

5137

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

FEB 15 1935

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAR 2 1936

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

DESCRIPTIVE REPORT

Topographic Sheet No. 5137
~~Hydrographic~~

State South Carolina & Georgia

LOCALITY
Savannah River
South Carolina & Georgia

Savannah River - above City of

Savannah

Isla Island

1935

CHIEF OF PARTY

S. B. GRANELL

U. S. GOVERNMENT PRINTING OFFICE: 1934

5137

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. 5137

State South Carolina & Georgia

General locality Savannah River
South Carolina & Georgia

Locality Isla Island
Savannah River - above City of Savannah

Scale 1:20,000 Date of Photographs: 10-10-33
Date of survey: Nov. 10, 1933

Vessel Aerial photo compilation party #18

Reviewed and recommended for approval:

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

Photographs plotted by F. B. Hickman

Surveyed by F. B. Hickman

Inked by C. E. Helfrich

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.: 1055 to 1080;

995 to 1018.

...

--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. 5137

PHOTO NO. 1055 to PHOTO NO. 1080
995 1018

BY	START	FINISH
ROUGH RADIAL PLOT <u>B. B. Lewis</u>		<u>7-10-34</u>
SCALE FACTOR (.935) <u>S. B. Grenell & BBL</u>		<u>7-10-34</u>
SCALE FACTOR CHECKED <u>S. B. Grenell</u>		
PROJECTION <u>A. M. Gruber</u>	<u>7-12-34</u>	<u>7-13-34</u>
PROJECTION CHECKED <u>W. R. Taylor</u>	<u>7-13-34</u>	<u>7-13-34</u>
CONTROL PLOTTED <u>A. A. Futral</u>	<u>7-13-34</u>	<u>7-13-34</u>
CONTROL CHECKED <u>F. B. Hickman</u>	<u>7-14-34</u>	<u>7-14-34</u>
TOPOGRAPHY TRANSFERRED		
TOPOGRAPHY CHECKED		
SMOOTH RADIAL LINE PLOT <u>F. B. Hickman</u>	<u>7-15-34</u>	<u>10-9-34</u>
RADIAL LINE PLOT CHECKED <u>S. B. Grenell</u>		<u>10-9-34</u>
DETAIL INKED <u>C. E. Helfrich</u>	<u>10-12-34</u>	<u>11-30-34</u>
AREA DETAIL INKED <u>138.0</u>	Square Statute Miles	
LENGTH OF SHORE LINE OVER 200m. <u>14.1</u>	Statute Miles	
LENGTH OF SHORE LINE UNDER 200m. <u>50.5</u>	Statute Miles	
GENERAL LOCATION <u>South Carolina & Georgia Savannah River</u>		
LOCATION <u>Savannah River - above City of Savannah Isla Island</u>		
DATUM STATION <u>Hardee 1932</u>	LATITUDE <u>32°-19'-39.888" (1228.6m)</u>	} Adjusted
DATUM <u>N. A. 1927</u>	LONGITUDE <u>81°-04'-06.775 (177.2m)</u>	

INSPECTION REPORT

COMPILATION No. 5137
Scale 1:20,000

REFERENCE:-

In reviewing this sheet in the Washington office reference should be made to the General Report forwarded with compilation No. 5111.

GENERAL INFORMATION:-

The area of principal importance on this compilation is the valley of the Savannah River extending north westward from the highway bridge above the city to the limit of the compilation. Lieut. C. A. Egner ran fixed control hydrography as far up the river as the highway bridges and sounded above the highway to the A. C. L. RR. crossing using compiled shoreline for control of the smaller branches.

This section has an important feature typical of the Savannah River valley, namely, the well preserved canal and ditch system of the once extensive and now abandoned rice plantations. These canals and ditches are very prominent and have been carefully inked in in actual position. Certain sections close to the river have reverted to marsh but the main portion is still protected from tidal water and supports a heavy growth of coarse, tall trees.

The northern and eastern portion of the compilation covers a general area of pine flats and surveys. A great deal of the pine-land has been either logged off or burned over so the bulk of timber remaining is cypress, gum and other deciduous trees which grow in the swamps.

CONTROL:-

An attempt was made to run through the radial plot on the existing control, but, due to the fact that the stations were so widely spaced as to give inadequate control and that some of these, falling in wooded areas, were difficult to "spot", the plot was abandoned temporarily. A traverse party was organized by the writer and a closed traverse was run with theodolite and chain along the A.C.L. RR and U. S. Highway #17 from ~~first~~ first order station SWITZERLAND, 1932 to second order station HEYWARD 2, 1934 established by C. A. Egner. This traverse had a length of 20.49 stat. miles and closed with a computed error of 3.6 meters. 6 D and R pointings were made with a 7" theodolite and all distances were double chained.

