart	846	before review	Oct 15, 1942	Hem.
"	"	1112	"	"
"	"	"	Feb. 10, 1944	R.
"	"	1247	after review	Mar. 13, 1949
"	"	846	"	"
			(4 docks added 2/4/48)	HJP

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

15919

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-5919

State Florida

General Locality East Coast

Locality St. Lucie Inlet

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

Vessel Air Photographic Party No. 1

Chief of party Lieut. Comdr. Kenneth G. Crosby

Field Inspected ~~Surveying~~ Lieut. J. D. Thurmond - Harold A. Duffy, Sr. Photo Aid

Inked by M. M. Slavney, Sr. Engineering Draftsman

Heights in feet above -- to ground to tops of trees

Contour, Approximate contour, Form line interval -- feet

Instructions dated April 3, 19 40

Remarks:

DESCRIPTIVE REPORT
TO ACCOMPANY
SHEET - T-44-5919

GENERAL

This sheet was compiled from nine - lens aerial photographs 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 Florida East Coast in the vicinity of St. Lucie Inlet and the village of Salerno.

Land areas east of the Indian River and Great Pocket are preponderantly covered with scattered palm and pine. Some patches of abandoned cultivation are noted. The shoreline of these areas is primarily sand beach on the side fronting the Atlantic Ocean; the shoreline adjacent to the Indian River and Great Pocket is generally mangrove covered but detailed with some exceptions as stable because these areas have been or are being drained.

Land areas west of the Indian River and Great Pocket are almost wholly stable with pine, Palm, deciduous trees and brush comprising the vegetation. The portion of the survey south west of the Florida East Coast Railroad is generally low lying land with sandy, brush covered ridges.

Mention is made here of the practice of detailing as stable shoreline areas that have a very narrow fringe of mangrove that in most instances is merely growing at the edge of the waterline. Areas of vegetation with varying density and identity were shown with symbols; labels were used in areas of uniform makeup.

Approximate mean low water is shown by a dotted line. The approximate limits of shoal areas are shown by a dashed line. These features are shown for the use of the hydrographer only.

All small islands are mangrove unless otherwise noted.

All roads on this sheet are to be shown 0.6 m.m. wide.

CONTROL

Control for this sheet consists of the following U. S. Coast and Geodetic Survey Triangulation Stations:

NAME OF STATION	YEAR	ESTABLISHED BY
REFUGE 2	1934	J. B. Jr.
SEWALL U.S. E.	1898-1934	U. S. ENGINEERS
TANK	1930	C. A. E.
JETTY	1930	C. A. E.
SNAKE	1930	C. A. E.

CONTROL

Continued

NAME OF STATION	YEAR	ESTABLISHED BY
LONG	1930	C.A.E.
BAKER	1930	C. A. E.
SWAN	1930	C.A.E.
CRAB	1930	C.A.E.
FAY	1930	C.A.E.
JOE	1930	C.A.E.
SURF	1934	J. B.
HIGH	1929	J. S.
PECK	1934	J.B. Jr.

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 photo 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 layed 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 layed 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 percent of the points established by the plot resulted from the intersection at a common point, of three to six radial lines.

The remaining 2 percent 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 intersection 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 condition in the preceeding paragraph apply to seven of the eight sheets of this plot. The other sheet (T-5814) 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 within 0.25 m.m. of their true position.

Various colored inks were used on the photographs and survey sheets 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 plot2.5 mm red circle

Survey Sheets

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 on back of sheet

--0--

INTERPRETATION OF PHOTOGRAPHS

Photographs were generally clear and of good contrast and no difficulty was experienced in the interpretation of the photographs.

FIELD INSPECTION

The field inspection was made by Lieut. James D. Thurmond, and Harold A. Duffy, Sr. Photogrammetric Aid, in January and February 1942.

The field notes were generally sufficient.

DETAILING

The acetate was prepared for inking by **rubbing** with dry magnesium carbonate and then washing with water. No additional cleaning has been necessary.

All ditches as detailed on this sheet should be shown on the finished print.

