

8067

Diag'd. on Diag. Ch. No. 78-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Air Photographic (Shoreline)

Field No. CS-283 Office No. T-8067

LOCALITY

State Virginia

General locality James River - Pagan River

Locality Smithfield and Vicinity

1941-'43

CHIEF OF PARTY

H.O. Fortin

LIBRARY & ARCHIVES

DATE August 29, 1949

B-1870-1 (1)

2908
8067

DATA RECORD

T- 8067

Quadrangle (II); Smithfield, Va. (U.S.G.S.)
(15 min.)

Project No. (II); C.S. 283

Field Office:
Air Photographic Party No. 2

Chief of Party: ~~Fred. L. Peacock~~
H. O. Fortin

Compilation Office:
Baltimore Photogrammetric Office

Chief of Party: Fred. L. Peacock

Instructions dated (II III):
March 26, 1942 - July 15, 1942
Sept. 30, 1942 - Nov. 14, 1942

Copy filed in ^{Div. of Photogrammetry} Descriptive ^{Office Files}
~~Report No. T-~~ (VI)

Completed survey received in office;

Reported to Nautical Chart Section;

Reviewed: 10-18-48 Applied to chart No. 529 Date: 8-11-44

Redrafting Completed;

Registered: 6-22-49

Published;

Compilation Scale: 1:10,215

Published Scale;

Scale Factor (III): 0.97895

Geographic Datum (III): N. A. 1927

MHW
Datum Plane (III): ~~Mean Sea Level~~

Reference Station (III): GALE, 1944

Lat.: 36° 56' 57.287" (1765.9m) Long.: 76° 39' 28.592" (707.4m) Adjusted
~~Unadjusted~~

State Plane Coordinates (VI): Virginia - South Zone
Station: Smithfield Municipal Water Tank, 1932

X = 2,543,993.07

Y = 241,181,37

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
7733 to 7735 Inc.	11/26/41	10:42 A.M.	1:10,000	0.4 ft. above M.L.W.
7704 to 7706 Inc.	11/26/41	10:00 A.M.	1:10,000	0.3 ft. above M.L.W.

Tide from (III); Predicted tables, Reference Station, Hampton Roads with correction for Newport News, Va.

Mean Range: 2.6 ft.

Spring Range: 3.0 ft.

Camera: (Kind or source) U.S.C. & G.S. nine lens camera (focal length 8 $\frac{1}{4}$ ")

All negatives are on file in Washington Office

Field Inspection by: Lt. Comdr. Henry O. Fortin date: Winter 1942 - 1943

Field Edit by: None date:

Date of Mean High-Water Line Location (III); Date of photographs supplemented by field inspection data obtained in 1942-1943. Season's field inspection reports previously submitted.

Projection and Grids ruled by (III) B.R.C. - J.T.B. date: 5/17/44
Washington Office

" " " checked by: B.R.C. date: 5/17/44

Control plotted by: H. Rudolph date: 5/25/44

Control checked by: A. Goncharsky date: 5/25/44

Radial Plot by: J. E. Deal, Jr. date: 6/10/44

Detailed by: M. E. Herzog date: 7/5/44 to 7/24/44

Reviewed in compilation office by: Henry P. Eichert date: 7/24/44 to 7/25/44

Elevations on Field Edit Sheet
checked by: None date:

STATISTICS (III)

Land Area (Sq. Statute Miles): 2

Shoreline (More than 200 meters to opposite shore): None

Shoreline (Less than 200 meters to opposite shore): 5 Statute miles

Number of Recoverable Topographic Stations established: 6

Number of Temporary Hydrographic Stations located by radial plot: 53

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered by,

(II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname
and initials (not initials only).

Remarks:

Summary to Accompany T 8067

T 8067, scale 1:10 000, is one of 40 shoreline surveys in Project CS-283 along the James River, Virginia.

Project CS-283 was originally planned as a planimetric mapping project but was limited to shoreline surveys only after War Mapping Project CS-289, covering practically all the James River, was undertaken.

Topographic Quadrangle T 8306 (Project CS-289) completely covers T 8067. The former was compiled in 1944 from 1:20,000 scale photographs taken in 1942 in contrast with T 8067, compiled in 194~~4~~ from 1:10,000 scale photographs taken in 1941.

Field Inspection

Field inspection data for the area of T 8067 are contained in the "Report on Field Inspection of Air Photographs, James River and Tributaries, Virginia" by Henry O. Fortin, dated April 20, 1943. Filed in Division of Photogrammetry, General Files.

