

5233

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Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

_____, Director

State: Georgia FLORIDA

DESCRIPTIVE REPORT

Topographic } Sheet No. 5233
Hydrographic }

LOCALITY

FLORIDA
Coast of Georgia
VICINITY OF ST MARYS ENTRANCE
Amelia Island, City of Fernandina

193 4

CHIEF OF PARTY

S. B. Grenell

Applied to drawing of Chart 577 - Dec 27, 1935 - JFW

Applied to new chart 841 Mar. 19, 1936 W.G.B.

" " " " 453 April 16 1937 JFW.

Applied to Chart 1242, Mar. 16, 1939 G.H.S.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

REG. NO.

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. 5233

State Georgia FLORIDA

General locality Coast of Georgia FLORIDA VICINITY OF ST. MARYS ENTRANCE

Locality Amelia Island, City of Fernandina

Date of Photographs: 11-24-33; 11-26-33

Scale 1:10,000 Date of Survey Comp: , 19

Vessel Aerial Photo Compilation Party #18

Reviewed and recommended for approval:

Chief of party Lieut. (j.g.) S. B. Grenell

Photographs plotted by: F. B. Hickman

Surveyed by:

Inked by J. W. Griffith, Jr.

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated November 10, 1933, 19

Remarks: Compilation of aerial photos Nos.: (790) M-21 to 30;

(790) 11-87 to 99.

--NOTES OF COMPILATION--

One copy of this form must accompany each chart from beginning to completion. The last draftsman, whose name appears on this form, is responsible for it and all personnell will endeavor to keep these forms up to date and correctly posted. This form is very important inasmuch as the final Descriptive Report of the chart compiled is based upon the information contained herein.

SHEET No. 5233

PHOTO NO.	790 M-87	to PHOTO NO.	790 M-99
	790 M-21		790 M-30
BY		START	FINISH
ROUGH RADIAL PLOT			
SCALE FACTOR ()			
SCALE FACTOR CHECKED	<u>S. B. Grenell</u>		
PROJECTION	<u>A. M. Gruber</u>	5-21-34	5-21-34
PROJECTION CHECKED	<u>Warren Fitch</u>	5-21-34	5-21-34
CONTROL PLOTTED	<u>F. B. Hickman</u>	6-11-34	6-11-34
CONTROL CHECKED	<u>A. A. Futral</u>	6-11-34	6-12-34
TOPOGRAPHY TRANSFERRED			
TOPOGRAPHY CHECKED			
SMOOTH RADIAL LINE PLOT	<u>F. B. Hickman</u>	6-12-34	6-23-34
RADIAL LINE PLOT CHECKED	<u>S. B. Grenell</u>	6-23-34	6-23-34
DETAIL INKED	<u>J. W. Griffith, Jr.</u>	7-9-34	10-8-34
AREA DETAIL INKED	26.5	Square Statute Miles	
LENGTH OF SHORE LINE OVER 200m.	40.0	Statute Miles	
LENGTH OF SHORE LINE UNDER 200m.	45.7	Statute Miles	
GENERAL LOCATION	<u>Florida East Coast Vicinity of St. Marys Entrance</u>		
LOCATION	<u>Amelia Island, City of Fernandina</u>		
DATUM STATION	<u>Amelia Island L.H.</u>	LATITUDE	<u>30 - 40 - 22.536 (691.0m)</u>
			(ADJUSTED)
DATUM	<u>N. A. 1927</u>	LONGITUDE	<u>81 - 26 - 33.600 (899.1m)</u>
			(894.4 m)

INSPECTION REPORT

Sheet #5233

REFERENCE:

In reviewing this sheet in the Washington office reference should be made to the Report for Single Lens Sheets filed with sheet #5206.

GENERAL INFORMATION:

This sheet has a varied assortment of topographic features peculiar to this section. However the street system, docks, railroads, highways etc are clearly indicated by symbol and require no special note. The treatment of flooded marsh areas has been adequately discussed in the Compilers report and needs no further mention.