This traverse together with a few first order stations and the second order established along the Savannah River by C. A. Egner furnished the necessary control and the radial plot was run in and adjusted.

COMPARISON WITH CONTEMPORARY SURVEYS:-

Lieutenant Egner ran sounding lines on fixed control along the main channel of the Savannah River between the highway and the A. C. L. R.R. bridges. This hydrography checked the shoreline. All junctions are complete with adjoining compilations.

LANDMARKS FOR CHARTS:-

Form 567 has been submitted by C.A. Egner, 1934


COAST PILOT NOTES:-

Notes have been submitted by C. A. Egner, 1934.

NAMES ON OVERLAY SHEET:-

All names appearing on this compilation were taken from current issues of charts and from U. S. Army Tactical Maps and U. S. Geological Survey Maps.

Respectfully submitted,


S. B. GRENELL
Chief of Party #18

REPORT OF COMPILATION:-

RADIAL LINE PLOT:

The standard radial line plot method was used in compiling this sheet.

After two unsuccessful attempts the radial plot was carried through holding the control. The cause of difficulty was due to discrepancy in picking the control on the photographs.

Scale factor of this sheet was .935 (1:20,000) Adjoining compilations, T.5138, T5134 and T.5136 had same scale factor. Adjoining compilation T.5141 (1:10,000) had scale factor of .940.

ADJUSTMENT OF PHOTOGRAPHS:

In majority of photographs a small amount of tilt was found. Photograph 997 was badly tilted and was not used in either the tracing off detail or radial plot.

Radial points were well selected and spaced.

In area covered by overlap of the two flights additional points were ~~selected~~ cut in by use of interlacing method.

The difference in scale of the two flights was the cause of most of the difficulty experienced in the tracing of the detail. In laying out the projection an average scale of the two flights was used. Thus making adjustment necessary.

INTERPRETATION:

As a whole photographs were moderately clear and detail easily interpreted.

Water-Sun spots and heavily wooded areas on Savannah River made interpretation of high water line difficult.

Heavily wooded swamp areas were indicated by broken marsh lines combined with cypress and gum symbols. Abandoned rice fields were indicated by a system of ditches where ever it was possible. In some case only the main ditches were shown with a broken marsh and grass symbol. Although these rice fields have been abandoned for some time the ditches and canals are still quite distinct, and in some of the larger canals boats drawing three feet of water use them for short cuts. The fields themselves have a heavy growth of marsh grass.

COMPARISON WITH CONTEMPORARY SURVEYS:

All junctions with adjoining sheets have been made.

The shore line was checked by the fixed positions of hydrographic party of C. A. Egner, 1934.

COMPARISON WITH CONTEMPORARY SURVEYS:

COMPARISONS WITH OTHER SURVEYS:

This compilation is in agreement with the previous charted detail.

ACCURACY AND COMPLETENESS:

Probable error in well defined detail four meters. Probable error in less well defined detail, ten meters.

PHOTOGRAPHS:

No.	to	No.	Time	Date	Stage of Tide
1055		1080	11:30AM	10-10-33	5/6
995		1018	10:45AM	10-10-33	4/6

C. E. Helfrich
C. E. Helfrich,
Draftsman

Approved:

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

REVIEW OF AIR PHOTO COMPILATION NO. 5137 (1934)

Scale 1:20,000

1. Comparison with graphic control survey T-6156b (1934)(1:10,000):

T-6156b covers the Savannah River up to latitude $32^{\circ} 14'$. Comparison showed discrepancies in location of HWL between T-6156b and the compilation amounting to from $3/10$ to $1-1/2$ millimeters on the scale of the compilation. Also a number of discrepancies between the descriptions on form 524, submitted with T-6156b and the HWL on compilation were found. In many places the compilation HWL did not agree with non-recoverable stations on T-6156b.

The photo plot was carefully examined and numerous additional radial points located and the compilation corrected where necessary, in this office. The compilation is now in agreement with graphic control survey T-6156b and with the descriptions on form 524 except for a few minor differences of less than $1/2$ millimeter on the scale of the compilation and are accounted for largely as differences in interpretation.

Recoverable \odot stations shown on this compilation were transferred from T-6156b in this office by *Miller* and checked by *L. C. Lande* and descriptions on form 524 are filed under the graphic control survey T-6156b.

All detail on the graphic control survey and information of importance in the Descriptive Report are now shown on the compilation except for temporary graphic control stations, the magnetic declination, and \odot Olive (d). \odot Olive according to a recent letter from C. A. Egner was a banner in a tree and is not recoverable. The card description has been destroyed.

