

5165

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
R. S. Patton, Director	
<div></div>	
State: South Carolina	
DESCRIPTIVE REPORT	
Air Photo	Topographic } Field 13 Hydrographic } Sheet No. Reg. No. 5165
5165	
LOCALITY	
West of Charleston Harbor	
CHARLESTON HARBOR AND VICINITY	
STONO RIVER	
W. OF CHARLESTON HARBOR - FANTOWLES	
GREEK TO CHURCH CREEK	
PLEASANT POINT	
1934	
CHIEF OF PARTY	
E. H. Kirsch	

U. S. GOVERNMENT PRINTING OFFICE: 1921

5165

Applied to chart 897 Nov. 26, 1935 H.L.C.
Applied to chart 1239 April, 1937 J.M.A.

PHOTOS NO.

M-83 - 807M-8 through M-94 - 807M-8

DATED

October 25, 1933

TIME

12:15 PM High Tide 1:04 PM.

12:45 PM Low Tide 6:28 AM.

M-124 - 125 807M-8

November 9, 1933

11:41 AM High Tide 12:23 PM

Low Tide 6:17 A.M.

PROJECTION BY

L. C. Ripley
L. C. Ripley

1 - 4 - 34

PROJECTION CHECKED BY

J. H. Wulbern
J. H. Wulbern

1 - 5 - 34

CONTROL PLOTTED BY

T. P. Mitchell
T. P. Mitchell

1 - 10 - 34

CONTROL CHECKED BY

M. R. Donaldson
M. R. Donaldson

1 - 11 - 34

CONTROL PLOTTED ON PHOTOS BY

F. H. McBeth
F. H. McBeth

CONTROL CHECKED ON PHOTOS BY

J. F. Richardson
J. F. Richardson

TOPOGRAPHY TRANSFERRED BY

F. H. McBeth
F. H. McBeth

TOPOGRAPHY CHECKED BY

E. H. Kirsch
E. H. Kirsch

SMOOTH RADIAL PLOT BY

Discharged before this report
was written E. H. K.
P. I. Hochman

1 - 26 - 34

RADIAL PLOT CHECKED BY

J. H. Wulbern
J. H. Wulbern

SCALE PLOT BY

J. H. Wulbern
J. H. Wulbern

12 - 27 - 34

DETAIL INKED BY

W. W. Johnson, Jr.
W. W. Johnson, Jr.

L. C. Ripley
L. C. Ripley

F. H. McBeth
F. H. McBeth

E. J. Anderson
E. J. Anderson

AREA DETAIL INKED: 17.25 Square Statute Miles

LENGTH OF SHORE LINE: 2 $\frac{1}{2}$ statute miles (More than 200 meters from opposite shore)

COAST LINE: None

LENGTH OF STREAMS: 24.5 Statute Miles (Streams and sloughs less than 200 meters wide)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5165

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. 13

REGISTER NO. 5165 5165

State South Carolina STONE RIVER
~~WEST OF CHARLESTON HARBOR~~
General locality Charleston Harbor and Vicinity
PLEASANT POINT
Locality W. of Charleston Harbor, Rantowles Creek to Church Creek.
Scale 1:10,000 Photographs - 10-25-33
Date of survey 11-9-33, 19____
Vessel Air Photo Compilation Party No. 21, Charleston, S. C.
Chief of party E. H. Kirsch
Surveyed by See data sheet in descriptive report.
Inked by Johnson, Ripley, McBeth, and Anderson
Heights in feet above: - - - - to ground to tops of trees
Contour, Approximate contour, Form line interval - - - feet
Instructions dated November 10, 1933, 19____
Remarks: _____

GENERAL INFORMATION

Statistics:

This sheet covers an area of 17.25 Square Statute Miles with 2.50 statute miles of river shore line (defined to include streams of more than 200 meters only) and 24.5 statute miles of rivers, streams, sloughs, and waterways of less than 200 meters in width. The first figure includes both banks; the latter as measured down the center line.

No coastal shore line occurs on this sheet.

Report:

The area covered by this sheet consists of marsh, timber, and cultivated land which are shown in the usual symbols. The general description of the related sheets of this series applies here. The terrain of this sheet is of a low coastal plane type with practically no relief. The field inspection report 1933-34 covering this series of sheets will be furnished by Lt. B. H. Rigg. *Submitted with sheet 5153*

Photographs:

Photographs from parts of two different flights were used in the compilation of this sheet. The flights were made by the U. S. Army Air Corps and the photographs are of the single lens type.

