

5211

U.S. COAST & GEODETIC SURVEY
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U.S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: South Carolina

DESCRIPTIVE REPORT

Photo
Topographic

Sheet No. 5211

LOCALITY

of South Carolina,

Vicinity of Port Royal Sound

Skull Creek

1934

CHIEF OF PARTY

Lieut. (j. g.) S. B. Grenell

U. S. GOVERNMENT PRINTING OFFICE: 1928

5211

Applied to Cht. 571 Nov., 1935 K. Reynolds

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. 5211

5211

State South Carolina

General locality Vicinity of Port Royal Sound

Locality Skull Creek

Scale 1:10,000 Date of Photographs: 12/6/33
Date of ~~Survey~~ Comp. March, 1934

Vessel

Reviewed and recommended for approval:

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

Photographs plotted by: F. B. Hickman
~~Surveyed by~~

Inked by B. B. Lewis, Jr.

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated November 10, 1933

Remarks: Compilation of aerial photographs Nos. (807) M126 to M133
Also M149

NOTES ON 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 personnel 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. 5211

PHOTO NO. (807)M126 TO PHOTO NO. M133 - Also 149

BY START FINISH

ROUGH RADIAL PLOT _____

SCALE FACTOR() _____

SCALE FACTOR CHECKED S. B. Grenell _____

PROJECTION A. A. Futral 2/14/34 2/14/34

PROJECTION CHECKED F. B. Hickman 2/19/34 2/19/34

CONTROL PLOTTED F. B. Hickman 2/20/34 2/20/34

CONTROL CHECKED A. A. Futral 2/20/34 2/20/34

TOPOGRAPHY TRANSFERRED _____

TOPOGRAPHY CHECKED _____

SMOOTH RADIAL LINE PLOT F. B. Hickman 2/20/34 2/26/34

RADIAL LINE PLOT CHECKED S. B. Grenell 2/26/34 2/26/34

DETAIL INKED B. B. Lewis, Jr. 3/6/34 4/13/34

AREA DETAIL INKED 14.9 sq. Statute Miles

LENGTH OF SHORELINE OVER 300 m. 13.7 Statute Miles

LENGTH OF SHORELINE UNDER 300 m. 23.8 Statute Miles

GENERAL LOCATION Coast of South Carolina

LOCATION Port Royal Sound to Calibogue Sound

DATUM STATION Graham 2 - 1931 Latitude 32-13+ 488.9 m.

N. A. 1927 Datum Longitude 80-45+ 883.2 m.

REPORT OF COMPILATION:

COMPILATION METHOD:

The standard radial line method was used on this sheet and no difficulty was experienced in carrying the plot through with the available control.

ADJUSTMENT OF PHOTOGRAPHS:

The pictures on this sheet have about the average amount of tilt and only in two cases was difficulty experienced in adjusting the pictures to the plot.

Due to tilt in the photographs and being out near the tracing limits on the photographs, it was difficult to accurately trace the shoreline and detail around the two points of land in Lat. $32^{\circ}-13.5'$ - Long. $80^{\circ}-47'$.

In the area around Lat. $32^{\circ}-14'$ - Long. $80^{\circ}-45.4'$ some islands are right along the line of flight, which at this point is down the center of the stream. The radial points on these islands, or close to them were very weak due to the thin cuts. The azimuth of the points is correct but the distance in reference to the line of flight is doubtful. These islands were located by holding points out to the side that had good intersections, and averaging in the tilt.

INTERPRETATION:

In some places on this sheet the shoreline is very indefinite. There will be a dense growth of marsh next to the solid ground and this will thin out toward the water and in the vicinity of the high water line become a mud flat with clumps of marsh grass scattered around. Referring to the section of high water line around Lat. $32^{\circ}-14.3'$ - Long. $80^{\circ}-45.6'$: Around the point below Station Quat there is a definite line of marsh denoting the berm of the stream and the high water line is shown with a solid line, which is the usual way. On south around the point, there is a definite extreme high water line along the high ground but the type of marsh described in the first of this paragraph exists there and no mean high water line can be determined. The vicinity of the high water line was shown by breaking off the marsh with no bordering line around it. On a little further south the marsh took on a more definite line and this was shown by a broken line, continuing until the high water line became definite and then it was shown with the usual solid line.

The above condition occurs in three places on this sheet.

There is a slough along the land in Lat. $32^{\circ}-12.2$ - Long. $80^{\circ}-46'$ and this is denoted by leaving a space between the ends of the marsh lines and the lands.

Around most of the islands and along the high water line in some places, there are shoals exposed or partly exposed (according to stage of tide) except at high tide. As these shoals showed up on the pictures white they were shown with sand dots. They are probably a mixture of mud and sand. A good example of this is the island in Lat. $32^{\circ}-12.2$ Long. $80^{\circ}-47.2'$ which has a large shoal around it. It will be found on pictures 126 and 127.