2. Comparison with contemporary hydrographic survey No. H-5584 (1934)(1:10,000).

Comparison showed discrepancies in HWL along the Savannah River in a number of places. The compilation HWL as now revised and as discussed in the preceding paragraphs agrees with the soundings on H-5584 and with special information furnished by the field party. The revised shoreline has been furnished the reviewer on #5584.

A row of piling shown at latitude $32^{\circ} 09.9'$, longitude $81^{\circ} 07.7'$, at latitude $32^{\circ} 10.2'$, longitude $81^{\circ} 08.2'$, and at latitude $32^{\circ} 11.3'$, longitude $81^{\circ} 08.3'$ on H-5584 cannot be spotted on photos and have not been shown on compilation.

3. Comparison with previous topographic surveys:

There were no previous topographic surveys of this Bureau covering this area.

4. Comparison with Progressive Military Maps:

Some of the minor streams and roads do not appear on photos and have not been shown on compilation. Two islands on the Savannah Quadrangle at latitude $32^{\circ} 10.4'$, longitude $81^{\circ} 08.2'$, and latitude $32^{\circ} 11.8'$, longitude $81^{\circ} 09.5'$ do not show on photos and have not been shown on compilation. The freshet bank south of Vanezobre Creek does not show on photos and has not been shown on compilation. The Old Log Train Road Southeast of Hardeville is no longer in existence but the old road bed has been shown with a double row of dots.

5. Comparison with charts:

No charts cover the area of this compilation. The compilation is complete and adequate for charting purposes.

One landmark has been recommended by the graphic control survey and is shown on this compilation: \odot Center of bridge light.

6. Bridge data:

No mention was made in the Descriptive Report about the bridge clearances given on overlay sheet.

The clearance for the highway bridge at latitude $32^{\circ} 09.9'$, longitude $81^{\circ} 09.2'$ over Front River was given as 14 feet. The U. S. Engineers list of bridges, 1927 gives the L.W. clearance as 14 feet and the HW clearance as 8 feet for this bridge. The HW clearance of 8 feet has been used.

The fixed spans over Middle river and Little Back river (due east from the swing span listed above) are not in the U. S. Engineers List of Bridges, 1927. Assuming that the figures given on overlay were LW clearances, the same as for the swing span over Front River, the difference of 6 feet between HW and LW clearance has been subtracted from the figures given on overlay giving a HW clearance of 5 feet for the Middle River span and 8 feet for the Little Back river span.

It is not known where the field draftsman got the clearance value of 12 feet 4 inches given on overlay for the A.C.L.R.R. swing span over the Savannah River at latitude $32^{\circ} 13.9'$, longitude $81^{\circ} 08.7'$. The U.S. Engineers List of Bridges, 1927 list a HW clearance of 8.7 feet for this bridge which has been used.

7. Projection:

The compilation projection has been checked in this office and no error noted more than $2/10$ of a millimeter in the spacing of lines. The projection is laid out diagonally and is not directly perpendicular. The projection diagonals across 6 and 8 minute blocks do not check by $5/10$ to $7/10$ millimeters. The center parallel is $6/10$ millimeters high at 6 minutes east of the center meridian and $6/10$ millimeters low 6 minutes west of the center meridian (allowing for curvature). The lack of perpendicularity may be accounted for in part by a small differential change in the celluloid under

variable conditions of humidity. This same condition has been found on a number of ~~short~~ ^{sketch} projections and does not seem to be due to errors in drafting.

Remarks:

Many small wooded areas left blank by the field draftsman were filled in to eliminate confusion with cultivated fields. Even some of the larger wooded areas left blank and labeled heavily wooded were found to be sparsely wooded with grass patches here and there. These have all been filled in with symbols. Many of the open fields showed no signs of being under cultivation and grass symbols and bushes have been shown in these places.

A ditch has been added at latitude $32^{\circ} 13.1'$, longitude $81^{\circ} 12'$. Length about $3/4$ of a mile.

Unimproved roads and trails have been added in many places over the entire compilation.

An island about 150 meters south of the ACL R.R. bridge (station Isle is located on it) was added to compilation in this office.

A row of piling was added to compilation just north of the U. S. Highway Bridge over Front River.

The above additions to compilation were plainly visible on photos and ~~were made~~ ^{were made} added to compilation in the Washington office.

Little Back River, Middle River, Union Creek, and the Savannah River north of the ACL R.R. bridge were ~~exaggerated~~ ^{somewhat} in width in a number of places. In some places this was due to the dense trees lining the banks which made it hard to correctly locate the HWL on the photos. The hydrography ~~fall in line~~ ^{and shoreline are in agreement} where ever soundings were taken in the above mentioned streams and since no topographic surveys were made in these areas, no changes were made. It was not thought important enough to change the HWL in these small streams.

