

4577

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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JUN 24 1931

State: FLORIDA

Acc. No.

DESCRIPTIVE REPORT

Photo-
Topographic
Hydrographic

Sheet No. T-4577

LOCALITY

East Coast of Florida

Card and Barnes Sounds

Arsenicker Keys to Division

Point

1928

CHIEF OF PARTY

O. S. Reading

Applied to chart 848 - April 23, 1936 HML
" " " 1249 Mar. 1937 HML

Descriptive Report to Accompany
Air Photo-Topographic Sheet No. 4577
East Coast of Florida
Arsenicker Key to Division Point.

This sheet is a compilation of composite air photographs taken by the Army Air Corps' four-lens camera, No. 26-1. Two flights of photographs were used which crossed each other in the vicinity of Steamboat Creek, photographs numbers 312-336 being used from a flight eastward and northeastward, and photographs numbers 380-401 from a flight northward, crossing over to the coast of the mainland at Card Point. Photographs numbers 312-336 were composed of only three photographs each, the "D" chamber film having jammed during the flight. Photographs numbers 380-401 were composed of the usual four views. A Loening amphibian plane was piloted by Lieutenant J.A. Dexter, at a height of approximately 10,600 feet for photographs 312-336, and at a height of 10,100 feet for photographs 380-401, giving a scale factor of 1.026 for photos 312-336 and one of 1.078 for photos 380-401. The factor of 1.026 was actually used in making the projection.

Photos 312-336 were taken April 12, 1928, between 3:15 and 3:20 P.M., three hours after a high tide of 2.2 ft. Photos 380-401 were taken April 17, 1928, between 10:20 and 10:25 A.M., two hours before a low tide of -.4 ft., as predicted in the tide tables.

LIMITS.

The northern limit of this sheet is latitude $25^{\circ} 23'$ N., on the mainland and $25^{\circ} 22'$ N., on Old Rhodes Key. The southern limit is latitude $25^{\circ} 13'$. Eastward the sheet covers the northern portion of Key Largo, and the southern portion of Old Rhodes Key. Westward the sheet includes at the north the area of the mainland to longitude $80^{\circ} 22'$, and southward the portions of Barnes Sound east of longitude $80^{\circ} 25'$, including at its western extremity, Main, Short and Middle Keys.

CONTROL.

Triangulation executed in 1930 along the shores of Card and Barnes Sounds was used as the principal control; use was also made of several old triangulation stations located on the ocean shores of the outer keys. Some of these stations in the scheme were rendered of doubtful value, due to their approximate spotting on the photographs by members of the field party. They appeared to have

been spotted on the ship from insufficient field measurements, instead of by the preferred method of taking the photographs in the field and spotting them at the triangulation stations where the area can be compared with its photograph, distinguishing features in each identified, and the station exactly spotted.

COMPILATION.

A projection was made on celluloid to the approximate scale of the photographs, using the scale factor of 1.026 as obtained from a preliminary radial plot of one of the flights of photographs used. Photostats were then made of the larger-scale photographs of other flights to conform to this scale.

Photostats were also made of topographic sheets 746 and 747, to the scale of the projection, and the ocean shoreline traced in blue on the celluloid as a check on the ocean shoreline determined by the radial plotting.

All triangulation stations that had been identified by the field party were marked for use in the radial plot, and the triangulation stations plotted on the projections.

A radial line graphic traverse was then plotted, holding to the control for both flights of photographs; several plottings being made until the two radial plottings were found to check each other in the areas that the flights overlapped.

DIFFERENCES FROM OLD TOPOGRAPHY.

Considerable differences from the old topography were noted on the western shores of Card and Barnes Sounds from and including Card Point southward, the extent of the sheet. From Card Point to Little Card Point this sheet differs very appreciably from the previous representation, and it is believed this area is now much more faithfully presented than on the old sheet, which shows evidence of considerable sketching. Southward from Little Card Point large changes were also made in the keys in the western part of Barnes Sound. The sheet gives a much more accurate representation than the old sheet, it is believed, though it is not claimed that this is an absolutely true representation of the area, due principally to the fact that these keys were shown on the extreme edge of the photograph where the detail was somewhat obscure and the high water line in some places difficult to interpret from the photographs.

LANDMARKS FOR CHARTS.

The only landmarks suitable for charts noted on the photographs were the east house on the bridge from the mainland to Key Largo, between Little Card Point and Barnes Point, shown on form 567 of the date of May 10, 1931.

NAMES. *Names on this sheet verified Nov 26, 1934 H. Bacon*
Mud Pt. (25°18.4' - 80°22.4') added

The names on this sheet are those appearing on Chart No. 1249.

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 for a ditch, a double full line for all improved, graded and paved roads, a double dashed line for all unimproved but graded roads, a single short dashed line for trails and a single long dashed line for boundaries of cultivated or cleared fields.

The culture was obtained by notations on the photographs from the highways and the roads traversed made during a limited field inspection, and from consultations with members of the field force recently at work on triangulation in the area mapped. At inaccessible places the culture was interpreted in the office from the similarities noted to that obtained from the field inspection.

Respectfully submitted,

Julian H. Wulbern

Julian H. Wulbern,
Jr. Carto. Engineer.

APPROVED:

O. S. Reading
O. S. Reading,
Chief of Party,
Coast and Geodetic Survey.

K. T. Adams
FIELD RECORDS (C)

L. O. Robb
Chief, Division of Charts

APPROVED

James S. Borden
Chief, Section Field Work

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4577

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-4577

State Florida

General locality East Coast

Locality Arsenicker Key to Division Point

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

Vessel Army Air Corps Loening Amphibian Airplane

Chief of Party O. S. Reading

Surveyed by J. H. Wulbern

Inked by J. H. Wulbern

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

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

Instructions dated -----, 19

Remarks: Compilation of aerial photographs Nos. 312-336

and 380-401. Printed by photo-lithographic process in

printing section.

G P O

Descriptive Report T4577 Supplemental
4/ 11/4/37

T4577 supplemental is the same as the original T4577 except for the areas tinted or other wise marked in color, or noted below in this report

1. Area tinted in red - entered on supplemental # 11/4/37. Includes corrections and additions from photographs taken in January 1935.

2. New plate made up to correct negative ^{agg} punctures

3. Plotting of all triang. stations shown with large points on the original was checked and fine points made on the negatives

all above corrections included on plates for printing of 3/7/38

B.G. Jones