Mention is here made of the method used in compilation and detailing of the land area east of the Indian River. This area extends from triangulation station, SURF - 1934, southeast to triangulation station, JETTY 1930. Insufficient photograph coverage made it possible to obtain only two cuts on radial points in this area. Therefore, the compiler controlled this portion of the survey by holding the triangulation in azimuth and adjusting for the existing two cut intersections. All control picked on the photographs was checked for accuracy and all of the work in this area was done very carefully. The area covered in this survey has been previously surveyed on sheet number 4542 compiled by the U. S. Coast and Geodetic Survey from aerial photographs by the U. S. Army Air Corps on April 29, 1929 on a scale of 1:20,000. The necessity of enlargement from 1:20,000 to 1:10,000 would of itself magnify any errors in the compilation of sheet 4542 and it is possible that in the small scale survey some of the detail found in the present survey escaped notice. Should sheet 5919, be reduced to 1:20,000 it is certain that error in geographical position of any point on the sheet will not exceed 3 m.m. It is, therefore, the opinion of the compiler that this survey, sheet 5919, replace sheet 4542 for further chart purposes.

JUNCTIONS

This sheet joins sheets T-5916, 5917, and 5918 on the west. All junctions are in good agreement.

COMPARISON WITH OTHER SURVEYS

This has been previously covered under paragraph entitled "Detailing."

NON FLOATING AIDS.

Some of the non-floating aids in the area covered by this sheet were located by sextant fixes; those remaining were located by main radial plot. The aids not shown on charts of this area are listed on form 567 and made a part of this report.

Beacon "11," in St. Lucie River as shown on Chart 1247 was non-existent at the time of the field inspection.

GEOGRAPHIC NAMES

The investigation of geographic names is incorporated in the special report entitled "Investigation of Geographic Names, Florida East Coast, St. Lucie River, Lake Okeechobee and Cross State Waterway;" submitted to the Washington Office by Harold A. Duffy, Sr. Photogrammetric Aid.

LAND MARKS

There are listed on Form 567 landmarks which should be deleted but which are now shown on Chart No. 1247. The deletions from Chart 1247 are made because the air photo compilation for this sheet shows that the houses at Latitude $27^{\circ} 11' 3''$ Longitude $80^{\circ} 09' 45''$, Latitude $27^{\circ} 13' 05''$ Longitude $80^{\circ} 12' 10''$ has been destroyed; the house at Latitude $27^{\circ} 10' 45''$ Longitude $80^{\circ} 11' 20''$ is obscured to seaward by a line of palms and the clump of trees at Latitude $27^{\circ} 09' 40''$ Longitude $80^{\circ} 10' 25''$ is of too general distribution.

Chart 1247 839 (1942)

NON FLOATING AIDS

On another sheet of Form 567 are listed non floating aids to navigation that are not shown on the latest issue of Chart 1247

Respectfully submitted

Milton M. Slavney

Milton M. Slavney,
Sr. Eng. Draftsman

FORWARDED:

Kenneth G. Grosby
Kenneth G. Grosby
Chief of Party...

SUPPLEMENTARY SURVEYS

	Name	Date	Hours
Control Surveys	JEH-WHS	Mar & Apr	9
Planetable Surveys.....			
		Total	9

FIELD INSPECTION

Preparation of Photographs.....	CH- FHE- CAJP	NOV & FEB	9 1/4
Field Work.....	HAD FHE	JAN.	137
Inking Notes.....	HAD FHE	JAN.	7 1/2
Coast Pilot Notes.....			
Geographic Name Reports.....	HAD FHE	JAN & MAY	10
Landmarks for Charts.....			
Description Cards.....	HAD	JAN.	45 1/2
Recovery Notes.....			
		Total	209 1/4

MAIN RADIAL PLOT

Scale Plot.....	JEH	FEB.	1
Projection on Base Sheet.....	Washington Office		
Projection on Survey Sheet.....			
Control Plotted.....	KGC	APR.	3
Control Checked.....	WHS	Apr.	2 1/2
Control Trans. to Base Sheet....	KGC	Apr	1 1/2
Transfer Checked.....	WHS	Apr.	1/2
Control Picked on Photographs...	CAJP-JEH- HGB	Feb	28 1/2
Control Checked on Photographs...	JEH CAJP	Feb.	13
Hydro. & Topo. Stations Picked...	CAJP-HGB- JEH	Feb & June	31
Radial Points Picked.....	JEH	Mar.	9 3/4
Adjacent Centers Picked.....	JEH- HGB- CAJP	Feb.	9
Templates.....	HVR- CAJP	Apr.	6
Radial Plot.....	KGC- WHS-JEH	Apr.	17
Radial Points Transferred.....	JHSB-MMS-JEH	Apr.	3
Transfer Checked.....	JEH	Apr	2 1/2
H & T Stations Scaled & Checked..	MMS -VFS	June	16 1/2
Additional Radial Points.....	MMS	June	9
		Total	153 3/4

DETAILING

Rough Draft.....	MMS	May & June	207
Smooth Draft.....			
		Total	207

COMPILATION

Name Overlay.....	MMS	June	16
Descriptive Report.....	MMS	June	13
Field Review.....	JAG	July	9
		Total	38

Total time spent on Sheet..... 617 hours.