For additional field work in the winter of 1944 see "Report on Field Inspection of Air Photographs, James River, Va" by Dale E. Sturmer, dated April 11, 1944. Filed in Div. of Photogrammetry, General Files.

26 CONTROL:

The following horizontal control stations fall within the limits of this Map Drawing. They are:

COBB, 1944 ✓
GALE, 1944 ✓
SMITHFIELD, Main & Commerce Sts., r.1918, r.1944 ✓
(U.S.G.S.)
SMITHFIELD WATER TANK, MUNICIPAL, 1932, r.1944 ✓

The following horizontal control stations fall just outside the limits of this Map Drawing. They are:

SMITHFIELD, 1932, r.1942
Test Traverse Points T-1 to T-5, Incl., of Horizontal
Accuracy Test Traverse No. 7, Project C.S. 289.

The Field Inspection Unit established field inspection points at well defined points of detail near stations COBB, 1944, and GALE, 1944.

All of the above horizontal control stations except some of the Traverse Test Points which were difficult to identify with clarity on the photographs, were used to establish photograph centers, secondary points, detail points, recoverable topographic stations, and temporary hydrographic stations.

27 RADIAL PLOT:

An individual radial plot was run for this Map Drawing in the following manner.

All of the horizontal control stations mentioned in Paragraph No. 26 were plotted on the Map Drawing.

All secondary control points established by an additional radial plot for Map Drawing, Survey No. T-8068 to the North, and Map Drawing, Survey No. T-8062 to the East, and which fell within the limits or just outside, the limits of Map Drawing, Survey No. T-8067, were transferred by graphic methods.

27 RADIAL PLOT: (Continued)

All horizontal control stations were pricked on the nine lens photographs on which they fell.

It was apparent after accomplishing the above, that sufficient horizontal control stations were available to adequately control the orientation of the photographs.

A number of well defined points were selected for secondary control points and pricked on all the photographs on which they appeared.

Each photograph was oriented directly under the Map Drawing, holding to its respective horizontal control. Its center was then established on the Map Drawing and radial lines were drawn on the Map Drawing through the secondary control points falling on the photograph.

After all the photographs were oriented in this manner it was found that excellent intersections were obtained on all secondary control points. These intersections were then pricked and are shown by double circles in blue ink on the reverse side of the Map Drawing.

It was noted that only the well defined Test Traverse Points could be held in conjunction with the existing horizontal control stations. "Y" road intersections could not be held satisfactorily due to the uncertainty of identification on the photographs.

28 DETAILING:

The shore line and immediate adjacent culture of the part of the area of Pagan River, which falls within the limits of this Map Drawing, and all of the area of Mt. Holly Creek, and Blairs Creek, has been detailed according to the Director's letters dated: 3/26/42; 7/15/42; 9/30/42, and 11/14/42, pertaining to this Project No. C.S. 283. Filed in Div. of Photogrammetry - Office Files.

Positions of minor detail points, temporary hydrographic stations, and recoverable topographic stations

28 DETAILING: (Continued)

were determined by the usual radial line method.

The shore line data, furnished the Compilation Office by the Field Inspection Unit, was transferred to the office photographs from the field inspection photographs. This data were then detailed on the Map Drawing. In addition, the Field Inspection Unit furnished the Compilation Office sextant fix locations for a small portion of the Mean High-Water Line, which could not be identified on the photographs. These sextant fix locations were plotted directly on the Map Drawing. Areas adjacent to the shore line were detailed in accordance with field inspection data and office examination of the nine lens photographs.

The number of nine lens photographs covering the area of this Map Drawing was sufficient for detailing. The scale of the photographs and of the Map Drawing were in good agreement.

At the head of Mt. Holly Creek a pond has been formed, due to the construction of a dam. The shore line of this pond was not field inspected and due to the overhang of trees it was indefinite on the photographs. The shore line of this pond has been shown on the Map Drawing with a dashed line, in black acid ink.

A list of abbreviations used on this Map Drawing, accompanied by explanatory notes, has been shown in the right hand margin.

29 SUPPLEMENTAL DATA:

No supplemental data were furnished the Compilation Office for use in detailing this Map Drawing.

30 MEAN HIGH-WATER LINE:

Full, heavy-weight and light-weight black acid ink lines have been used to differentiate between the Mean

30 MEAN HIGH-WATER LINE: (Continued)

High-Water Line and the outer limits of marsh bordering the Mean High-Water Line, respectively. The light-weight line is not considered to be the Mean High-Water Line, but is only an indication of the outer limits of low wet land at Mean High-Water.