Generally speaking the land in this locality is bordered by bluffs which were shown with the usual symbol. The bluffs were picked up with the aid of the stereoscope and by discussion with the men of the field party who inspected stations in that vicinity. The land along the shoreline at the north-eastern extremity of the sheet is eroding as there are uprooted trees along the beach and the high water line is at the base of the bluff. The bluff around Station Rocks is unusually high.

INFORMATION FROM OTHER SOURCES:

All information for the compiling of this sheet was obtained from the photographs, observation of same under the stereoscope, and discussion with the men of the field party.

COMPARISON WITH OTHER SURVEYS:

There is no junction to the north of this sheet due to intervening water. The junction with sheet no. ~~5210~~ to the south has been made and is satisfactory. **5212**

There are no details shown on the present charts to be removed. ✓

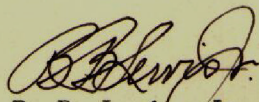
ACCURACY AND COMPLETENESS:

The area covered by this sheet is complete in every detail as nearly as can be determined by the photographs.

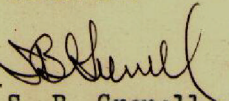
All well defined detail is located with a probable error of not more than 4 meters; less well defined detail with an error of not more than 10 meters.

PHOTOGRAPHS:

No.	to	No.	Date	Time	Stage of tide
(807)M126	-	M133	12/6/33	10:30	High water


B. B. Lewis, Jr.,
Draftsman.

APPROVED:


S. B. Grenell,
Chief of Party.

INSPECTION REPORT

Sheet No. 5211

REFERENCE:

In reviewing this sheet in the Washington Office, reference should be made to the General Report for all single lens sheets, which is filed with sheet No. 5206.

GENERAL INFORMATION:

This sheet covers the inside route through Skull Creek from Port Royal Spund to Calibogue Sound. The fast land areas of the bordering islands are higher than the general average along the coast and considerable eroded bluff formation is evident. The highest portion of bluff appears on the north end of Hilton Head Island in the vicinity of triangulation station Rocks 2 where the bluff is very steep and runs as much as 25 feet in height. This point is rapidly eroding and the lower beach is covered with undermined trees.

There is considerable active cultivation on Hilton Head Island and Pinckney Island where large areas have been cleared. The wooded areas consist of a mixed growth of oak, pine and deciduous brush. The oak predominates along the bluffs and points and the pine on the higher inland sand flats.

The streams are bordered by the usual growth of salt marsh which seems to be spreading to the old charted marsh areas when compared.

Unfortunately the pictures on this sheet were flown at almost exactly high water and this made it difficult to determine the high water line along the marsh berm. (See compiler's report for specific details.)

CONTROL:

All of the triangulation control used on this sheet was included in the revision scheme of C. A. Egner, Natoma, 1931, with the exception of station Chim located in 1920 by F. S. Borden. There were no topographic stations used on this sheet.

LANDMARKS FOR CHARTS:

Lists of landmarks will be submitted on form 567 by C. A. Egner, 1934.

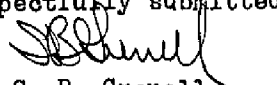
COAST PILOT NOTES:

Notes for the coast pilot will be submitted by C. A. Egner, 1934.

NAMES:

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

Respectfully submitted,


S. B. Grenell

REVIEW OF AIR PHOTO COMPILATION T-5211 (1934)

Projection:

The projection has been checked in the office. The errors are noted on the sketch following this review. No changes have been made as they would affect the plotting of control.

Comparison with Other Surveys:

1- Only a small portion of the lower end of the compilation is covered by a contemporary plane table survey.

(a) T-6138b, 1934 (1:10,000). A short section of plane table shore line at Lat. $32^{\circ}12.3'$, Long. $80^{\circ}48.0'$, differs from the compilation by 0 to 20 meters. The shore line here is marshy, bordered by sand and mud. The disagreement is ~~probably~~ due to a difference in interpretation. The compilation has not been changed.