SHEET NO. T-5919

PHOTOGRAPHS

Number	Date	Time	Stage of Tide
4582	1-9-1940	12:08	0.6
4583	" "	12:09	0.5
4584	" "	12:11	0.5
4585	" "	12:12	0.5
4586	" "	12:14	0.5

Tide from predicted tables for: Mayport, Florida

Adjusted for Jetty, St. Lucie Inlet

Camera: U. S. Coast and Geodetic Survey Nine-Lens (focal length 8 1/4 inches)
Negatives on file at the Washington Office.

SCALE

Mean scale of Photographs..... 1:10,000 \div .9916
Scale of Survey Sheet 1:10,000

STATISTICS

Area (land)	15.	Square statute miles
Shoreline (more than 200 m. from opposite shore).....	246.	Statute miles
Shoreline (creeks)	5.	Statute miles
Roads, streets, trails, and railroads	43.5	Statute miles

REFERENCE STATION

Station: Sewall U. S. E. 1898, 1934
Datum: N. A. 1927

Latitude: 27°10' 25.905" (797.3m)
Longitude: 80°11' 21.432" (590.1m)
590.0m

129 adjusted -

X = coordinate 763,587.01
Y = coordinate 1,033,179.89

1998

P - Pond
 P/P - Sprayed Pond
 I/P - Int. Pensions Pond

1998

[illegible]

— 2 —

H - Home, farm or building
 Ch - Church (give name)
 SH - Court House (give name)
 Co H - Post House
 P.O. - Post Office (give name)
 R.R. Sta. - Railroad station (give name)
 Hos - Hospital (give name)
 Sch - School (give name)

PT. F. LANDIS

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

- 1d1 - 1st class road (paved)
- 1d2 - 2nd class road
- Fr - Fr. rd
- B7 - Bypass
- Op - Overpass (at to the hind)
- U1 - Underpass (at to the hind)
- S - A selected trail, road, etc.
- etc - P.R. designated (grade only)

LIST OF ABBREVIATIONS
PAGE NO. 222 - 1922

LAND

Fl - Flats
Cy - Cypress
Rd - Road
Falm - Falm
J T - Jacksonville to (road land)
Cit - Citrus (orchard)
Lix - Lix, Cypress & Dec. trees
(Orchard)
Act. - Act. forest
t.e. - Timberland
h.w. - High water line
Cor. - Corner

WATER

C - Canal
Gr - Grass
P Gr - Full tropical grass
M - Marsh (solid blue line on
inshore limits)
L - Marsh grass in water (dashed blue
line on offshore limits)
Sw - Swamp
Mg - Mangrove
Rd - Road

WATER

Ca - Canal (width)
Cr - Creek
D - Ditch (width)
IS - Intermittent Stream
FDU - Foul drainage unsurveyed
Brg - Bridge or symbol
Cr - Current
Lw - Low

F.S.S. - Florida Sanitary Survey
U. S. E. - U. S. Engineers
B.S. - B.S. Biological Survey

ROADS AND TRAILS

Rd 1 - 1st class road (paved)
Rd 2 - 2nd class road
Tr - Trail
R T - Railroad
OP - Overpass (at to the kind)
UP - Underpass (at to the kind)
R - abandoned trail, road, etc.
R H ab - R.H. abandoned (grade only)

WATER

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

WATER

H. L. - High water line (solid
red line - fast land)
L. L. - Low water line (dashed red line)
L. L. - Light line (solid blue L. L. for
mean high water line on a ship)
Rk - Rock
Pr - Pier
Se L - Seawall
Mhd - Mound
Cmc - Concrete
Lo - Load
Jct - Jetty
Dol - Dolphin
Pile - Pile (give type)
S - Sand
Lnd - Land
Rk - Rock or Rocky
Sty - Story
W - Water
Blf - Bluff (height)

