

5120

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

APR 15 1935

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

JAN 22 1936

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic } Sheet No. 5120
~~Hydrographic~~

State Georgia

LOCALITY

~~Georgia East Coast~~

Sapelo Island

1935

CHIEF OF PARTY

S. B. Grenell

U. S. GOVERNMENT PRINTING OFFICE: 1934

5120

Applied to Ch. 840 Dec. 1935 W.A.B.

Applied to new compilation drawing of chart 574 - Oct. 24, 1936 - J.T.W.

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. 5120

State. Georgia

General locality ~~Georgia East Coast~~

Locality Sapelo Island

Scale 1:20,000 photographs: 9-20-33
Date of ~~survey~~, 19...

~~xxxxx~~ Air Photo Compilation Party No. 18

Reviewed and recommended for approval:

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

Photographs plotted by: R. D. Cross

~~xxxxxx~~

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 photographs Nos.: M-66 19 to 34;
66 to 80.

--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. 5120

M-66 19 34
PHOTO NO M-66 66 to PHOTO NO. 80

BY D.B. Gaines START FINISH

ROUGH RADIAL PLOT	<u>D. B. Gaines</u>	<u>12-1-33</u>	<u>12-6-33</u>
SCALE FACTOR (.915)	<u>J. C. Harmon</u>		<u>12-4-33</u>
SCALE FACTOR CHECKED	<u>S. B. Grenell</u>		<u>12-4-33</u>
PROJECTION	<u>J. C. Partington</u>		<u>12-9-33</u>
PROJECTION CHECKED	<u>A.A. Futral</u>		<u>12-9-33</u>
CONTROL PLOTTED	<u>R. D. Cross</u>	<u>12-1-33</u>	<u>12-2-33</u>
CONTROL CHECKED	<u>A. A. Futral</u>		<u>12-12-33</u>
TOPOGRAPHY TRANSFERRED			
TOPOGRAPHY CHECKED			
SMOOTH RADIAL LINE PLOT	<u>R. D. Cross</u>		<u>12-18-33</u>
RADIAL LINE PLOT CHECKED	<u>S. B. Grenell</u>		<u>12-18-33</u>
DETAIL INKED	<u>J. W. Griffith, Jr.</u>	<u>12-23-33</u>	<u>2-24-34</u>
AREA DETAIL INKED	<u>100:1</u>	Square Statute Miles	
LENGTH OF SHORE LINE OVER 200m.	<u>115.8</u>	Statute Miles	
LENGTH OF SHORE LINE UNDER 200m.	<u>147.7</u>	Statute Miles	
GENERAL LOCATION	<u>Georgia East Coast</u>		
LOCATION	<u>Sapelo Island</u>		
DATUM	<u>Neck, 1916</u>	<u>31-27-45.862 (1412.5)</u>	
STATION	<u>Sapelo Island Light, 1932</u>	<u>31-23-32.721 (1007.7M)</u>	
DATUM	<u>N. A. 1927</u>	<u>81-17-02.661 (70.3M)</u>	
	<u>Adjusted</u>	<u>81-13-15.389 (406.3)</u>	

INSPECTION REPORT
for
COMPILATION No. 5120
Scale: 1:20,000

REFERENCE:

In reviewing this sheet in the Washington office reference should be made to the General Report for 5-Lens Compilations filed with compilation 5114.

SHEET LAYOUT:

When the writer took over the compilation party in December, 1933, from M. H. Reese, the radial plots had been run and tracing begun on five compilations Nos. 5113, 5115, 5117, 5120 and 5123. About the time these first compilations were nearing completion a shipment of single lens photographs of the Inside Route were received with instructions to give this section preference in compiling. Consequently work on these 5-lens sheets was dropped until the single lens compilations were completed.

The single lens compilations cover a narrow strip paralleling the coast and passing through the five compilations mentioned above. This constituted a duplication of a portion of the area on each five lens compilation which has been blocked out in red on the attached overlay.

