

4545

Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. Patton, Director

B. & B. SURVEY  
L. & A.

SEP 22 1898  
Acc. No.

State: Florida

DESCRIPTIVE REPORT

Topographic  
Hydrographic

Sheet No. <sup>B</sup> 4545

LOCALITY

Indian River

Eau Gallie to Grant

1930

CHIEF OF PARTY

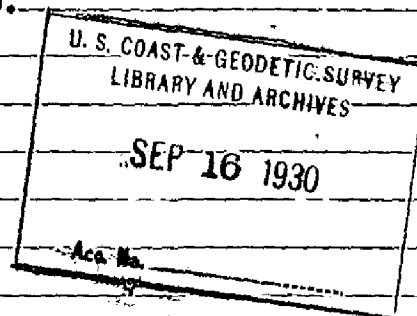
G. D. Cowie

Graphic Control

DESCRIPTIVE REPORT TO ACCOMPANY

TOPOGRAPHIC SHEET "B", EAST COAST OF FLORIDA

SEASON - SPRING, 1930.



PROJECT #50

INSTRUCTIONS, STR. LYDONIA, DATED DEC. 31, 1929

GEORGE D. COWIE, CHIEF OF PARTY

DESCRIPTIVE REPORT TO ACCOMPANY  
TOPOGRAPHIC SHEET "B", EAST COAST OF FLORIDA

SEASON - SPRING, 1930.

PROJECT # 50

INSTRUCTIONS DATED DEC. 31, 1929.

PURPOSE OF SURVEY

This topographic survey was executed for two purposes: to locate signals along the shore for the control of hydrographic surveys, and to furnish control for aerial surveys.

The control for aerial surveys consisted in locating structures, roads -- and particularly crossroads -- which could be readily spotted on the aerial photographs. This was supplemental to triangulation which determined the position of the most outstanding objects in the area and of stations on points of land conspicuous in the aerial photographs.

GENERAL DESCRIPTION

This is a low, flat, sandy country with no landmarks other than man-made structures. The coastal strip is covered by palmetto growth, with a few groups of pine trees and palm trees. From the sea an almost continuous stretch of trees on the west side of Indian River shows in the background.

The shore line of the entire coast consists of sandy beach.

DETAILED DESCRIPTION

The area between  $\Delta$ Blue and  $\bigcirc$ Rush is partly improved. It is still covered with palmetto, however. There is a grove of pine trees near  $\bigcirc$ Quack. The bank along the shore is from 10 feet high at  $\Delta$ Blue to 6 feet high at  $\bigcirc$ Rush. The palmetto growth is 3 meters inshore from M.H.W. line

From  $\bigcirc$ Rush to  $\bigcirc$ Gal the land is improved. It is level, grass-covered, and has paved roads bordered by trees. The Indialantic Hotel and Indialantic Casino are large, orange-stucco finished buildings. Indialantic tank can be seen far out at sea. There are also many houses in this area. The bank along the beach is about 6 feet high. The edge of the grass is about 3 meters inshore from M.H.W. line.

South of  $\bigcirc$ Gal, the terrain consists of sand ridges parallel to the shore, covered with palmetto. From  $\bigcirc$ Gal to  $\Delta$ Winter

the sandbank bordering the beach averages 6 feet in height. The edge of the palmetto is 5 meters inshore from M.H.W. line.

An old, unpainted shed is situated near  $\triangle$  Winter. Between  $\triangle$  Winter and  $\triangle$  Steel, the bank along the beach is about 6 feet high; the edge of the palmetto about 2 meters inshore from M.H.W. line.

Between  $\triangle$  Steel and  $\triangle$  Short the shore bank diminishes in height from 7 feet to 4 feet; the edge of the palmetto is 2 meters from M.H.W. line.

South of  $\triangle$  Short the bank is low and the edge of the palmetto growth 3 meters inshore from M.H.W. line.

West of  $\triangle$  Floridagold are tall pine trees surrounding <sup>groves</sup> rows of orange trees.

#### SURVEY METHODS

The topographic beach signals were located by traverse between the triangulation stations near the beach. The distances between plane-table set-ups were measured with a 300 ft. steel tape. The plane-table set-ups were spaced 600 meters apart. All traverse closures were within the required limits. The closing errors of the section are listed on a sheet attached to this report.