31 LOW-WATER AND SHOAL LINES:

No Mean Low-Water Line has been shown on this Map Drawing and none was indicated by field inspection data, or was visible on the nine lens photographs. Several mud areas, identified by the Field Inspection Unit, were outlined on the Map Drawing with a thin dashed line in black acid ink. The word "Mud" has been lettered inside these areas. *Label "Mud" changed to "shallow". See review report. "Mud" referred to the nature of the bottom*

No shoal areas, bordering the Mean High-Water Line, were visible on the photographs and none were indicated by field inspection data. *See above*

32 DETAILS OFFSHORE FROM THE MEAN HIGH-WATER LINE:

One wreck, in the vicinity of Smithfield, which is also a temporary hydrographic station, has been radially plotted on this Map Drawing. The extent to which it bares has been noted on the Map Drawing, in accord with the field inspection data.

Areas in which the remains of wharves, piling, and other objects, which were not visible on the photographs, but were indicated by field inspection data, have been outlined with a dashed black acid ink line and lettered with accompanying descriptive notes.

Trees, logs awash, and submerged logs have been shown on this Map Drawing, according to field inspection data, with appropriate notes.

33 WHARVES AND SHORE LINE STRUCTURES:

All wharves, piers, ruins of piers, and other shore line structures, have been shown on this Map Drawing, according to field inspection data, with accompanying descriptive notes.

34 LANDMARKS AND AIDS TO NAVIGATION:

The Field Inspection Unit recovered the following landmark which is charted, namely:

SMITHFIELD WATER TANK (Also triangulation station
"SMITHFIELD WATER TANK, MUNICIPAL, 1932,
r.1944")

In addition the Field Inspection Unit recommended for charting as a landmark, the following object, namely:

BLACK STACK, on brick building, across from
Smithfield, Va.

This recommended landmark has been radially plotted and is shown on the Map Drawing with a 2.5 mm black acid ink circle.

Form 567 is being submitted for the new recommended landmark. ~~Filed in Naut. Chds. See Ch Letter 544 '44~~

There are no fixed aids to navigation falling within the limits of this Map Drawing.
See Chart Letter 917 (49) Copy enclosed.

35 HYDROGRAPHIC CONTROL:

The Compilation Office was furnished the identification of 53 temporary hydrographic stations and 6 recoverable topographic stations (One of which is recommended for a landmark). These were identified on the 1:10,000 field photographs by numbers and their descriptions listed in a field sketch book (Form 274) by corresponding numbers. These stations were transferred to the

35 HYDROGRAPHIC CONTROL: (Continued)

1:10,000 office photographs and radially plotted on the Map Drawing. The numbers and descriptions of these stations have been listed in the right hand margin of the Map Drawing. List added to the Descriptive Report.

Form 524 is being submitted for the six recoverable topographic stations. They are:

- No. 27- ~~GRAY CROSS ON STONE BELFRY~~, 1944
- No. 58- NORTH GABLE OF ~~UNPAINTED BARN~~, 1944
- No. 59- SOUTH GABLE OF ~~UNPAINTED HOUSE~~, 1944
- No. 110- SOUTH GABLE OF ~~RED BARN~~, 1944
- No. 120- ~~BLACK STACK ON BRICK BUILDING~~ (Also recommended, 1944 landmark)
- No. 268- SPIRE ON ~~TRINITY METHODIST CHURCH~~, 1944

36 LANDING FIELDS AND AERONAUTICAL AIDS:

No aeronautical aids have been recommended by the Field Inspection Unit.

There are no landing fields falling within the area of this Map Drawing.

37 JUNCTIONS:

The junction to the North with Map Drawing, Survey No. T-8068 is in excellent agreement.

The junction to the East with an ozalid of Map Drawing, Survey No. T-8062 is in excellent agreement with the following exception:

Junction could not be made with a small stream through a marsh at Latitude $36^{\circ} 58' 52''$. This is apparently a minor error in detailing on Survey No. T-8062. This stream has been detailed correctly in the East margin of Map Drawing, Survey No. T-8067, in red acid ink with an appropriate note requesting the Washington Office to make the necessary correction on Map Drawing, Survey No. T-8062.

Discrepancies corrected during review.

37 JUNCTIONS: (Continued)

There are no contemporary surveys, of this series, to the South and West of this Map Drawing.

38 GEOGRAPHIC NAMES: *Approved list filed in Geographic Names Section.*

A partial investigation of geographic names was made for the area of this Map Drawing by the 1942 Field Inspection Unit, which was furnished the Compilation Office in the form of notes in a copy of the U. S. Coast Pilot and on the field inspection photographs.