A careful comparison was made of the area duplicated and it was found that the 5-lens sheets were far less complete in detail, due principally to the fact that the 5-lens photographs were not very clear. Also these compilations were the first attempted on this party and the draftsmen unskilled in tracing minute detail. Also the ink was of inferior quality and the celluloid had a high shrinkage factor, all of which tended to lower the grade of the work.

Compilations 5113 and 5123 were so far below the standard of work that we are now turning out that it was decided to scrap the old compilations. Each of these two sheets were compiled again, showing only the area not covered by single lens.

Compilations 5115 - 17 - 20 have been worked over and checked against the photostat reductions of the single lens compilations and are being forwarded as originally compiled. It is realized that the compilations are not up to present standards as to fineness of drafting but it is believed that they are accurate as to detail shown.

The ink is badly faded in spots and the projections are distorted considerably.* The former is due to the original ink used which was poor in quality and the latter to the poor grade of celluloid received in the first shipment. If these three compilations (5115-17-20) are too badly faded to reproduce they can be recompiled by returning the original compilations with photographs and prints of adjoining compilations to this office.

CONTROL:

This compilation was controlled entirely by triangulation from the following sources: First order arc by G. D. Meaney, 1932 and coordinating scheme of C. M. Durgin, 1933. There was ample control and no difficulty was encountered in running the plot

** The inaccuracies in projection result from celluloid distortion and drafting and while not large enough to seriously affect the value of the compilation for charting they are large enough to affect its value as a base for resurveys. SDA 12/19/35*

COMPARISON WITH CONTEMPORARY SURVEYS:

The area between the red lines has been covered by single lens compilations and checked against the smooth hydrographic sheets of C. A. Egner. The balance of this compilation has been checked against the same smooth hydrographic sheets and against such rodded detail as appears on the aluminum mounted control sheets. Lieut. Egner's control sheets were not completed when checked in this office so there may be sections of shoreline which have not been compared.

LANDMARKS AND COAST PILOT NOTES:

The above have been submitted by C. A. Egner, 1934.

NAMES:

All names appearing on the overlay were taken from current issues of charts and U. S. Army Tactical Maps.

Respectfully submitted,


S. B. Grenell

REPORT OF COMPILATION:

RADIAL LINE PLOT:

This sheet was compiled by the standard radial line plot method. There were no difficulties encountered in making the radial plot for this compilation. Adjoining 1:20,000 scale sheets have the same scale factor so the plot was continuous making the junctions a simple process.

ADJUSTMENT OF PHOTOGRAPHS:

The photographs contained very little tilt and the radial points were well selected and frequent so the adjustments through this sheet were rather easy. It was not necessary to establish additional points on this sheet and no unusual difficulties were encountered.

INTERPRETATION:

The photographs were fairly clear causing very little trouble in the interpretation of detail. The stereoscope was used to help pick up the detail in the areas containing features with elevation and also to help trace out roads running through heavily wooded areas. Standard topographic symbols were used to indicate the detail on this sheet. There is quite an extensive drainage system on Sapelo Island which was indicated with the standard ditch symbol. The ponds in the vicinity of Lat. 31°-30.5'; Long. 81°-14.2 are duck ponds. At Lat. 31°-31.5, Long 81°-13.5 the mud and grass flats outside of the H. W. L. have been outlined with sand dots.

COMPARISONS WITH CONTEMPORARY SURVEYS:

The junctions with the adjoining 1:10,000 and 1:20,000 scale sheets compiled in this office are complete and satisfactory. The photographs and field notations were the only sources of information used on this sheet.

COMPARISONS WITH OTHER SURVEYS:

For the most part, the detail on this sheet agrees with the charted detail. In several cases the courses of streams or the shape and size of small marsh islands have changed. There is no detail 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 possible error of not more than 10 meters; less well defined detail with an error of not more than 10 meters.