Lieut. H. A. Paton forwarded a detailed tracing of the waterfront of Fernandina as located on the plane table control sheets which checked perfectly with the compilation location.

Some of the country around Fernandina is rolling and this area was carefully studied under the stereoscope and allowance made for displacement due to elevation. The two swing bridges across Kingsley Creek are correctly shown.

The single dotted line bordering the marsh areas indicates the sharply defined edges of dredged and natural channels as they showed up on the photographs.

CONTROL:

This sheet was controlled entirely by triangulation. The bulk of the control came from the revision survey of C. H. Durgin, 1932-33. There were a few intersection stations from the first order arc of C. D. Meaney, 1932 and a few old intersection stations of 1905, Chief of Party unknown.

LANDMARKS FOR CHARTS:

A list of landmarks has been submitted on form 567 by H. A. Paton, 1934.

COAST PILOT NOTES:

Coast pilot notes have been submitted by H. A. Paton, 1934.

NAMES:

All names appearing on this sheet were taken from current issues of charts.

Respectfully submitted,



S. B. Grenell,
Chief of Party.

REPORT OF COMPILATION:

COMPILATION METHOD:

This sheet was compiled by the standard radial line plot method. Although some of the control was hard to hold, this sheet had so many control stations on it that the plot was run through without any trouble at all.

ADJUSTMENT OF PHOTOGRAPHS:

Very little difficulty was experienced in adjusting the photographs through this sheet. The photographs have a minimum of tilt and the radial points were numerous and well placed. The only exception is the shoreline from Lat. 30 - 40, Long. 81.25.8 to Lat. 30 - 41.7 to Long. 81 - 25.8. This detail appeared on the outer edge of the photographs and only two cuts were obtainable on the radial points. The western end of the south jetty (Lat. 30 - 42, Long. 81 - 25.9) was all that could be drawn in because of the limits of the photographs.

INTERPRETATION:

The photographs were unusually clear causing no great difficulty in interpretation of the detail. The outline of old docks and piling along the Eastern shore of the Amelia River (Lat. 30 - 41, Long. 81 - 27.6) are indicated with a small dotted line. In several places on this sheet, at Lat 30 - 39; Long. 81 - 30 for example, the streams flood out over large mud flat areas. These areas are broken up by numerous small mud and marsh islands which practically flood at high water. The larger islands have been drawn in and the main channels through these areas have been indicated with a single row of dots. The stereoscope was used to pick up as accurately as possible the detail having elevation, such as the docks and buildings along the Amelia River. The land on Amelia Island around Lat. 30 - 40.5, Long. 81 - 27 is rolling.

INFORMATION FROM OTHER SOURCES?

The photographs, field sketches and short sections of shore line transferred from the aluminum mounted plane table control sheets were the only sources of information used on this sheet.

COMPARISON WITH OTHER SURVEYS:

Junctions with adjoining sheets compiled in this office are complete and satisfactory. There are no details to be removed from the charts.

ACCURACY AND COMPLETENESS:

The area covered on this sheet is complete in every detail. As nearly as can be determined from the photographs, all well defined detail is located with a probable error of not more than 4 meters; less well defined detail with an error of not more than 10 meters.

-2-

PHOTOGRAPHS:

No.	to	No.	Date	Time	Stage of Tide
(790) M-21		M-30	11-24-33	12:30PM	5/6
(790) M-87		M-99	11-26-33	11:45AM	2/5

J. W. Griffith, Jr.
Draftsman

J. W. Griffith Jr.

Approved:

S. B. Grenell
S. B. Grenell
Chief of Party

GEOGRAPHIC NAMES

Survey No. T-5233 (pg 1 of 2)