Due to the height of the sandbank bordering the beach, it was impractical to rod the roads parallel to the beach while the beach traverse was in progress. The location of these roads necessary for the aerial photo control was determined later. Many parts of these roads were in low ground between growths of palmetto, making the seeing of signals from the ground difficult. Therefore the plane-table was mounted on the truck. The truck was stopped wherever it was desired to secure topographic detail, the table leveled, and the position determined by 3-point fix.

A short traverse was executed along the shore from  $\triangle$  Peter Wright. The eastern end of the Indian Atlantic Bridge was determined by a 3-point fix on 4 triangulation stations.

The shore-line around definite points of land projecting into Indian River was rodded from set-ups at the triangulation stations on the point.

A detached topographic survey was made in the vicinity of Aerial Beacon #16. This Beacon lies near the main road about 4 miles west of Melbourne. It apparently lies beyond the limits of the aerial photographs at hand. It was expected to locate this Beacon by triangulation from the triangulation stations, Water Tank Eau Gallie and Water Tank Melbourne, but this was not accomplished before the party left the field. The line Tank, Eau Gallie to Beacon #16 sees through the trees. A superstructure of at least 14 feet in height must be built on Beacon #16 in order for the stations Tank, Melbourne and Beacon #16 to be intervisible.

A detached topographic survey was made in the vicinity of Aerial Beacon #14, Roseland. Due to the slope on either side of the river at Roseland, but one shore triangulation station was visible from the Beacon; therefore the Beacon could not be located from the existing scheme of triangulation. The position of Beacon #14 has been spotted approximately on the Aerial Photograph #AC26-1CF-649. A more accurate position may be spotted in the office where there are better means of studying the photographs.

MAGNETICS

Observations with a compass declinometer were taken at  $\triangle$  Blue and at  $\triangle$  Steel. Observations with a declinator were also taken at  $\triangle$  Steel. The results determined with the declinator checked closely with those obtained with the declinometer.

Magnetic Declination by Declinometer

|                   |                     |
|-------------------|---------------------|
| $\triangle$ Blue  | $0^{\circ} 39.0' E$ |
| $\triangle$ Steel | $0^{\circ} 47.9' E$ |

*L.S. Hubbard. H. & G. Engr.*

TRAVERSE CLOSURES

|          |    |                |          |
|----------|----|----------------|----------|
| △ BLUE   | -- | △ DOME         | 3 meters |
| " DOME   | -- | " ANT          | 4 "      |
| " ANT    | -- | " WINTER       | 6 "      |
| " WINTER | -- | " STEEL        | 7 "      |
| " STEEL  | -- | " SHORT        | 0 "      |
| " SHORT  | -- | " SMITH        | 9 "      |
| " SMITH  | -- | " FLORIDA GOLD | 7 "      |

PLANE TABLE POSITIONS

| <u>OBJECT AND DESCRIPTION</u> | <u>LATITUDE</u> | <u>D.M.</u> | <u>LONGITUDE</u> | <u>D.P.</u> | <u>HEIGHT</u> |
|-------------------------------|-----------------|-------------|------------------|-------------|---------------|
| ✓ Pavilion, small             | 28 05           | 467         | 80 33            | 1436        | 15            |
| ✓ Yellow house                | 28 04           | 415         | 80 33            | 853         |               |
| ✓ Tank, small water-          | 28 04           | 17          | 80 33            | 1475        |               |
| ✓ Shed                        | 28 01           | 1696        | 80 32            | 684         |               |





DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

# 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 B.

REGISTER NO. 4545

State FLORIDA

General locality. ~~EAST COAST OF FLORIDA~~ Indian River

Locality EAU GALLIE TO <sup>Grant</sup>~~FLORIDAGOLD~~

Scale 1-20,000 Date of Survey April 1930, 19

Vessel Str. LYDONIA

Chief of Party GEORGE D. COWIE

Surveyed by L. S. HUBBARD

Inked by L.S. HUBBARD

Heights in feet above M.H.W. to ground to tops of trees

Contour    Approximate contour    Form line interval        feet

Instructions dated December 31, 1979, 19

Remarks: \_\_\_\_\_

REG. NO. 4545