

4544

Form 504
Ed. June, 1923

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

S. & B. SURVEY

L. & A.

SEP 22 1932

Acc. No.

State: Florida

DESCRIPTIVE REPORT

Topographic
Hydrographic

Sheet No.

A 4544

LOCALITY

Indian River

Cocoa Beach to Eau Gallie

1932

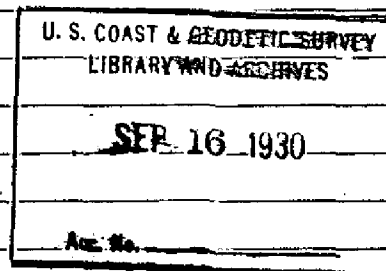
CHIEF OF PARTY

G. D. Cowie

Graphic Control

DESCRIPTIVE REPORT TO ACCOMPANY
TOPOGRAPHIC SHEET "A", 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 "A", 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 small isolated palm trees. Banana Island is covered with orange groves. There are a few groups of pine trees.

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

DETAILED DESCRIPTION

Cocoa Beach extends for about one half mile south of Caso. There are numerous beach cottages and several improved roads here. South of Cocoa Beach extend palmetto-covered sand ridges parallel to the shore. From Cocoa Beach to Δ Cocoa the shore side of these dunes is eroded into steep sandbanks about ten feet high. The edge of the palmetto growth at the top of these banks lies 6 meters inshore from M.H.W. line.

The sea-eroded bank between Δ Cocoa and Δ Tuck gradually diminishes in height from 10 feet to 6 feet. The edge of the palmetto growth is 5 meters inshore from the M.H.W. line.

Near Δ Concrete is a small, white, stucco-covered house and wooden barn inclosed by a fence. A shed lies south of the enclosure.

Between \triangle Concrete and \triangle Tripod all the terrain consists of palmetto-covered sand ridges. A sand ridge about twenty feet high lies parallel to the shore about 100 meters inshore. This slopes seaward to eroded banks about 5 feet high and landward to a depression through which runs a swampy road. Palmetto growth covers the area to the top of the eroded banks. The edge of this palmetto growth is 6 meters inshore from M.H.W. line.

The palmetto-covered sand ridges continue from \triangle Tripod to \triangle Civet, but are slightly higher. The eroded banks are about 10 feet high; the edge of the palmetto growth is 5 meters inshore from M.H.W. line. Canova Casino is a two-storied square structure with an orange-colored stucco finish. A fishing pier extends seaward from the casino.

From \triangle Canova to \triangle Blue the sandbanks are 8 feet high; the edge of the palmetto is 4 meters inshore from M.H.W. line.

SURVEY METHODS

The topographic beach signals were located by traverse between the triangulation stations along the beach. From \triangle Lucky to \triangle Cocoa distances were measured by ordinary rod readings. From \triangle Cocoa southward for the remainder of the sheet distances between set-ups were measured with a three-hundred foot tape. The set-ups were spaced 600 meters apart. All traverse closures were within the required limits. The closing errors of the sections 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 traverse was in progress. These roads, necessary for the aerial photo control, were located later. Since a good part of these roads were in low ground between growths of palmetto, the seeing of signals from the ground was difficult. The plane-table was mounted, therefore, on the truck. The truck was stopped wherever it was desired to secure topographic detail, the table leveled, and the position determined by three-point fix.

Because the coastal area between Latitude $28^{\circ} 14'$ and \triangle Canova was missed by the aerial photographs, effort to secure the detail of this area was made. From \triangle Tripod north to \triangle Concrete the road passes through low swampy ground; in fact, for most of the distance the water was above the running-boards of the truck. The road could not be traveled further north than Lat. $28^{\circ} 12'$. This road, therefore, between Lat. $28^{\circ} 12'$ and $28^{\circ} 13' 20''$ is merely sketched.

The inland control for the aerial photographs consists of triangulation stations located on definite points of land easily spotted on the photographs. The distances of the shoreline and grass-line from these stations are given with the descriptions of stations in a sketch-book accompanying this series of topographic sheets.

The area within $\frac{1}{2}$ mile of \triangle Ban was surveyed by traverses originating from \triangle Ban. A steel tape was used along the roads. The shoreline near \triangle College 2 was surveyed by traverse from \triangle College 2.

MAGNETICS

Magnetic observations were made at \triangle Palmetto and \triangle Blue with a compass declinometer. At \triangle Palmetto observations with a declinatoire were also taken. The results with the declinatoire checked those obtained with the declinometer as closely as could be scaled on the sheet.

Declination obtained with Declinometer:

\triangle Palmetto $0^{\circ} 34.0' E$

\triangle Blue $0^{\circ} 39.0' E$

L. S. Hubbard.

H + G. Engr.

TRAVERSE CLOSURES

△	LUCKY	--	△	BEACHY	0 meters
"	BEACHY	--	"	COCOA	10 "
"	COCOA	--	"	TUCK	4 "
"	TUCK	--	"	PALMETTO	0 "
"	PALMETTO	--	"	CONCRETE	0 "
"	CONCRETE	--	"	TRIPOD	3 "
"	TRIPOD	--	"	CIVET	9 "
"	CIVET	--	"	BLUE	6 "

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>
✓ White house, red roof	28 19	538	80 36	914	30 ft
✓ Church	28 18	1419	80 36	1027	40
✓ House, chimney	28 18	1356	80 36	850	25
✓ House	28 18	1111	80 36	1055	25
✓ Old house, half broken down	28 17	91	80 36	690	15
✓ Old house	28 16	1797	80 36	681	20
✓ Shed, red roof	28 14	132	80 36	606	25
✓ Shed	28 13	1421	80 36	108	20
✓ Concrete house, one- storied, light cement	28 13	1123	80 36	107	25
✓ Shed	28 13	1082	80 36	107	20
✓ Shed	28 13	1061	80-36	600	
✓ Shed	28 11	460	80 35	1550	
✓ Pier, center of outer face	28 08	562	80 34	1177	15
✓ Shack	28 08	243	80 34	1241	18
✓ Lone palm tree	28 08	528	80 35	728	
✓ Palm tree	28 08	270	80 35	577	
✓ Palm	28 08	185	80 35	549	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

REG. NO.

4544

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 A

REGISTER NO. 4544

State Florida

General locality ~~East Coast of Florida~~ Indian River

Locality Cocoa Beach to Eau Gallie

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, 1929., 19

Remarks: _____