The geographic names shown on this Map Drawing are in accordance with the field inspection data, except in areas not included in the investigation. In such areas, the names shown have been taken from the best known sources available for use by this Compilation Office.

There are no disputed geographic names in the area of this Map Drawing. The undisputed geographic names have been alphabetically listed and are submitted herein.

39 HORIZONTAL ACCURACY:

The probable error in the relative positions of detail points, the Mean High-Water Line, and well defined objects, is believed to be within the limits of satisfactory accuracy.

40 RECOMMENDATIONS FOR FUTURE SURVEYS:

The shore line, rough draft, Map Drawing, Survey No. T-8067, is believed to be complete in all details for charting and no other surveys are deemed necessary.

41 BRIDGES:

Two bridges, one at the mouth of Mt. Holly Creek and the other across the Pagan River, in the vicinity of Smithfield, have been shown on the Map Drawing with

41 BRIDGES: (Continued)

conventional symbols, accompanied by pertinent notes, in accordance with the field inspection data.

44 COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

Comparison was made with the United States Geological Survey, Smithfield, Va. 15 min. quadrangle, edition of 1929, reprinted in 1938, scale 1:62,500.

Due to scale difference only a visual comparison could conveniently be made. The following difference was noted:

A bridge across Pagan River in the vicinity of Smithfield has been relocated since the quadrangle has been issued.

All other common topographic features seem to be in fair agreement.

45 COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Chart No. 529, published at Washington, D. C., September 1940 and corrected to March 6, 1944, scale 1:40,000, by use of the vertical projector.

The following differences are noted:

The shore line of the Pagan River between Long. $76^{\circ} 38.3'$ to Long. $76^{\circ} 39.2'$, is shown on the chart approximately 50 meters further North than that as shown on the Map Drawing.

The shore line of Blairs Creek is shown on the chart approximately 90 meters further North than that as shown on the Map Drawing.

The shore line of Mt. Holly Creek is shown on the chart approximately 30 meters further Northwest than that

45 COMPARISON WITH NAUTICAL CHARTS: (Continued)

as shown on the Map Drawing.

The above differences are probably due to the use of a different projection on the Map Drawing than that used on the nautical chart.

A bridge crossing the stream North of Smithfield approximately at Lat. $36^{\circ} 59.8'$ and Long. $76^{\circ} 38.1'$, is located on the chart 80 meters South of its position as shown on the Map Drawing.

Respectfully submitted:
July 25, 1944

M. Eleanor Herzog
M. Eleanor Herzog
Asst. Photogrammetric Aid

Compilation and Descriptive
Report, Reviewed by:

Henry P. Eichert
Henry P. Eichert
Jr. Photogrammetric Engineer

Compilation of Map Drawing
Supervised by:

Joseph Steinberg
Joseph Steinberg
Asst. Photogrammetric Engineer

and

J. Edward Deal Jr.
J. Edward Deal, Jr.
Asst. Photogrammetric Engineer

Approved and Forwarded:
July 26, 1944

Fred. L. Peacock
Fred. L. Peacock
Chief, Air Photographic Party No. 2

Descriptions of Photo-Hydro Stations

- No.
- 25 Southerly of two cedars. Southerly is 12' tall. Two pines to westward.
 - 26 Lone east gable of two-story shed with flat top roofs on either side.
 - 28 East corner of retaining wall.
 - 29 East gable of long red shed. 50 yards back of high water line.
 - 30 South gable of red roof shed. Chimney near south east corner.
 - 31 Stem of wreck.
 - 32 North gable (upstream) boathouse which is parallel to stream.
 - 33 East end of north fender to bridge
 - 34 West end of south fender to bridge.
 - 35 South east corner of retaining wall. (This station was plotted by Fix)
 - 36 South east corner of short wood-retaining wall (log) end telephone pole just inshore.
 - 37 Northwest tip of grass at ditch.
 - 38 Overhanging cedar tree.
 - 39 Northwest tip of grass at ditch, 100 meters east of bluff.
 - 40 Northwest tip of grass by ditch.
 - 41 Edge of marsh and ditch (line of black through grass) a one stick bush upstream and 5 meters back from it. Northeast across stream from small square pier at west end of bluff.
 - 42 East side of ditch and edge of marsh, south west tip on north shore, northeast of small pier with pipe on it.
 - 43 Center of pier on southside with 2 pipes on it. (This station was plotted by Fix)
 - 44 Southwest corner, sharp tip of grass.
 - 45 Southeast corner, sharp tip of grass.
 - 46 Tip of grass on point.
 - 47 Southeast corner tip of grass.

