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U. S. COAST & GEODETIC SURV  
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton Director

State: Florida

DESCRIPTIVE REPORT

Photo

Topographic

~~Hydrographic~~

Sheet No. 4542

LOCALITY

Florida East Coast

Walton to St. Lucie Inlet

19 28

CHIEF OF PARTY

O. S. Reading

U. S. GOVERNMENT PRINTING OFFICE: 1928

Descriptive Report to Accompany  
Air Photo Topographic Sheet

No. 4542 - Walton to St. Lucie Inlet, Florida East Coast.

This sheet is a compilation of a single strip of three-lens air photographs taken with Army Air Corps T-2 Camera No. 26-1 on April 29, 1928. The D or fourth chamber of the camera was not operating at the time due to the tearing of the film in it. Photograph No. 545 at the south end of the sheet was taken about 9:10 A. M. and photograph No. 571 at the northern end about 9:20 A. M. which was approximately three-quarters of an hour before low tide as obtained from the predicted tide tables.

A Loening amphibian plane was piloted by Lieutenant J. A. Dexter at an approximate altitude of 10,200 feet, giving an average scale of 1:18,940 to the photographs (scale factor 1:20,000 x 1.056).

CONTROL:

The control for this sheet consists of triangulation stations located on the photographs and steel tape road traverses at Walton, Jensen, Port Sewall and Salerno, and the highwater line from Topographic Sheets Nos. 1652, 4533, 4534a and 4535. Solar azimuths were observed at the intersection of the road traverses and the railroad. All turning points and plusses to intersections of the road traverses are shown on the sheet by small red circles.

COMPILATION:

The average scale of the photographs was found to be 18,940 (1:20,000 x 1.056) by a preliminary plot and a polyconic projection to this scale was laid down on celluloid. The triangulation and control traverses were plotted on the celluloid. The topography of Sheets Nos. 1652, 4533, 4534a and 4535 was enlarged to fit the celluloid projection by photostat. The shoreline from Sheets Nos. 4533, 4534a and 4535 was traced in black and appears as the shoreline of the printed sheet in the areas affected. The shoreline on the south side of St. Lucie Inlet surveyed in 1930 differed from that shown on the photographs probably due to storms and dredging subsequent to 1928, the date

of the photographs. Notes indicating the portion of the shoreline traced from the 1930 surveys are shown on the sheet. Photostats of the shoreline from Sheet No. 1652, surveyed in 1883, were traced on the celluloid in blue.

A careful radial plot was then made adhering to the triangulation and traverses and the general trend of the topography previously surveyed. The plot to the north of Station Pisgah is somewhat weakened because the principal points of the photographs fall in the water. In this area the plot depends almost entirely on the accuracy of the plane table topography except in the immediate vicinity of a triangulation station.

The detail was then traced on the celluloid proportioning distortions between radial intersections. Names and numbers were added with the Wrico lettering guide. Standard descriptive notes and titles which had been printed on gummed paper were stuck up on the celluloid.

The celluloid sheets were then reduced to 1:20,000 and printed on Whatmans paper by the photo lithographic process in the Printing Section.

#### DIFFERENCES FROM FORMER TOPOGRAPHY:

The ocean shore at St. Lucie Inlet has washed back some three hundred meters since the survey of 1883 which was made before the cutting of the Inlet. Most of the material appears to have been washed into the Indian River from the appearance of shoals showing on the photographs.

The north bank of the St. Lucie River near Latitude  $27^{\circ}13'$  Longitude  $80^{\circ}15'$  was placed some 30 meters farther north by Sheet No. 4534a than Sheet No. 1652. The location of Sheet No. 4534a was adhered to for the photo plot as being better controlled and more recent.

Similar small differences in location occurred along the Indian River. As the 1930 survey was based on an arc of triangulation with stations two miles apart while the 1883 control was quite weak, the 1930 locations were adhered to throughout.

There are some small differences of inshore streams and ponds due to sketching in the 1883 survey. Other changes are

undoubtedly due to dredging and development of the country.

NAMES:

The names appearing on this sheet are the names shown on the charts, the railroad stations and the State Highway map of this locality.

SYMBOLS:

The standard topographic symbols were used together with the following special symbols: a single full line was used for a ditch; a double full line for canal and for all improved graded and paved highways and streets; a double dashed line for all unimproved but graded roads and a single short dashed line for trails. A longer ~~closed~~ line was used for boundaries of fields, clearings, etc. ~~dashed~~

It is somewhat difficult to interpret the marsh conditions and to portray them with symbols on the sheet. Nearly all the ponds shown are more or less grassy and probably shift their margins with the rainy and dry seasons. Only those which are believed to lose practically all their surface water at times have been shown with the intermittent symbol.

The culture was noted on the photographs from the principal highways and roads traversed during a limited field inspection. In other places the culture was interpreted in the office from the similarity noted to that obtained during the field inspection.

LANDMARKS:

In addition to the landmarks recommended on chart letter No. 389, 1930, it is recommended that the bridgetender's house at the draw on the Jensen Bridge be shown on Chart 3259

(Δ Draw 1930, Latitude 27°15', Meters D. M. 343.8, Longitude 80°13', Meters D. P. 288.0.)

*Show as house -  
st.*

K.T. Adams  
FIELD RECORDS (C)

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

APPROVED

*J. Borden*  
Chief, Section Field Work

*G. H. de*  
Chief, Div. of Hyd'y and Top'y

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4542

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. 4542

State.....Florida.....

General locality.....East Coast.....

Locality.....Walton to St. Lucie Inlet.....

Scale.....1:20,000..... Date of survey.....April 29, 1929, 19.....

Vessel.....U. S. Army Air Corps Amphibian Plane.....

Chief of Party.....O. S. Reading.....

Surveyed by.....O. S. Reading.....

Inked by.....O. S. Reading.....

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

Contour, Approximate contour, Form line interval.....feet

Instructions dated.....June 6, 1929.....

Remarks:.....Compilation of air photographs Nos. 545 to 571.....

.....Reduced to 1:20,000 and printed by photolithographic  
process in Printing Section<sup>o</sup>

## Remarks

## Decisions

1		272801
2		271801
3		"
4		272802
5		"
6		"
7		"
8		271801
9		271802
10		271801
11		271802
12		271801
13		"
14		"
15		"
16	From several USE blueprints: e. side Manatee Creek mouth.	"
17		272801
18		271802
19		
20		
21		
22		
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25		
26		
27		
M 234		

# GEOGRAPHIC NAMES

Survey No. **T-4542**

GEOGRAPHIC NAMES											
Survey No. T-4542											
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		
<u>St. Lucia River</u>										1	
<u>St. Lucie Inlet</u>										2	
<u>Indian River</u>										3	
<u>Rio</u>										4	
<u>Jensen</u>										5	
<u>Walton</u>										6	
<u>Snake Island</u>										7	
<u>Sewall Point</u>										8	
<u>Port Sewall</u>										9	
<u>Manatee Creek</u>										10	
<u>Salerno</u>										11	
<u>Horseshoe Point</u>										12	
<u>Long Point</u>										13	
<u>Long Island</u>										14	
<u>Great Pocket</u>										15	
<u>Manatee Point</u>										16	
<u>Gilbert Bar C.G. Sta</u>										17	
<u>Stuart</u>										18	
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N.B. No name list made at time of original check.

Heck on 7/29/40