PHOTOGRAPHS:

No.	to	No.	Date	Time	Stage of Tide
M-66	19	34	9-20-33	10:00 AM	7/8
M-66	66	80	9-20-33	11:00 AM	5/8

Approved:

S. B. Grenell

J. W. Griffith, Jr.
Draftsman

Had to be revised

A few islands to be removed and a few other changes along coast 4 to 8 10 to 16

Review of Air Photo Compilation T 5120

1. Comparison with Graphic Control Surveys

(a) T 6159 (1934), 1:10,000

Covers the north shore line of Sapelo Island and Blackbeard Island on this compilation.

Comparison of the high water lines showed a disagreement of 2 mm. at lat. $31^{\circ} 31.6'$, long. $81^{\circ} 13.1'$. A careful check with the photographs showed that the compilation high water line had not been taken along the edge of marsh. After this correction was made in this office the compilation high water line checked closely with the high water line on T 6159 a. Described topographic station Sid plotted correctly from the high water line also.

The above correction necessitated further change in the compilation high water line to westward for approximately $1/2$ mile. The change amounted to as much as $7 \frac{1}{2}$ mm. (on scale of compilation) in places. *The large correction of 7 1/2 mm is for a short distance only and is due largely to interpretation rather than to error in the plot.*

A difference in high water line of 0 to $1 \frac{1}{2}$ mm. (on scale of compilation) is noticed at lat. $31^{\circ} 31.4'$, long. $81^{\circ} 13'$ but a careful check of the compilation high water line failed to show any error and no change has been made at this point in this office. The high water line on T 6159 a must be rodded incorrectly since the high water line at this point is well defined on the photographs.

All detail shown on graphic control survey T 6159 a, covered by this compilation, is shown on the compilation except temporary graphic control stations and the magnetic declination.

(b) T 6196 b (1934), 1:10,000

Covers only the southern tip of Sapelo Island on this compilation.

No shore line is shown on T 6159 b in this area.

The high water line at the southern tip of Sapelo Island has been moved southwest 65 meters in this office and now agrees with description on Form 524 for described station Abu. *This is on a sand beach and the compilation was made with no field inspection. The change of 65 meters is for a short distance and the shoreline as now shown is a better interpretation of the photos.*

2. Comparison with Contemporary Hydrographic Surveys

(a) H 5583 (1934), 1:10,000

Covers Sapelo Sound north of Sapelo Island and Blackbeard Island.

Comparison showed no differences between the high water line and the soundings. In some places the high water line has been changed on the compilation in this office and this has been referred to the verifying unit.

The two old dock ruins and rock pile shown on H 5583 at lat. $31^{\circ} 32'$, long. $81^{\circ} 12.3'$ and lat. $31^{\circ} 32.2'$, long. $81^{\circ} 12.4'$ do not show plainly enough on the photographs to be shown on the compilation. ~~but~~ their position ~~must~~ ^{on # 5583} be taken from hydrographic survey H 5583.

The single pile ^{on # 5583} at lat. $31^{\circ} 32.2'$, long. $81^{\circ} 12.4'$ does not show on the photographs and is not shown on the compilation.

(b) H 5575 (1934), 1:10,000

Covers all of Blackbeard Creek. No differences were noted between the high water line and the soundings. ?

A dock shown on the boat sheet at lat. $31^{\circ} 30.7'$, long. $81^{\circ} 13.8'$ has been added to the compilation from the photographs.

A row of piling shown on boat sheet across the mouth of the unnamed creek at lat. $31^{\circ} 29.7'$, long. $81^{\circ} 13.1'$ and a tower at lat. $31^{\circ} 31.3'$ ^{29.3'} long. $81^{\circ} 12.4'$ do not show on the photographs and have not been shown on the compilation.

(c) H 5632 (1934), 1:10,000

Covers the southern point of Sapelo Island on this compilation.

No disagreement was found between the high water line and the soundings.

The high water line at the southern tip of Sapelo Island has been changed in this office as discussed in this report under T 6196 b. This change has been referred to the verifying unit.