- No.
- .48 Southeast corner, tip of grass.
 - .49 Northeast corner, tip of grass.
 - .50 East tip of grass on northside of entrance to small creek.
 - .51 Center of rounding point west side of creek.
 - .52 Center of ditch and marsh line.
 - .53 Center of ditch and marsh line.
 - .54 Southeast tip of grass.
 - .55 Center of ditch and marsh line.
 - .56 Northeast point of grass.
 - .57 Center of ditch and marsh line.
 - .60 Southwest corner, tip of grass.
 - .61 Center of ditch and marsh line.
 - .62 Center of ditch and marsh line.
 - .63 Center of ditch and marsh line.
 - .64 Southwest point of grass.
 - .65 Northeast corner, tip of grass.
 - .66 Southwest tip of grass.
 - .67 Lone pine tree on hammock in marsh.
 - .68 Southeast tip of grass.
 - .69 South tip of grass.
 - .70 Northeast tip of grass.
 - .71 Southwest tip of grass.
 - .72 Center of ditch and marsh line.
 - .73 Northeast tip of grass.
 - .74 Southwest tip of grass.
 - .75 Southeast tip of grass.

No.

- 102 Center of ditch and grass line.
- 103 Southwest tip of grass.
- 104 Open path in grass and grassline, bush on east side and about 10 meters back.
- 105 North gable of P. D. Gwaltney Inc. & Son Building.
- 112 Southeast tip of brush.

GEOGRAPHIC NAMES

(Undisputed)

- ✓ • Blairs Creek
- ✓ • Mount Holly Creek
- ✓ • Pagan River
- ✓ • Smithfield
- ✓ • Champion Swamp
- ✓ • Smithfield Creek
- Virginia* (for title)
- Cypress Creek

* = Decis. of BGN

• = Approved name.

10-15-48.

A. J. W.

5-12-49

L. H.

DIVISION OF PHOTOGRAMMETRY
Review Report of
Shoreline Map Manuscript T-8067

Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.

31 Low Water and Shoal Lines

The areas enclosed by a dashed line on the map manuscript have been labelled "Shallow".

37 Recoverable Topographic and Photo-Hydro Stations

A list of descriptions of Photo-Hydro Stations was prepared and made a part of the descriptive report.

The names of Recoverable Topographic Stations were changed to a short, descriptive term.

40 Geographic Names

Names were added to the map manuscript from the approved list submitted by the Geographic Names Section.

43 Comparison with Contemporary Hydrographic Surveys.

H 7162 1:10,000 1944-47

No discrepancies were noted between the shoreline on the map manuscript and the positions of the soundings on the hydrographic sheet.

44 Comparison with Existing Surveys

* T 8306 1:20,000 1944
U.S.G.S. Smithfield Quadrangle 1:62,500 1929 Reprinted 1944
Common features on all previous surveys are superseded by the map manuscript in common area.

45 Comparison with Nautical Charts

Chart No. 529 1:40,000 1944 Corr. 1947

The landmark, Stack, 1944, is not shown on the nautical chart.
Chart Letter 544(44)

51 Application to Nautical Charts

The map manuscript has been applied to the nautical chart.

Reviewed by:

Under the direction of:

Charles Theurer
C. Theurer 10/18/48

S. V. Griffith
Chief, Review Section K.H.M.

* T 8306 is a more recent survey. Corrections were not brought forward to T 8067

Approved by:

B.G. Jones
Technical Asst. To Chief,
Division of Photogrammetry

M. Edmonston
Chief, Nautical Chart Branch
Division of Charts

K.T. Adams
Chief, Div. of Photogrammetry

W.M. Scife
Chief, Div. of Coastal Surveys ¹⁰²

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED }
TO BE DELETED }

STRIKE OUT ONE

Washington Office Norfolk, 1949

I recommend that the following objects which have ~~been~~ been inspected from seaward to determine their value as landmarks be charted on ~~(deleted from)~~ the charts indicated.

The positions given have been checked after listing by C. Theurer

S. V. Griffith Chief of Party

CHARTING NAME	STATE	DESCRIPTION	SIGNAL NAME	POSITION				METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED	
				LATITUDE		LONGITUDE								DATUM
				°	'	°	'							
T-8067	Virginia - James River	Tank		36	58	76	38	1594.9	NA 1927	Triang. CP 693	1932			529
		Stack		36	59	73	37	593.7	"	Photo 8067	1944			529

(Chart Letter 917(49))