No mention was made in the descriptive report about the clearing running across the northwest corner of the sheet. It has been marked transmission line clearing to agree with a similar clearing running south of Savannah.

Triangulation stations Arland, 1934; Rabi, 1934; Draw Span, Center Line, 1934; Cary, 1934; Rene, 1934; and Chimney with Crack, 1934 have been added to compilation by the reviewer and checked by L. C. Lande.

L. C. Lande

Approved
K.T. Adams

W. D. Crook
Reviewer
B. G. Jones

Survey No. T-5137

GEOGRAPHIC NAMES

Chart No. P.M.M. QuadsDate. 3-30-35

Diagram No. _____

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

Ø, Not Approved by the Division of Geographic Names, Department of Interior.

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

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	Drakies Point	None	P.M.M. Quad.	Savannah	
	Drakies Bluff	"	"	"	"
	Drakies Ld'g	"	"	"	"
	Drakies Cut	"	"	"	"
	Onslow Island	"	"	"	"
	St. Augustine Creek	"	"	"	"
	Mulberry Grove	"	"	"	"
	Untermyer Landing	"	"	"	"
	Charleston-Augusta Rd.	"	"	"	"
	Charleston-Stage Rd.	"	"	"	"
	Scrivens-Ferry Rd.	"	"	"	"
	Hardeville	"	"	" Hardeville	
	Southern Ry.	"	"	"	"
	Narrow Gauge R.R.	"	"	"	"
	Purrysburg Rd.	"	"	"	"
	Purrysburg	"	"	"	"
	Purrysburg Sta.	"	"	"	"
	Meyer Lake	"	"	"	"
	Wood-Landing	"	"	"	"
	Lady Washington Pt.	"	"	"	"
	Big-Patten-Ld'g	"	"	"	"
	Glovers Pt.	"	"	"	"
	Abandoned Tram Road	"	"	"	"

Survey No. T-5137

GEOGRAPHIC NAMES

Date. 3-30-35Chart No. P.M.M. Quads.

Diagram No. _____

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

C, Not Approved by the Division of Geographic Names, Department of Interior.

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

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	Pritchardville Sta.	None	P.M.M. Quad.	Bluffton	
	Great Swamp	"	"	" Savannah	
	Seaboard Air Line Ry.	"	"	"	"
	New River	"	"	"	"
	Savannah River	"	"	"	"
	Atlantic Coast Line RR	"	"	"	"
		"			
	Dead Mans Point	"	"	"	"
	Front River	"	"	"	"
	Middle River	"	"	"	"
	Little Back River	"	"	"	"
	Vanezobre Creek	"	"	"	"
	Union Creek	"	"	"	"
	Knoxboro creek	"	"	"	"
	Black Creek	"	"	"	"
	Isla Island	"	"	"	"
	Argyle Island	"	"	"	"
	Lucknow Canal	"	"	"	"
	Dixie Highway	"	"	"	"
	Rice Hope	"	"	"	"

Survey No. T-5137

Chart No. P.M.M. Quads

Diagram No. _____

Date. 3-30-35

GEOGRAPHIC NAMES

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

~~C~~, Not Approved by the Division of Geographic Names, Department of Interior.

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

[illegible]

REVIEW OF AIR PHOTO COMPILATION NO. 5137

Chief of Party: S. B. GRENNELL Compiled by: C. E. Helprich
 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) *no charts*
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) *No changes*
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) *Traverse - see descriptive report.*
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. *See Review*
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) ✓
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 *very light* 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. ✓

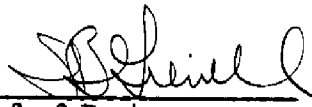
- 3. ✓ All station points are exactly marked by fine black dots. ✓
- 4. ✓ Closely spaced lines are drawn sharp and clear for printing. ✓
- 5. ✓ Topographic symbols for similar features are of uniform weight. ✓
- 6. ✓ All drawing has been retouched where partially rubbed off. ✓
- 7. ✓ Buildings are drawn 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.


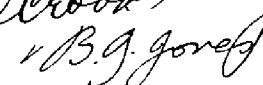
17. Remarks:

18. Examined and approved; 2-8-35


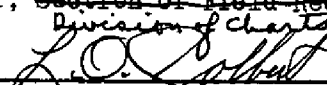

Chief of Party

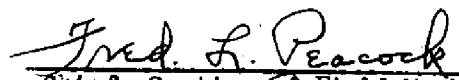
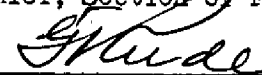
19. Remarks after review in office:

Reviewed in office by:

 June 24, 1935


Examined and approved:


Asst Chief, Section of Field Records
Division of Charts

Chief, Division of Charts


Chief, Section of Field Work

Chief, Division of Hydrography
and Topography.