2- T-4608 and T-4609, 1931 (1:10,000). The high ground as shown on the compilation agrees well with these surveys. However, the deliniation of the marshy shore lines was almost entirely different. This was in part due to differences in location, but more largely due to differences in interpretation. Inspection of the photographs showed the compilation to be subject to correction. On page 2 of the Descriptive Report the stage of tide is given as high water. This was checked by referring to the Tide Tables for the date and time shown on the photographs, and found to be correct. However, inspection of the photographs shows that they were not taken at high water as several mud flats are exposed. These mud flats are undoubtedly covered at high water. Assuming ~~that the date and time~~ as shown on the photographs is wrong, all the marshy shore lines have been retraced in the office. In several places the edge of the marsh is so indefinite that it is impossible to show a high water line. In these sections the limits of the marsh are shown by symbols only. The marsh areas are in general broken up by numerous small creeks and sloughs. Open spaces in the marsh are mud flats, bare at low water, and the larger areas are so labeled. Where the edges of the mud flats border on a channel a distinct berm can generally be distinguished on the photographs. This feature is shown by a dotted low water line, and by sand dots where there is a sand or shell beach bordering the mud.

The dock shown on T-4608 at Lat. $32^{\circ}38'13.6''$, Long. $80^{\circ}45.4'$, and the double row of piles at Lat. $32^{\circ}11.5'$, Long. $80^{\circ}46.9'$ are not shown on the compilation. They cannot be located on the photographs.

Buildings shown on the compilation were traced from the photographs in the office. No attempt was made to include all buildings which are not visable from the channels.

A group of rocks at Lat. ^{32°-16'}~~32°10.0'~~, Long. 80°43.1' have been added to the compilation in the office. The row of piles at Lat. 32°13.6', Long. 80°45.3' were also added from the photographs in the office.

Details appearing on T-4608 and T-4609 which are not shown on the compilation are as follows:

(a) Bull Point Rear Range. ~~This beacon can not be located by triangulation.~~ ^{was} see note below

(b) Skull Creek Entrance Buoy No. 1.

3- T-809, 1859 & 60, (1:20,000). Comparison with this survey shows numerous minor changes. The compilation is complete and adequate to supercede this survey.

Aids to Navigation:

Skull Creek Beacons #1, #5, and #7 were included in C. A. Egner's 1931 triangulation. In 1933 these beacons and Beacon #3 were rebuilt in new locations (Notice to Mariners, 43-33-1548). The triangulation positions have been removed from the compilation in the office. An attempt was made to plot the new positions for control by using the azimuths and distances from the old locations as given by the Lighthouse Service. Beacon #7 was the only one to which the plot would hold. The positions of these beacons as determined by the photo plot have been shown on the compilation.

