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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
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Acc. No.

State: Florida

DESCRIPTIVE REPORT

Photo

Topographic

Hydrographic

Sheet No. 4553

LOCALITY

Florida East Coast

Ormond

Holly Hill to Ponce de Leon Inlet

Ormond to Mosquito Inlet

1930

CHIEF OF PARTY

O. S. Reading

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4553

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 Letter

REGISTER NO. 4553

State FloridaGeneral locality East CoastLocality Ormond ~~Holly Hill~~ to Ponce de Leon Inlet
(Photos taken)Scale 1 : 20,000 Date of survey April 30, 1928, 19Vessel Army Air Corps Loaning Amphibian AirplaneChief of Party O. S. ReadingSurveyed by F. G. ErskineInked by F. G. ErskineHeights in feet above ----- to ground to tops of treesContour Approximate contour Form line interval ----- feet

Instructions dated (Control and Compilation) June 6, 19 29

Remarks: Compilation of four lens air photographs Nos 756 to 780.Printed by photolithographic process in Printing Section.

DESCRIPTIVE REPORT TO ACCOMPANY

AIR PHOTO TOPOGRAPHIC SHEET

No. 4553 - EAST COAST OF FLORIDA, HOLLY HILL TO
PONCE DE LEON INLET.

This sheet is a compilation of a single strip of four lens air photographs taken with Army Air Corps T-2 camera No. 26-1, April 30, 1928. The flight of the area covered by this sheet began at 9:30 A. M. with photograph No. 755 and ended at 9:50 A. M. with photograph No. 781. The tide tables predicted a low tide of -0.3 foot at 11:27 A. M. at Ponce de Leon Inlet, the southern extremity of this sheet.

A Loening Amphibian plane piloted by Lieutenant J. A. Dexter at an approximate altitude of 10,000 feet was used. The transverse level vial on top of the camera was broken in a previous flight and a hand level was substituted. Unfortunately it 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 one-half of the area covered by the "A" prints could be used and the "B" prints were dropped partly out of focus.

LIMITS:

This sheet consists of a single strip of photographs extending from Holly Hill on the north to Ponce de Leon Inlet on the south and having a width of about five miles from the shore, inland. The north end joins photo topographic sheet No. 4552, photograph No. 755, and the south end joins photo topographic sheet No. 4530, photograph No. 781.

CONTROL:

This sheet is controlled by (1) topographic sheets Nos. 4067 (1924), 4132 (1925), 4133 (1925), 1343 (1874), 1344 (1974); (2) triangulation stations recovered and spotted on the photographs during field inspection (such stations are marked by small black triangles); (3) steel tape traverses with solar azimuths run along roads leading inshore (the turning points and pluses to intersecting roads of these traverses are shown by small red circles); (4) traverse of the railroad which extends the entire length of the sheet. The railroad traverse was obtained from the Engineer's Office of the Florida East Coast Railroad. The tape surveys were tied into this traverse; thus it was possible to get a good inshore control line the entire length of the sheet.

COMPILATION:

A projection of 1:20,000 was laid down on the celluloid sheet, the control plotted and the former surveys traced in blue. A careful radial plot was then made, adhering to the control and old topography. The photographs were distorted so much by film sag and constant tilt that they were re-photographed in the photostat machine with tilt and scale reduction enough to bring them into approximate agreement with the control and former topography at the 1:20,000 scale. The rectified photostats were then plotted as well as possible, according to the radial intersections.

The Sanborn map of Daytona Beach, Holly Hill and Vicinity, was used in conjunction with the photographs for the street systems. Only such streets as were verified by the photographs were shown.

DIFFERENCES FROM FORMER TOPOGRAPHY:

No differences in the outer coast line of the air photo topographic sheet from the 1924 and 1925 topographic sheets (Nos. 4067, 4132, 4133) were noted. Several of the streets were in disagreement as to location and shape. It so happened that in these places the photographs were held by strong control and there was no doubt as to their accuracy. To cite a particular case, the causeway (lat. $29^{\circ}12-2/3'$, long. $81^{\circ}00-2/3'$), crossing the Halifax River just north of the Landing Field, fell some fifty meters north of its location according to topographic sheet No. 4067 (1924). Triangulation stations are on both sides of the river near this causeway; hence, the photograph's location was tightly fixed and disproved the 1924 location. Due to conditions in this vicinity the life of a causeway is short and it is probable that the one shown on topographic sheet No. 4067 at this point has been destroyed and one built just north of it.

On the 1924 and 1925 sheets only the outer shore line was shown. The river shore line of the 1874 topographic sheets agreed fairly well with the photographs, the eastern shore the best. From photographs Nos. 765 to 770 and from Nos. 774 to 779 the photographic topography fell a little west of the topography in the 1874 topographic sheets. Quite a bit of time was spent on this area and the final location of the photographs gave the best agreement, holding to the railroad traverse and tying to a tape traverse and five triangulation stations scattered throughout this area, but at that,

disagreed slightly with the old topography. The plot tied in well with the adjoining topographic sheet, No. 4530.

The high water line through mud flats and marsh was difficult to interpret from the photographs. In general the limiting line of vegetation was shown as the high water line and the shore line of the 1874 survey was used as a guide in the interpretation of the photographs.

SYMBOLS:

The standard topographic symbols were used together with the following special symbols in order to bring out the topographic character of the locality: a single full line was used as a ditch, a double full line for all improved graded and paved highways and streets, a double dashed line for all unimproved but graded roads, a single dashed line for trails, and a longer single dashed line for boundaries between fields, orchards, etc. The culture was noted in the photographs from the principal highways and the road traverses during a limited field inspection. At inaccessible places the culture was interpreted in the office from the similarity noted to that obtained from the field inspection.

Only the outstanding ^{landmarks} ~~buildings~~ such as a large hotel, church spires and water tanks were shown where they could be brought out with the aid of the stereoscope. Principal buildings such as post office and city hall, were also shown.

NAMES:

The names appearing on this sheet are those appearing on charts Nos. 1244 and 3258, the topographic sheets Nos. 4067, 4132, 4133, 1343 and 1344, the State Highway map, and the railroad maps of this vicinity.

*Approved and forwarded
J. Reading
Chief of Party, C & G Survey.*

K.T. Adams
FIELD RECORDS (O)

L.O. Colburn
Chief, Division of Charts

APPROVED

Frank S. Brown
Chief, Section Field Work

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

*Respectfully submitted
Frank G. Kerckhove*

*Jr. Civil Engr.
Coast & Geodetic Survey*