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SUPPLEMENTAL I 4452, 4453, 4454

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: Florida

DESCRIPTIVE REPORT

Topographic / Hydrographic Sheet No. 10-11-12 4452 4453 4454

LOCALITY

Florida West Coast

Ten Thousand Islands

Broad Creek to Rabbit Key. (3 Sh)

1927
1928

CHIEF OF PARTY

O. S. Reading

GOVERNMENT PRINTING OFFICE

4452 4453 4454
SUPPLEMENTAL I

Tc

Form 537a

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4452

PHOTO TOPOGRAPHIC TITLE SHEET
Aerial Phototopographic Survey

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 No. 10

REGISTER NO. 4452

State Florida

General locality West Coast Ten Thousand Islands

Locality ~~Rabbit Key to~~ Seminole Point to Rabbit Key
3 lens 4 lens

Scale 1:20,000 Date of survey Feb. 18 & 22, 19 27 March 29, 1928

Vessel Steamer HYDROGRAPHER & U.S.A.C. Loening Amphibian Plane

Chief of Party ~~O. S. Reading~~ R.P.Eyman, Guykirksey,Pilot

~~Surveyed by~~ Photographs reduced by O.S.Reading ~~Guy Kirksey, U.S.A.C. Pilot; J. S. Morton photo plot~~

Inked by R. J. Sipe

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

Contour Approximate contour Form line interval - - - feet

Instructions dated - - - -, 19

Remarks: Compilation of 3 lens air photos No.s 54 to 62 and 147 to 163 together with 4 lens photos No. 80 to 95 and 183 to 190

U. S. GOVERNMENT PRINTING OFFICE: 1928

Reduced to 1:20,000 and photo engraved by Printing Section

'TC'

Form 537a

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4453

PHOTO TOPOGRAPHIC TITLE SHEET
Aerial Phototopographic Survey

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 No. 11

REGISTER NO. 4453

State Florida

General locality Ten Thousand Islands West Coast

Locality ~~Seminole Point to~~ Highland Point to Seminole Point
3 lens 4 lens

Scale 1:20,000 Date of survey February 18, 1927 and March 29, 1928.

Vessel Steamer HYDROGRAPHER & U.S.A.C. Loening Amphibian Plane
R.P. Eyman, Guy Kirksey and J.S. Dexter, Pilots

Chief of Party ~~O. S. Reading~~
Photographs reduced by O.S.Reading and H.C.Walker

~~Surveyed by Guy Kirksey and J. S. Dexter, U.S.A.C. Pilots~~
~~H. C. Walker Photo reduction~~

Inked by Roswell C. Bolstad

Heights in feet above none to ground to tops of trees

Contour Approximate contour Form line interval none feet

Instructions dated - - - - - - , 19

Remarks: Compilation of 3 lens air photos Nos. 163 to 174 and four lens photos No.s 67 to 80, 95 to 110 and 190 to 205

U. S. GOVERNMENT PRINTING OFFICE: 1928

Reduced to 1:20,000 and photo engraved by Printing Section.

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Form 537a

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4454

PHOTO TOPOGRAPHIC TITLE SHEET
Aerial Phototopographic Survey

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 No. 12

REGISTER NO. 4454

State Florida

General locality Ten Thousand Islands, West Coast

Locality ~~Highland Point to~~ Broad Creek to Highland Point
3 lens Feb. 18, 1927

Scale 1:20,000 Date of survey 4 lens March 29, , 1928 and April 12, 1928.

Vessel Steamer HYDROGRAPHER & U.S.A.C. Amphibian planes.

Chief of Party ~~O. S. Reading~~ R. P. Eyman, Guy Kirksey and J. A. Dexter, Pilots

Surveyed by ~~Guy Kirksey and J. A. Dexter Pilots; O.S. Reading photo plot~~ Photographs reduced by O.S. Reading

Inked by R. C. Bolstad

Heights in feet above none to ground to tops of trees

Contour Approximate contour Form line interval none feet

Instructions dated - - - - -, 19

Remarks: Compilation of 3 lens air photos No. 174 to 181
4 lens photos No. 59 to 67; 11 to 123; 205 to 220.

U. S. GOVERNMENT PRINTING OFFICE: 1929

Reduced to 1:20,000 and photo engraved by Printing Section.

Descriptive Report to Accompany
Air Photo Topographic Sheets.

No. Field No. 10, Rabbit Key to Seminole Point.

No. Field No. 11, Seminole Point to Highland Point.

No. Field No. 12, Highland Point to Broad Creek.

These three sheets are a compilation of multiple lens air photographs taken by the Army Air Corps during 1927 and 1928. The photographs were taken from amphibian planes at an altitude of about 10,000 feet giving an approximate scale of 1:19,000 to the photographs. Three lens photographs No. 147 to 181 were taken in the order of diminishing numbers, the plane passing over Broad Creek about 4:00 P. M. and Rabbit Key about 4:30 P. M., February 18, 1927, about one hour after high water. Three lens photographs numbers 54 to 62 were taken about 11 A. M. February 22, 1927. Four lens photographs Nos. 59 to 123 were taken from 11:30 A. M. to 12:30 P. M., March 29, 1928, with the tide about one half foot above low water. Four lens photographs Nos. 183 to 220 were taken from 2:30 to 2:45 P. M. on April 12, 1928. The tidal constants for the inner bays are not known.