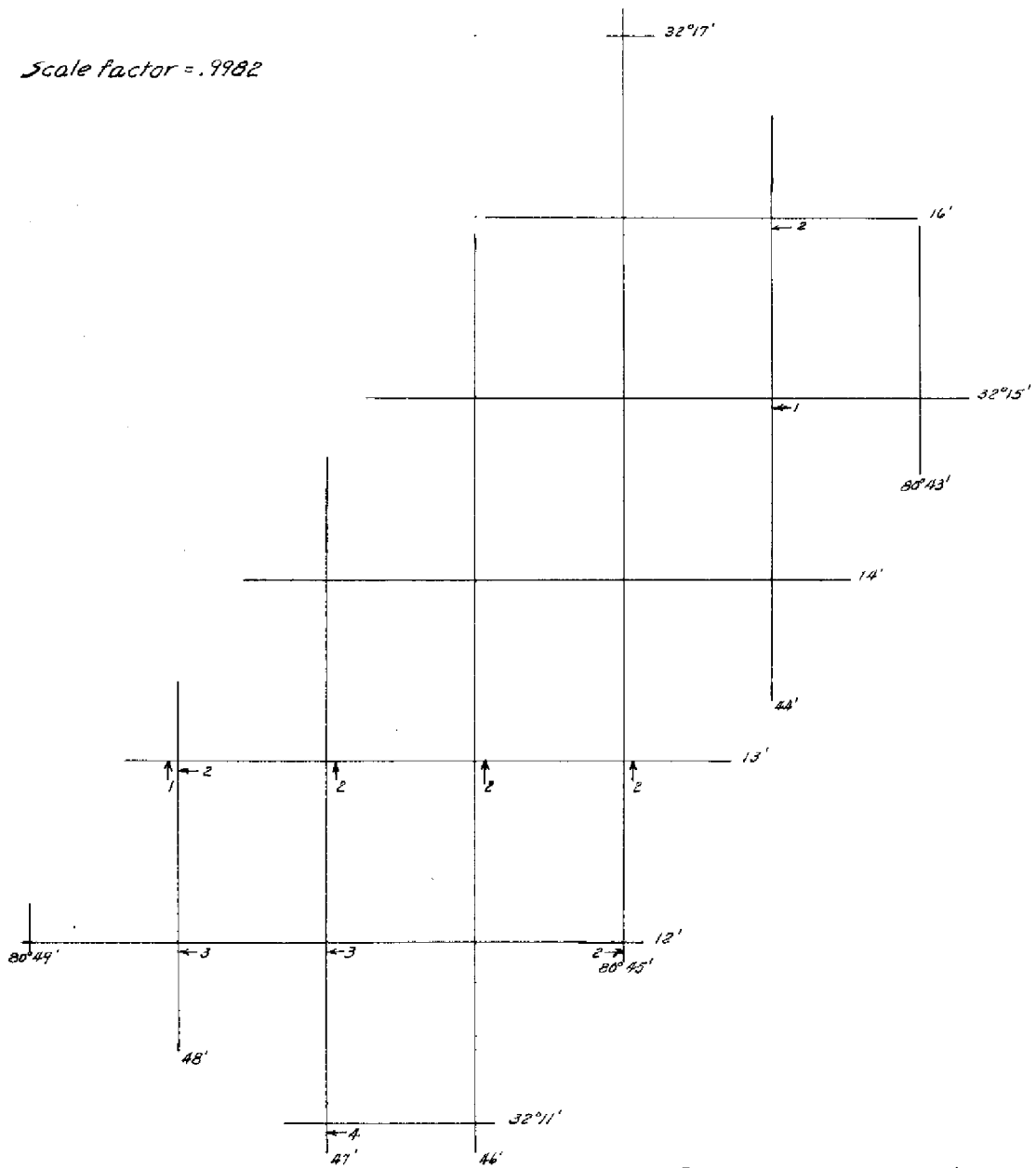
V. R. Sobieralski

B. G. Jones

Note Bull Point Rear Range Bn. is unknown as a triangulation station on T-4608 but no date is given and no triangulation position could be found for this beacon is listed in the field computations of C. A. Egner 1931 ^{in that his} record books and the Division of geodesy has not been able to furnish a position. This position is not listed in Egner Horizontal Angle books. ^{the beacon does not} ^{show on the photograph}
B. G. Jones

T-5211

Scale factor = .9982



Red arrows and figures indicate direction and distance projection lines should be moved to be correct.

POST-OFFICE ADDRESS:

Box 613, Washington, North Carolina.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Reference:

26-SG

1990 (18)

Feb. 26, 1935.

To: The Director,
U. S. C. & G. Survey,
Washington, D. C.

From: Lieut. (j.g.) S. B. Grenell,
Chief of Party # 18.

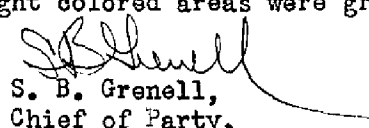
Subject: Air Photo Compilation No. T-5211.

In accordanced with the instructions in the letter of above reference, the interpretation of the detail in question has been taken up with the field inspection party. At the time the sheet was compiled there was some doubt as to the exact symbol to be used in the flooded areas and the question was referred to Lieut. C. A. Egner who was in Savannah at the time and who had done the hydrography in 1931. His description of the area agreed with the report of the field inspection party in that the areas in question are extensive mud flats supporting a scattering growth of marsh grass.

The demarkation between mud and marsh is so indefinite as to be impossible of delineation by a definite line. Therefore, in order to make the channel lines stand out clearly the marsh lines were extended to the channel edges. It will probably be much more accurate to out out the grass symbols as proposed since the grass is mostly covered at high tide.

The field inspection party were informed locally that at certain seasons of the year the grass is much taller and shows over a larger area at high water. This is particularly true in the late summer and fall before the winter storms have flattened the dead grass.

The time and date shown on the photographs are evidently in error because at high tide the bare mud flats would not show due to the fact that the water in this area is always muddy. For this reason it was assumed that the sharply defined, light colored areas were grassy.


S. B. Grenell,
Chief of Party.

Survey No. T-5211

Chart No. 1240-571

Diagram No..

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

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

[illegible]

REVIEW OF AIR PHOTO COMPILATION NO. 5211

Chief of Party: S.B. GRENELL

Compiled by: B.B. Lewis, 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)~~ *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)~~ *None used.*
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 used.*
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~~ *office* and are discussed in the ~~descriptive report.~~ *review.* *No field sheets available up to date*
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 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 Submitted 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)~~
No 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)~~
No new names
- ✓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; 8/29/34



Chief of Party

19. Remarks after review in office:

See following pages: revised.

Reviewed in office by: *V. K. Sobieralski*
B. G. Jones

Examined and approved:



Chief, Section of Field Records



Chief, Division of Charts



Chief, Section of Field Work



Chief, Division of Hydrography
and Topography.

Note regarding the error in time of the photographs - a check with the 1931 Hydrographic Survey showed - 2 to 0 soundings in areas which were bare when the photos were taken - these areas having several feet of water on them at High Tide.

In making the revision in this office careful comparison with T 4608 and T 4609 (1931) and T 809 (1859) furnished additional information in interpreting the photographs.