The flight M-83 through M-91 - 807M-8 was taken at 12:15 P.M. and M-92 - M-94 at 12:45 P.M. on the 25th of October 1933. High tide on this date occurred at 1:04 P.M., 19 minutes after picture M-92 was taken. Between these pictures there occurs a considerable angle in the line of flight.

Pictures M-124 - 125 were taken at 11:40 - 11:41 A.M., on the 9th of November 1933. High tide occurs at 12:23 P.M., on this date.

Further discussion of photographs will appear in the paragraph on interpretation.

CONTROL

Sources:

Triangulation by G. D. Cowie and R.L. Shoppe 1933.
~~Station Beacon No. 18 by G. D. Meaney - 1932.~~
Aluminum control sheets "I" Reg. No. 6056, "J" Reg. No. 6057
No. , and "K" Reg. No. 6058, Lt. B. H. Rigg, Chief of Party.

All control has been reduced to North American 1927 datum. (*Datum station is unadjusted*).

Errors:

Station Heat is poorly spotted on the photos, and was not used in the plot on completion.

Discrepancies:

No control stations established by other organizations were used in the compilation of this sheet. All U. S. E. D. Stations shown were located by the U. S. C. & G. S.

Method:

The standard radial line method was used as described in the U. S. C. & G. S. 1933 notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs.

Adjustment of Plot:

Through most of the area no difficulty was experienced in the detailing of this sheet - photos 124 and 125 were badly tilted and were used but little for this reason. Unfortunately the marsh detail and river configuration shows plainest on these pictures. For the other flight no extraordinary amount of scale variation or tilt occurs.

Interpretation:

The graphic symbols used in this sheet are taken from the topographic manual.

A great deal of difficulty has been encountered in the delineation of stream banks in certain areas of this sheet. In these areas the aluminum sheet for the same locality has been freely consulted and used.

Taken near mid-day the marshy areas of this flight appear unusually indistinct. Taken so near high water this is possibly due to reflection caused by water covering all flats and underlying the grass covered areas. Pictures 84, 85, 86 are illustrative of this difficulty.

Information from other Sources:

Field inspection by Lt. B. H. Rigg - 1933.
Aluminum control sheets "I" Reg. No. , "J" Reg. No. 6057, "K" Reg. No. 6058, by Lt. B. H. Rigg, Chief of Party. 1933-34.

Conflicting Names:

There are no names on this sheet conflicting with names shown on the U. S. C. & G. S. chart for this area. *The new names shown have been accepted, pending Mr. Bacon's decision.* *R. H. Rigg*

Comparison with Other Surveys.

The combined hydrographic and topographic ^{soundings} ~~edges~~ survey H-1639. (1885.) shows shoreline and ~~edges~~.

There has been considerable change in the islands in Wadmalaw Sound. The compilation is adequate to supersede the topographic information shown there on. (H-1639). See also last page of the report.

Larn
Oct 25, 1924.

Bgg

COMPARISON WITH OTHER SURVEYS

Junctions:

Satisfactory junctions have been made with:

Sheet No. 12, Reg. No. 5164 on the Northeast.
 Sheet No. 1 & 2, Reg. No. 5153 & 5154 on the Southeast.
 Sheet No. 14, Reg. No. 5166 on the Southwest.
 Sheet No. 6, Reg. No. 5158 on the Northwest.

See opp. page.

Landmarks:

A complete list of land marks for charts and marked topographic stations have been submitted with aluminum control sheets "I" Reg. No. 6056, "J" Reg. No. 6057, and "K" Reg. No. 6058, by Lt. B. H. Rigg, Chief of Party.

RECOMMENDATIONS FOR FURTHER SURVEYS

The compilation of this sheet is believed to have a probable error of not more than 3 meters in well defined detail of importance for charting and of not more than 6 meters for other data.

To the best of my knowledge, this sheet is complete in all detail necessary for charting purposes, within the accuracy stated above, and no further surveys are required.

Assisted by:

E. H. Kirsch
 E. H. Kirsch,
 Chief of Party.

Submitted by:

W. W. Johnson, Jr.
 W. W. Johnson, Jr.

L. C. Ripley
 L. C. Ripley.

F. H. McBeth
 F. H. McBeth.

H. J. Anderson
 H. J. Anderson.

Bridge Clearances

The tide data (obtained from Tide Division) for computing the clearances of bridges in Rantowles Creek and Wallace River is approximate only: At Elliot cut 7 miles ~~each~~^{east} of Rantowles Creek corrections to Charleston Tides are ± 0.8 h later for high and low waters and ratio of ranges 1.02; at Point Pleasant three miles west of Rantowles Creek the corrections to Charleston Tides are ± 2.1 hr. for high water, ± 1.8 hr. for low water and ratio of ranges of 1.11. Computation of the clearances in Rantowles Creek would be approximate only and the army Engineers H. W. clearances are shown on the compilation as taken from the Bridge ~~list~~^{list} for 1927. The Highway Bridge over Rantowles Creek is not entered in the Engineers Bridge list and no clearance is shown on the compilation. The M H. W. Clearances as computed roughly are three to five feet greater than the H. W. clearances given in the Engineer list.