3. Comparison with Old Surveys

(a) T 1080 (1868), 1:20,000

Covers all of Sapelo Island, Blackbeard Island, Blackbeard Creek shown on this compilation below lat. $31^{\circ} 30'$.

Comparison shows a number of changes along the coast and in Blackbeard Creek. The mouth of Blackbeard Creek has shifted about one mile north. Sand bars and small islands now show where the southern point of Blackbeard Island formerly was.

Islands in Blackbeard Creek at lat. $31^{\circ} 27.4'$, long. $81^{\circ} 13.5'$; lat. $31^{\circ} 28.1'$, long. $81^{\circ} 13.7'$; lat. $31^{\circ} 28.9'$, long. $81^{\circ} 13.1'$; and lat. $31^{\circ} 29.1'$, long. $81^{\circ} 12.7'$ do not show on the photographs and have not been shown on the compilation.

An inlet ~~not~~ shown on T 1080 at lat. $31^{\circ} 24.5'$, long. $81^{\circ} 15.5'$ is visible on the photographs and is shown on the compilation.

The outer coast line has shifted little with the exception of the above changes.

Many new roads and trails are visible on the photographs and are shown on the compilation.

The compilation is complete and adequate to supersede T 1080.

(b) T 3780 (1919), 1:20,000 and T 4122 (1924), 1:20,000

Cover Sapelo Island below lat. $31^{\circ} 25'$ on this compilation.

The point at lat. $31^{\circ} 25.1'$, long. $81^{\circ} 14.9'$ on this compilation extends about 200 meters farther south on T 3780 and about 600 meters on T 4122.

The compilation is complete and adequate to supersede T 3780 and T 4122.

(c) T 3411 (1913), 1:20,000

Shows only the high water line of Blackbeard Island north of lat. $31^{\circ} 31'$.

The two docks, at Quarantine Station and Quarantine Stack, have been discussed under H 5583.

The compilation is complete and adequate to supersede T 3411.

(d) T 4121 (1924-25), 1:20,000

Covers the northern shoreline of Sapelo Island and the outer coast as far south as lat. $31^{\circ} 25'$.

The shell reef at lat. $31^{\circ} 32'$, long. $81^{\circ} 12.3'$ (on T 4121, outside of the high water line) does not show on the photographs and is not shown on this compilation.

The compilation is complete and adequate to supersede T 4121.

(e) T 678 (1857), 1:10,000

Covers part of Sapelo Island shown on this compilation.

The compilation is complete and adequate to supersede T 678.

4. Comparison with charts Nos. 1241 and 574:

All differences have been discussed under comparison with old surveys.

No old landmarks fall within the area of this compilation and no new landmarks were submitted with graphic control surveys for this area.

The compilation is complete and adequate for charting purposes.

MD Crook 9/7/35
B. Jones

REVIEW OF AIR PHOTO COMPILATION NO. 5120

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)
Positions of lights + beacons by C.A. Egner, 1934
- ✓ 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) None
- ✓ 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 by C.A. Egner, 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 by C.A. Egner, 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)

None

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. *Adjusted*

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.

- ✓ 13. All station points are exactly marked by fine black dots. ✓
- ✓ 14. Closely spaced lines are drawn sharp and clear for printing. ✓
- ✓ 15. Topographic symbols for similar features are of uniform weight. ✓
- ✓ 16. All drawing has been retouched where partially rubbed off. ✓
- ✓ 17. 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; April 11, 1935

S. B. Schell
Chief of Party

19. Remarks after review in office:

See preceding pages 1 to 3 for detailed report on office verification

Reviewed in office by:

M. L. Brook Aug. 25, 1935
B. G. Jones

Examined and approved:

C. H. Green
Chief, Section of Field Records
L. O. Colburn
Chief, Division of Charts

F. B. Borden
Chief, Section of Field Work
G. Wade
Chief, Division of Hydrography and Topography.