Compilation. Projections on the approximate scale of the photographs as determined by preliminary plots were laid down on celluloid. The control stations were plotted on these projections and photostats of the original topographic sheets enlarged to the scale of the projections were traced on the celluloid in blue ink. A radial line graphic traverse was then plotted from each strip of photographs holding to the control and the general trend of the topography. The strips were replotted to agree with each other also. The control on the inshore portions of Sheets Eleven and Twelve is too widely distributed to assure standard accuracy. There is no control inshore from Station Broad on sheet Twelve. The course of the plane curves somewhat to the south of Broad River and the adjustment in this vicinity is especially weak. Such discrepancies as remain after the adjustments have been thrown into the swamp areas rather than the channels and are not believed important.

Junctions of celluloid sheets. - It was necessary to plot the photographs on separate strips of celluloid for convenience in handling. The strips were cemented together when the projections were laid down then separated for plotting the photographs. When the plotting was completed the strips were trimmed to match and assembled on sheets of chart paper for the photographic reudction. There remained in many cases a small distortion of the projection due to unequal shrinkage of the sheets or to unavoidable inaccuracies in the matching. The junctions of the celluloid strips have been indicated on the sheets and if

the projection lines on the same side of the junction as the detail be used no error from the joining of the strips will be involved. Similarly three or four separate negatives are made of each sheet in the photo reduction and printing process. These negatives are joined according to match marks with attendant small residual errors. The junction of the negatives are also indicated on the sheets and error from this source may also be avoided by using projection lines on the same side of the junctions.

Offlying Islands. From Rabbit Key southward to Duck Rock on Sheet 10 there are several offlying islands which were missed by the photographs. The original topography of these islands was checked in the course of executing the 1928 triangulation and found to be excellent. Some beach erosion of about ten meters has occurred on the outer sides of the islands. This erosion while driving the mangrove and beach inshore does not affect the coral reefs forming the outer edge of the keys nearly so much. The previous topography of the offlying islands will therefore be satisfactory for charting.

General Description of the Coast. The general topography of the area covered by these sheets consists of a border of mangrove islands two to five miles thick, then a chain of shallow salt water bays fringed with mangrove and with numerous small streams leading from the bays to the marshes and sloughs of the Everglades. Several larger tidal streams or rivers connect the bays with the Gulf. The outer side of the outer mangrove keys are usually fringed with coral or coquina reef from which the mangrove and small pieces of shell are driven back by wave erosion. The rivers leading to the bays have numerous shoals and bars at their mouths and frequently shoals behind their points deposited by flood tides. The bays are shallow with two to five feet of water and numerous oyster bars. The oysters are of no commercial importance nor do they appear to be thriving. One canning factory is operated on clams dug from the bars off the rivers and islands in the Gulf. The mangrove of the coastal border increases from about sixty feet in height at Chatham River to eighty feet at Broad River. The mangrove decreases in height after the first few miles as it proceeds inshore to low brush in the brackish water at the edge of the Everglades.

Passages and anchorages. A few preliminary notes taken while traversing the country to establish control are given for use before the hydrographic examination obtains more definite information. Three feet can be taken from Chokoloskee Bay through Lopez River and the chain of bays to Chatham River at highwater. About two feet can be carried at highwater from Chatham River through the bays to Lostmans and to Broad River. The limiting depth is on a shoal at the north end of the creek leading from Cannon Bay to Alligator Bay. Local

knowledge or a very sharp lookout in good light is necessary to avoid frequent bars. The narrow creeks and passages may have to be cleared of small trees and branches blown across them by hurricanes.

The depth which can be carried up Chatham River is limited to two feet at low water by a bar across the channel abreast the inner of the numerous islands at its mouth. Three feet at low water can be carried into Lostmans River at low water by avoiding the complicated bars at its mouth and about the same amount into the south channel at Broad River.

There is a three foot passage to a protected anchorage in six feet between the islands in latitude 25° 39' N, longitude 81° 16.8' W. Small boats frequently anchor in three or four feet about 1/3 mile north of Seminole Point and one half mile west of Duck Rock. These areas are protected by shallow bars ~~from~~ to seaward.

Names. The names appearing on the sheets are those appearing heretofore on the charts or those well established in local usage. No names were assigned by field officers. The following changes are recommended on account of thoroughly established local usage:

Barnes River to Lopez River. Barnes River is a smaller stream farther inland.

Plover Key in place of Seminole Point (or if Seminole Point be retained, the name Plover Key should be shown on the island.

Broad River instead of South Rodgers River.

High water line. The outer limits of the mangrove on these sheets have been shown with full lines. Much of the value of the shoreline topography from the air photographs lies in the use of small indentations for the identification of position by passing boats. The significant shape of these indentations and points would be lost if the mangrove symbol without limiting line were used. A limiting line perhaps much finer than the usual highwater line is recommended for the chart for the same reason.

Landmarks. There are few if any landmarks which are of sufficient prominence for charting. Possibly a few of the small houses near the shore may be useful. Recommendations for charting are deferred until after the hydrographic examination.

A Reading

Descriptive Report T4453 Supplemental
6/24/40

Corrections noted in ~~red~~ Greasy & Red on T4453 supplemental are from the field examination of B.H. Rigg in 1931 and include the items listed below. These corrections were originally shown on a chart paper print of T4453 filed in the tube with the original. The chart paper print has been discarded after transferring the corrections to ~~T4460~~ T4453 Supplemental.

1. Bldgs. located during the 1931 hydrographic survey by sextant or planetable.

2. Several islands located by the hydrographic survey.

3. ~~Deletion of an~~ unnamed ⊙ station which was not used during the hydro. survey. Lat 25° 37½' Long 81° 09½'

4. A new title has been added to the supplemental and the negative junctions corrected.

6/24/40

Chart 1253 1-13-69 John P. Wells Applied to inset after verification and review

APPROVED

K. T. Adams
FIELD RECORDS (C)

J. S. Borden
Chief, Section Field Work

L. O. Colbert
Chief, Division of Charts

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