B. G. Jones

* There are four bridges appearing on this sheet as described below:

- 1, The 2nd Seaboard Air Line Railway bridge over the Stono River.

This is a single track bridge of the swing type. The horizontal distance between the fenders of the east channel is $62\frac{1}{2}$ feet. The distance between fenders of the west channel is 64.6 feet. There is a vertical clearance of 80 feet to overhead wires and the vertical clearance of the bridge when closed is 5.8 feet at mean high water.

- 2, The Atlantic Coast Line ^{Railroad} Railway bridge over Rantowles Creek.

This is of the vertical lift type. The overall length is 97.85 meters; the west span is 41.20 meters and the east span is 31.70 meters and the central portion is 14.95 meters. The width of the bridge at the lift is 9.75 meters of which 8.25 meters is occupied by the railroad which is double track throughout the vicinity. When visited on the 29th of March 1934 at 1:51 P.M. the clearance was 2.60 meters. on this date high tide was at ~~1:00 P.M.~~ ^{9:40 Am} and low tide at ~~7:10 P.M.~~ ^{6:45 Am at Charleston}

- 3, The highway bridge over Wallace River.

This bridge is 56.15 meters long and 6.10 meters wide. the distances between spans are;

West 25.4 meters center 8.25 meters and East 22.5 meters.

When visited on the 29th of March at 11:40 A.M. the vertical clearance was 3.80 meters. The morning low tide on this date was at 6:45 A.M.

- 4, The highway bridge over Rantowles Creek.

The width of this bridge is 6.05 meters; The piles of this bridge are at an angle to its crossing and reading from West to east they are 22.90 meters - 12.30 meters and 30.1 meters on the north side. On the South side their respective distances are 26.20 meters, 12.30 meters and 27 meters.

When visited on the 29th of March at 1:34 P.M. the clearance was 4.70 meters.

* See opposite page.
Lam

REVIEW OF PHOTO TOPOGRAPHIC SURVEY NO.

Title (Par. 56) W. of Charleston Harbor - Rantowles Creek to Church Creek.

Chief of Party E. H. Kirsch

Compiled by Johnson, Ripley, McBeth
and Anderson.

Project F.P.-13-S.U., 1933-35

Instructions dated November 10, 1933.

Air Photo Compilation Party No. 21.

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 8; and 16, a, b, c, d, e, g and i.) ✓
2. The character and scope of the compilation satisfy the instructions and the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs". ✓
3. The control and adjustment of the radial plot were adequate. (Par. 12, 29.) ✓
4. There is sufficient control on maps from other sources that were transmitted by the field party for their application to the charts. (Par. 28.)
No information taken from outside sources.
5. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
6. 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.) ✓
7. Important details shown on previous surveys and on the chart have been compared with this sheet and a statement has been entered in the report regarding the removal from the chart or change in position of important detail such as rocks, lights, beacons, prominent objects, bridges, docks, and structures along the water front. ✓
8. The span, draw and clearance of bridges are shown. (Par. 16c.) ✓
9. The data furnished by the Field Inspection is adequate. ✓

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

10. The descriptive report covers all details listed in the Manual, so far as they apply to this survey. (Par. 64, 65 and 66.) ✓
11. The descriptive report also contains all additional information required in photo topography as prescribed in the instructions and in the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs". ✓
12. The descriptions of recoverable stations and references to shore line were accomplished on Form 524, and scaling of positions checked. (Par. 29, 30 and 57.) Submitted with A.C.S. Sheets.
13. A list of landmarks for charts was furnished on Form 567 and scaling of positions checked. (Par. 16d, e, 60.) Submitted with A.C.S. Sheets.
14. The geographic datum of the sheet is N. A. 1927 and the reference station is correctly noted. (Par. 34.)
15. Junctions with contemporary surveys are adequate. ✓
16. Geographic names are shown on the sheet and are covered by the Descriptive Report. (Par. 64, 66k.) ✓
17. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46.) ✓
18. No additional surveying is recommended. ✓

19. Remarks:

20. Examined and approved:

E. H. Kirsch
E. H. Kirsch, Chief of Party

21. Remarks after review in office:

Reviewed in office by:

Examined and approved:

E. H. Kirsch
Chief, Section of Field Records

L. O. Colburn
Chief, Division of Charts

F. B. Borden
Chief, Section of Field Work

G. H. de
Chief, Division of
Hydrography and Topography.

Review of Air Photo Compilation No T-5165

Topographic Stations

The following recoverable topographic stations are described on Form 524 shown on the compilation with the conventional circle.

