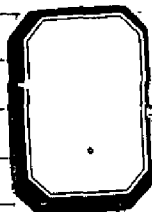


4530

4531

Form 504  
Ed. June, 1928

## DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

C. &amp; G. SURVEY

L &amp; A

MAY 6 1930

Acc. No.

State: Florida

## DESCRIPTIVE REPORT

Air Photo  
Topographic  
Hydrographic

Sheet Nos

4530  
4531

## LOCALITY

East Coast of Florida

Ponce de Leon Inlet to Oak Hill

Head of Indian R. To Titusville

1928

## CHIEF OF PARTY

O. S. Reading

4531  
4530  
4530  
4530

# DESCRIPTIVE REPORT TO ACCOMPANY AIR PHOTO TOPOGRAPHIC SHEETS

Register No. 4530 Field No. 3 E.C. Ponce de Leon Inlet to Oak Hill  
 Register No. 4531 Field No. 5 E.C. Head of Indian River to Titusville

These two sheets are a compilation of Army Air Corps four lens photographs Nos. 780 to 807 taken from 9:50 to 10:05 A.M. and Nos. 820 to 842 taken from 10:10 to 10:20 A.M. April 30, 1960. The tide tables predicted a low tide of -0.3 foot at 11:27 A.M. at Ponce de Leon Inlet. A Leaning Amphibian airplane with liberty motor was piloted by Lieutenant J. A. Dexter at an altitude of approximately 10,000 feet giving an average scale of 1:19,000 to the photographs. The photographs were taken with the four lens Air Corps T 2 Camera No. 28-1. The transverse level vial on top of the camera was broken during the previous flight. A hand level was substituted for this flight but unfortunately was out of adjustment with the axis of the camera and a constant tilt to the right resulted. The photographs of this roll were further distorted by the hooking of the film over a collimation notch in the margin plate of the "A" wing camera. This caused the film to sag so badly that only half of the "A" prints could be used and the "B" prints were dropped partly out of focus.

Control. These sheets are controlled by triangulation stations recovered and spotted on the photographs during a field inspection. Such stations are marked by small black triangles on the sheets. Some steel tape traverses with solar azimuths were also run along the roads leading inshore. The turning points and pluses to intersecting roads of these traverses are shown on the sheets by small red circles. The shoreline of the inside passages from previous surveys was also used when its general agreement with the photographs indicated that it was accurately surveyed.

Compilation. 1:20,000 projections were laid down on celluloid, the control plotted on them and the former surveys traced in blue. The photographs were so distorted by film sag and constant tilt that they were rephotographed in the photostat camera with tilt and scale reduction enough to bring them into approximately to agreement with control and the former topography. The rectified photostats were then plotted as well as possible from the radials in the B, C and D prints, adhering to the control and the former topography. The plotting of the areas shown on the "A" prints was by proportional adjustment between the road traverses and between the former topography. In the area immediately to the north of Oak Hill a considerable condensing of distance was necessary. The position of the detail in these inshore areas is therefore quite weak but is believed to be as good as the usual planetable stadia traverse without control. As it was impossible to make a complete radial plot the accuracy of the photo sheets depends on the accuracy of the former topography. Except for minor sketching the original survey agrees well with the photographs and with subsequent control.

Differences From Former Topography.

The high water line in the vicinity of Ponce de Leon Inlet was traced on the photographs from a field inspection but it was not surveyed on the ground. The water line of the sand spits changes considerably with each severe storm. Numerous differences in roads and buildings were noted between the photographs and the 1925 topographic survey. These differences are believed to be due to insufficient rod readings in the latter survey as the photographs are well controlled by triangulation in the locality.

A few minor sloughs were found out of position and certain errors in sketching of the original survey were corrected by the photographs.

A few small islets shown in the former surveys do not appear in the photographs and have not been shown on the sheets. The high water line through mud flats and marsh is difficult to interpret from the photographs. The limiting line of vegetation has usually been shown and generally it agrees very well with former topography. In a few cases where no difference in the appearance of the mud flat could be distinguished small islets may have been overlooked. The photographs do not disprove the existence of such islands.

Symbols. The standard topographic symbols were used together with the following special symbols in order to show special features of the locality: a single full line for ditches as well as streams, a double full line for all improved, paved and graded roads, a double dashed line for all unimproved but graded roads and a single dashed line for trails. An attempt was made to distinguish marsh which usually has water standing on it by tracing its limits by a fine full line from marsh of indefinite extent and condition which was left unbounded.

The culture was noted on the photographs from the principal highway and from the roads traversed during a limited field inspection. At inaccessible places the culture was interpreted in the office from similarity with that noted during the field inspection.

Names. The names appearing on these sheets are those appearing on the charts except the names of some of the towns are those appearing on their railroad stations or post offices.

*O. Reading*  
Chief of Party

APPROVED

*K.T. Adams*  
FIELD RECORDS (O)

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

*J.S. Borden*  
Chief, Section Field Work

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



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

REG. NO. 4530

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter 3 E C

E

REGISTER NO. 4530

State Florida

General locality East Coast

Locality Ponce de Leon Inlet to Oak Hill

Scale 1:20,000 Date of survey April 30, 19 29

Vessel Army Air Corps Loening Amphibian Airplane

Chief of Party O. S. Reading

Surveyed by R. C. Bolstad

Inked by R. C. Bolstad

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

Contour Approximate contour Form line interval -- feet

Instructions dated June 6, 19 29

Remarks: Compilation of four lens air photographs Nos. 780 to 807. Reduced to 1:20,000 and printed by photolithographic process in Printing Section

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

REG. NO. 4531

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter 5 E C

REGISTER NO. 4531

State Florida

General locality East Coast

Locality Head of Indian River to Titusville ✓

Scale 1:20,000 Date of survey April 30, 19 28

Vessel Army Air Corps Loening 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, 19 29

Remarks: Compilation of 4 lens air photographs Nos. 820 to 842.  
Reduced to 1:20,000 and printed by photolithographic  
process in Printing Section.