Date. _____

Chart No. 1243, 571, 453, 1242, 3257

Diagram No. _____

Approved by the Division of Geographic Names, Department of Interior. *

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
✓	<u>St Marys Entrance</u>		✓		
✓	<u>Fort Clinch</u>		✓		
✓	<u>Tiger Creek</u>		✓		
✓	<u>Tiger Island</u>		✓		
✓	<u>Little Tiger Island</u>		✓		
✓	South Point Creek	<u>St. Joseph Cr.</u>	✓	(VSB 3-5-4)	
✓	<u>Old Fernandina</u>		✓		
✓	<u>McClure Hill</u>		✓		
✓	<u>Fernandina</u>		✓		
✓	<u>Amelia River</u>		✓		
✓	<u>Bell River</u>		✓		
✓	<u>Lanceford Creek</u>		✓		
✓	<u>Soap Creek</u>		✓		
✓	<u>Amelia Island</u>		✓		
✓	<u>Jackson Creek</u>		✓		
	<u>Kingsley Creek</u>		✓		
	<u>Piney Island</u>		✓		
✓	<u>Seaboard Air Line Railway</u>		✓		
	<u>Jacksonville Road</u>		✓		
	<u>Big Piney Island</u>		✓		
	<u>Broad bent Creek</u>		✓		
	<u>Crane Island</u>		✓		

Survey No. T-5233 (pg. 2)

Chart No. _____

Under investigation. Q

(M-136)

REVIEW OF AIR PHOTO COMPILATION NO. 5233

Chief of Party: S.B. GRENELL

Compiled by: J.W. GRIFFITH, JR.

Project: F.P. 4, Ga.

Party #18

Instructions dated: Nov. 10, 1933

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64) ✓
2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g,n) *Note detail of aluminum mounted control sheets, H.A. Paton, 1934 for revision of waterfront-Fernandina* ✓
3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d,e) *No supplemental surveys* ✓
4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28) *None* ✓
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report. ✓
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c,h,i) ✓
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44) ✓

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41) ✓
9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57) ✓
Form 524 submitted by H.A. Paton, 1934
10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60) ✓
Form 567 submitted by H.A. Paton, 1934
11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c) ✓
2 Bridges
12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k) ✓
13. The geographic datum of the compilation is *N.A. 1927* and the reference station is correctly noted. ✓
14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j) ✓
15. The drafting is satisfactory and particular attention has been given the following: ✓
 1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
 2. The degrees and minutes of Latitude and Longitude are correctly marked.

3. All station points are exactly marked by fine black dots. ✓
4. Closely spaced lines are drawn sharp and clear for printing. ✓
5. Topographic symbols for similar features are of uniform weight. ✓
6. All drawing has been retouched where partially rubbed off. ✓
7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground. ✓

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time. ✓

17. Remarks:

18. Examined and approved;

Dec. 13, 1934

S. B. Howell

Chief of Party

19. Remarks after review in office:

See following pages

Reviewed in office by: *D. A. Benson B. G. Jones*

Examined and approved:

C. K. Green

Chief, Section of Field Records

L. O. Abbott

Chief, Division of Charts

B. B. Brown

Chief, Section of Field Work

G. H. de

Chief, Division of Hydrography
and Topography.

The vertical clearances of the two bridges over Kingsley Creek were given from mean low water on T-6233(a) and on H-5757, as follows:

S.A. R.R. bridge 6 Ft. M.L.W.

Highway bridge 12 Ft. M.L.W.

It is customary to give the clearance in relation to mean high water. The difference between M.H.W. and M.L.W. is 6 feet in Kingsley Creek, making the bridge clearances as follows:

S.A. R.R. bridge 0.0 Ft. M.H.W.

Highway bridge 6.0 Ft. M.H.W.

The zero clearance of the railway bridge at M.H.W. seems improbable, but as it is shown taken from two different surveys it is shown thus on the compilation.

The overlay accompanying the compilation gave the bridge clearances as follows. The lower values listed above have been used.

S.A. R.R. bridge 8 Ft. M.L.W.

Highway bridge 14 Ft. M.L.W.

REVIEW OF AIR PHOTO COMPILATION T-5233 (1934)

Scale 1:10,000.

Comparison with Graphic Control Surveys.

