

4576

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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MAY 16 1931

State: *FLORIDA*

Acc. No.

DESCRIPTIVE REPORT

Photo-  
Topographic  
~~Hydrographic~~

Sheet No. 4576

LOCALITY

*EAST COAST OF FLORIDA*

*BISCAYNE BAY*

*CUTLER TO MANGROVE*

*KEY*

*1928*

CHIEF OF PARTY

*LT. O. S. READING*

Applied to chart 848 Nov. 30, 1936 RML

Applied to chart 848 (new compilation) Sept 15, 1938 R.L.C.

Applied to chart 849 March 29, 1939 RML

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4576

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. 4576

REGISTER NO. 4576

State Florida

General locality East Coast, Biscayne Bay

Locality Cutter to Mangrove Key

Scale 1:20,000 Date of survey April 17, 1928.  
photographs

Vessel Army Air Corps Loening Amphibean plane

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 control and compilation June 6, 1929.

Remarks: Compilation of four-lens air photographs Nos. 401-430,

Reduced to 1:20,000 and printed by photo-lithographic process  
in Printing Section.

G P O

## DESCRIPTIVE REPORT TO ACCOMPANY

AIR PHOTO TOPOGRAPHIC SHEET No. 4576 EAST COAST OF FLORIDA

BISCAYNE BAY CUT<sup>L</sup>TER TO MANGROVE KEY

This sheet is a compilation of air photographs taken by the Army Air Corps four-lens camera No. 26-1. Photographs numbers 401 to 430, the direction of the flight to the northward, taken April 17, 1928, compose the sheet. Photograph No. 430, at the north end of the sheet, was taken about 10:30 A.M., and photograph No. 401, about 10:25 A. M. A Loening amphibian plane was piloted by Lieutenant J. A. Dexter at a height of approximately 10,000 feet, giving an average scale of 1:18,400 to the photographs. A scale of 1.0785 was actually used in making the projection for the photographs. A low tide of -0.1 foot as taken from the tide tables, occurred during the time the photographs were taken for this sheet.

### LIMITS.

The area of this sheet is covered by a single strip of photographs, extending from three to three and a half miles west of Biscayne Bay. The northern limit of this sheet is latitude  $25^{\circ} 37' N.$ , and the southern limit between  $25^{\circ} 24' N.$  and  $25^{\circ} 23' N.$

### REPLOTTED AREA.

Note that the area between latitude  $25^{\circ} 37' N.$  and  $25^{\circ} 35' N.$  is also covered by air photo-topographic sheet No. 4540. This sheet supplants air photo-topographic sheet 4540 with regard to that area, this area having been replotted with stronger control not available at the time of the earlier sheet. Some positions are changed, mainly in latitude.

### CONTROL.

The scheme of triangulation that was executed in 1930 under the direction of Captain Shaw in Biscayne Bay was used as the main control. This was mainly of value in controlling the coast line, there being no triangulation points available at any distance from the shore. Photostats were made of topographic sheets 4562 and 4563, which show parts of the shore line of the area were made to the scale of the projection and also used for the purpose. Three taped traverses executed by Lieutenant O. S. Reading and party in 1929 furnished longitudinal control. A small section of a railroad traverse plotted from data furnished by the Florida East Coast Railroad also furnished longitudinal control for the northern end of the sheet.

### COMPILATION.

A projection was made on the celluloid to the approximate scale of the photographs, using a scale factor of 1.078 as obtained from a preliminary spotting plot.

From previous experience with the nineteenth-century topographic sheets available for this particular area, it was not felt that these would be of any value as control, and hence no photostats of these to the projection scale were used as supplementary control data, as is usually the case.

All triangulation stations that had been identified on unmounted photographs by members of Captain Shaw's party of 1930, were transferred to the composite photos. These stations were plotted on the projection and marked with circumscribed black triangles. The available traverses, azimuth stations, turning points, plusses to roads, trails, etc., were also plotted and are shown by small red circles.

### OTHER MAPS USED.

The only map other than those of the Coast and Geodetic Survey used was a blueprint showing roads and rockpits in District No. 5, Dade County, furnished by the County Engineer.

### 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 roads; a double dashed line for all unimproved but graded roads; a single short dashed line for trails and a single dashed line for boundaries of cultivated or cleared fields. Where broad canals are indicated by double full lines, these are labelled to distinguish them from roads.

The culture was noted on the photographs from the principal highways and roads during a limited field inspection. At inaccessible places the culture was interpreted in the office from the similarities noted to that obtained from the field inspection.

### DIFFERENCES FROM OLD TOPOGRAPHY.

Considerable difference between the old and new shore lines were noted along the whole coast.

LANDMARKS FOR CHARTS.

The only landmark available for charts on this sheet is the triangulation station Cupola. Note that this is given on air-topo sheet 4540 as a house, before this feature was used in Captain Shaw's 1930 triangulation scheme south of Miami. This position is changed from that shown on air-topo sheet 4540, this sheet superseding 4540 in the area previously mentioned.

NAMES.

The names on this sheet are those appearing on chart 1249, and photo-topographic sheet 4540.

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.

APPROVED

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

*L. O. Colbert*

Chief, Division of Charts

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

*G. W. Hilde*

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