WATER

H - House, barn or building
Ch - Church (give name)
Jc H - Court House (give name)
M H - Meat House
P.O. - Post Office (give name)
R.H. Sta - Railroad station (give name)
Hos - Hospital (give name)
Sch - School (give name)

WATER

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

T-5919

No. 1
Decisions

Remarks

1		272801-03
2		"
3		"
4		"
5		"
6		"
7		"
8		271801-02
9		"
10		"
11		"
12		"
13	Not Hells Gate	"
14		"
15		"
16		"
17		"
18		"
19		"
20		"
21		"
22		"
23		"
24		"
25		"
26		"
27		"

GEOGRAPHIC NAMES

Survey No. T-5919

No. 1

Name on Survey

	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
A.	B.	C.	D.	E.	F.	G.	H.	K.	
Races Point ✓									1
Joes Cove ✓									2
Hoggs Cove ✓									3
St. Lucie River ✓									4
O K Woods Point ✓									5
Baker Point ✓									6
Nigger Cove ✓									7
Indian River ✓									8
Waveland ✓									9
Steele Point ✓									10
Hooker Cove ✓									11
Port Sewall ✓									12
Hell Gate ✓									13
Hell Gate Point ✓									14
Sewall Point ✓									15
Sewall Flats ✓									16
Old Postoffice Rocks ✓									17
Willoughby Creek ✓									18
Onion Patch ✓									19
North Slough ✓									20
Horseshoe Flat ✓									21
Sun Parlor ✓									22
Woods Slough ✓									23
Bessie Cove ✓									24
North Point ✓									25
St. Lucie Inlet ✓									26
Gilbert Bar ✓									27

Remarks

Decisions

1		272801-02
2		"
3		271801-02
4		"
5		"
6		"
7		"
8		"
9		"
10		"
11	Not Manatee <u>Pocket</u>	"
12		"
13		"
14		"
15		"
16		
17		Railway Guide
18		1939 Fla. Transp. Map
19		"
20		
21		
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES

Survey No. T-5919

No. 2

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	
Gilbert Bar C.G. Station										1
Gilbert Shoal										2
South Point										3
Hole in the Wall										4
Long Point										5
Long Island										6
The Narrows										7
Great Pocket										8
Horseshoe Point										9
Arnold Island										10
Manatee Creek										11
Rocky Point										12
Rocky Point Cove										13
Salerno										14
Sand Sprit										15
										16
Florida East Coast Ry.										17
Florida Highway No. 140										18
U.S. Highway No. 1										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in this list
by L. Heck on 12/29/42

Division of Photogrammetry

Review of Planimetric Map T-5919

This map was compiled in the Tampa Office and the manuscript was received in Washington in September 1942. However, the Washington Office processing was delayed by war map work of the Bureau and was not completed until 1947.

Field Inspection and Detailing.

These were generally adequate. Only a few minor changes were made during the review and are shown on the manuscript in red.

Comparison with Previous Surveys.

T-5919 supersedes the following surveys except for the item listed below:

T-1652	1883	1:20,000	
4542	1930	1:20,000	
* 4533	1930	1:10,000	
4534a&b	1930	1:10,000 - 1:20,000	} Graphic Control
4535	1930	1:20,000	

* At Lat. $27^{\circ}09'.8$, Long. $80^{\circ}10'.2$ - Old piling on 4533^{1/2} not shown on T-5919. - see L 16 (1948)

Comparison with Nautical Charts.

T-5919 was applied to Chart 846 prior to review. The following changes to T-5919 were made during the review and are shown in red on the manuscript:

Three net racks were added about Lat. $27^{\circ}08'.75$
Long. $80^{\circ}11'.7$

Several small docks or cat walks were added about Lat. $27^{\circ}08'.9$, Long. $80^{\circ}11'.8$

Three small docks were added about Lat. $27^{\circ}09'.5$
Long. $80^{\circ}11'.8$

St. Lucie Beacon #11 is not shown on T-5919. It was reported missing at time of field inspection (Chart letter #839). It is shown on Chart 846.

Review under the direction of D. H. Benson in
December 1943.

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

APPROVED BY:

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

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

K. T. Adams
Chief, Div. of Photogrammetry

C. H. Green
Chief, Div. of Coastal Surveys 146