(a) T-6233b (August 1934) 1:10,000. 17 described stations shown on T-6233b and one Δ CRANE U. S. E. 1933 were added to the compilation in this office, plotted by *D.H. Benson*, checked by *U.R. Sobieralski*. Differences in shore line location amounting to 0.16 meters just south of the bridge on Kingsley Creek have been examined and corrected by replotting on the compilation from the photographs in this office. *see offset page*

(b) T-6233a (June 1934) 1:10,000. 15 recoverable stations shown on T-6233a were plotted on the compilation in this office, plotted by *D.H. Benson*, checked by *U.R. Sobieralski*. The following Δ stations have been destroyed since the date of the compilation and have been removed.

Fernandina Schoolhouse Belfry 1933
Fernandina Municipal Standpipe 1933

Δ FERN, St. Joseph's Academy is plotted 4 meters east of the correct position on T-6233a. There are also small errors in the plane table projection at Fernandina. The compilation has been compared with T-6233a but hold to Δ stations instead of the projection.

Detail which cannot be identified on the photographs, such as piling along the waterfront at Fernandina, has been added to the compilation from T-6233a in this office.

Numerous buildings along the waterfront at Fernandina have been added to the compilation in this office from the photographs.

(c) ^{6191b}~~T-6191b~~ (July 1934) 1:10,000. At the north end of Amelia Island the compilation shore line failed to check with T-6191b. ^{No} New field inspection was made of this shore line and the field draftsman had traced a line close to the line of vegetation, or more nearly the storm waterline. The compilation high waterline has been changed to agree with T-6191b. A line is distinguishable on the photographs which corresponds to the plane table high waterline, and the compilation has been corrected to agree with this line for some distance south of the work shown on T-6191b.

(d) T-6190a (June 1934) 1:10,000. 8 recoverable stations were added to the compilation from T-6190a, plotted by *D.H. Benson* checked by *U.R. Sobieralski*. The shore line on T-6190a and the compilation are in good agreement. A few minor changes have been made in the compilation shore line by replotting from photographs. These corrections do not exceed 15 meters and are generally due to interpretation.

(e) All detail on the above listed graphic control surveys within the area of this compilation is now shown on the compilation except the temporary topographic stations, magnetic declination, and azimuths of the following ranges which are lettered on T-6190a. Tiger Island Range, lettered on T-6190a as $260^{\circ}37'$ from north. No indication is made as to how this azimuth was determined. The range has been located by triangulation but the azimuth has not been computed in making this review.

Comparison with Recent Hydrographic Surveys.

(a) H-5754 (1934) 1:10,000. Two rocks and two ^{wrecks} lakes at lat. $30^{\circ}41.3'$, long. $81^{\circ}27.5'$ are plotted in a slightly different position on H-5754 than on this compilation. The compilation checks with the positions shown on T-6190a and has not been changed. Plane table stations LIT and ^{Scw} ~~Sen~~ are plotted 6 meters out of positions on H-5754. H-5754 has not been verified.

(b) H-5757 (1935) 1:10,000. No discrepancies are noted except for minor differences in shoreline amounting to not more than 10 meters and the incorrect plotting of several topographic stations on H-5757, the errors in which do not exceed 5 meters.

(c) H-5690 (1934) 1:10,000. No discrepancies.

Comparison with Old Surveys.

(a) T-613 (1857) 1:10,000. There have been many large changes in topography in the area common to both T-613 and the compilation. The largest change has been the building out of the northeast shore of Amelia Island which has built up eastward about 750 meters at lat. $30^{\circ}41.5'$. At lat. $30^{\circ}40'$ Amelia Island has eroded 240 meters, the point formerly present having been washed away; at lat. $30^{\circ}42.3'$, long. $81^{\circ}25.6'$ Amelia Island has eroded southward 210 meters. There has been some erosion of the same island to the westward of Fort Clinch, the amount being from 30 to 110 meters but which has been retarded by the stone jetties built around the point for the purpose.

The waterfront of Fernandina has been greatly developed since 1857 and is substantially along the same line as formerly.

Tiger Island has eroded at lat. $30^{\circ}42.3'$, long. $81^{\circ}27.9'$ up to 160 meters and the course of South Point Creek has changed to some extent.

Roads and railroads have been relocated on Amelia Island.