Description filed under T-6057	(U.S.E. 17	(d)
	(U.S.E. 19	(d)
	(U.S.E. 2A	(d)
	(U.S.E. 18	(d)
	(U.S.E. 11	(d)
	(U.S.E. 12	(d)
	(U.S.E. 13	(d)
	(U.S.E. 24	(d)
	(U.S.E. 25	(d)

Description filed under T-6058	(U.S.B.M.	(d)
	(U.S.E. 26	(d)
	(U.S.E. Hart	(d)

Comparison with other Surveys.

Air photo control (plane table) T-6056, - T -6059 (1934).
All detail shown on these surveys agrees with that shown on the compilation. All recoverable topographic stations have been transferred.

Previous topographic surveys. (See back of page 2 of the ^{preceding} descriptive report T-5165)

(L.A.M)

B.G. Jones

Survey No. T-5165

Chart No. 1239-2

Diagram No.

Diagram No. _____
Allen M. Strong *H Harlow Bacon*
 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.

(M 100)

List showing the discrepancies between the geodetic and the Engineer Corps' Plain Co-ordinates Position

Sheet No. 13; Reg No. 5165

Origin Δ^1 3246-14766 (371.7)
80-06 871.9 (689.8)

Station	Geographic Positions	Engineers Coordinates	G.P. from Origin Δ^1 Through Engineers Coordinates	Correct to Engineers Coordinates According to Sign	Corrected to Engineers Coordinates N.A. 1927 datum
	meters	Lat. Dep.	Lat. Long.		
USED Canal	32 46 80 06	1795.0 (533) 530.4 (1031.2)	1045.4 ^N 318.7m	1123.74 ^E 342.5m	1795.3 529.4
Topo ACS				-0.3 +1.0	318.4 ^N 343.5 ^E
USED No. 2,	32 46 80 06	1325.3 (523.0) 1206.9 (354.8)	487.82 ^S 148.7m	1096.34 ^N 334.2m	1327.9 1206.1
Topo ACS				-2.6 +0.8	146.1 ^S 335.0 ^N
USED No. 2A	32 46 80 08	305.0 (543.3) 143.8 (417.9)	3832.93 ^S 1168.3m	7858.46 ^N 2395.2m	300.3 144.9
Topo ACS				-3.3 -1.1	1171.6 ^S 2394.1 ^N
USED XVIII	32 44 80 09	1520.3 (628.0) 1225.7 (336.6)	1197.95 ^S 3651.5m	16525.87 ^N 5037.1m	1520.5 1222.2
Topo ACS				-0.2 +3.5	3651.3 ^S 5040.6 ^N
USED XVII	32 44 80 09	1023.9 (624.4) 842.1 (720.2)	13504.08 ^S 4146.5m	15273.05 ^N 4655.2m	1025.6 840.3
Topo ACS				-1.7 +1.8	1444.8 ^S 4657.0 ^N
USED XIX	32 44 80 09	574.5 (1273.8) 1298.4 (639)	15081.40 ^S 4586.8m	16774.92 ^N 5113.0	575.1 1298.1
Topo ACS				-0.6 +0.3	4596.2 ^S 5113.3 ^N
USED XX	32 44 80 - 1.0	575.1 (1273.2) 461.4 (1100.8)	15079.08 ^S 4596.1m	19147.15 ^N 5836.1m	575.4 461.3
G.D. Gome 1933 N.A. 1927 Field reduced				-0.3 +0.1	4575.8 ^S 5836.2 ^N
USED XXI	32 44 80 1.0	90.2 (758.1) 82.3 (480.0)	16670.91 ^S 5081.3m	17902.89 ^N 5456.8	90.4 82.0
G.D. Gome, 1933 N.A. 1927 Field Reduced				-0.2 +0.3	5081.1 ^S 5457.1 ^N
USED XXIV	32 43 80 10	365.2 (283.1) 222.3 (340.2)	21187.16 ^S 6457.8m	18373.16 ^N 5600.1m	562.1 221.8
Topo ACS				+3.1 +0.5	6460.9 ^S 5600.6 ^N