There is a break developed between Lanceford Creek and Bell River at lat. $30^{\circ}40.4'$, long. $81^{\circ}27.8'$ not present formerly, with some erosion of the banks of both streams near the break.

28.8'

30
Tiger Creek is now about twice its former width and the marsh at lat. $30^{\circ}42'$, long. $81^{\circ}24'$ is now more broken up by water areas than formerly shown.

The compilation is complete and adequate to supersede T-613 except for small hills developed on T-613 on Amelia Island.

(b) T-614 (1857) 1:10,000. Very little of T-614 falls within the area of the compilation being on the northwest corner of the sheet. Changes up to 80 meters at places in the banks of Lanceford Creek and Bell River have taken place.

The compilation is complete and adequate to supersede T-614.

(c) T-615 (1857) 1:10,000. The most important changes which have taken place since 1857 in the area covered by T-615 are the large wharf at lat. $30^{\circ}40'$, long. $81^{\circ}27.2'$ which has been built since 1857 and the changes in Kingsley Creek where a new cut was made to straighten the creek. There have been other changes in the banks of streams. The curve in the railroad at lat. $30^{\circ}38'$, long. $81^{\circ}26.6'$ has been relocated. Neither the old causeway ~~or~~ the new road along the railroad was present in 1857.

The compilation is complete and adequate to supersede T-615.

(d) T-1232a (1871) 1:20,000. The Atlantic coast of Amelia Island has built outward up to 80 meters south of lat. $30^{\circ}38'$ and has eroded up to 180 meters north of lat. $30^{\circ}39'$. The locations of the roads has been changed to some extent. The railroad location is substantially the same as formerly. Kingsley Creek has been changed by a cut across an "ox bow" and there have been other changes in stream banks as could be expected.

The compilation is adequate to supersede T-1232a except for the bluff line running up the west part of Amelia Island and around some of the higher ground at other parts of the sheet.

(e) T-3410 (1910) 1:20,000. The Atlantic shore line from the south jetty at St. Marys Entrance south to lat. $30^{\circ}40.5'$ has built outward up to 240 meters. From there on south to lat. $30^{\circ}39'$ the High Water Line is within 15 meters of the line shown on the compilation.

The northern shore line of the island from Fort Clinch to the breakwater has eroded about 20 meters since 1910.

The compilation is complete and adequate to supersede T-3410,
except for the eastern part of the south jetty at St. Marys Entrance.

(f) T-4068 (1924) 1:20,000. Only the Atlantic shore line of Amelia Island from lat. $30^{\circ}36'$ to $30^{\circ}40'$ is shown on T-4068 within the area of T-5233. This strip of high water line is about 40 meters east of the ~~line~~^{line} shown on the compilation for its entire length. However, the line shown on the compilation is the storm waterline, rather than the true high water line, so that it is probable that the true high water line has not changed more than 20 meters.

The compilation is adequate to supersede T-4068.

(g) T-4095 (1924) 1:20,000. The north shore of Amelia Island has built out about 20 meters since 1924 reversing the tendency for erosion apparent from the other comparisons above.

The shore line south of the south breakwater is building out and north below the jetty but from lat. $30^{\circ}41'$ the shoreline shown on the compilation is about 40 meters further west than on T-4095, except at the beach colony where it is the same as formerly. The waterfront of Fernandina is substantially the same as it was in 1924.

There has not been much change in the other streams shown on the two surveys except that the break at lat. $30^{\circ}40.4'$, long. $81^{\circ}27.8'$ has grown much larger and as reported by the hydrographic party for H-5754 now is the principle route of the current from Lanceford Creek into Amelia River.

The compilation is complete and adequate to supersede T-4095 except for the extension of the south jetty at St. Marys Entrance, which is not shown in its entirety on T-5233.

Comparison with Charts 1243, 577, 453, 1242, 3257.

Changes to be made on the charts are discussed under comparisons with previous surveys.

General.

The streams through the marshes on this compilation were not shown completely, the high waterline being shown in a very broken style which made the map look incomplete. Considerable time was spent in this office tracing out the streams to complete the drawing.

P. H. Benson

B. G. Jones