

8080

Virginia

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric Air Photographic  
(Shoreline)

Field No. .... Office No. T-8080

LOCALITY

State Virginia

General locality Chickahominy River

Eagle Bottom to Big Marsh Point

Locality Morris Creek and Kennon Creek

1944

CHIEF OF PARTY

Fred. L. Peacock

LIBRARY & ARCHIVES

DATE .....

## DATA RECORD

T- 8080

Quadrangle (II): Toano, Va. 15' quad.

Project No. (II): CS-283

Field Office: Air Photographic Party No. 2 Chief of Party: Fred. L. Peacock

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 and Nov. 24, 1942Copy filed in Descriptive  
Report No. T- — (VI)Completed survey received in office: *Nov 8/1944*Reported to Nautical Chart Section: *11/8/44*Reviewed: *27 May 46* Applied to chart No. Date:~~Redrafting Completed:~~Registered: *5/47*

Published:

Compilation Scale: 1:10,000

Published Scale:

Scale Factor (III): None

Geographic Datum (III): N.A. 1927

Datum Plane (III): Mean Sea Level

Reference Station (III): WALKER, 1932, r. 1934, r. 1942

Lat.:  $37^{\circ} 19' 59.355''$  (1829.8 m) Long.:  $76^{\circ} 53' 56.152''$  (1382.3 m) Adjusted  
~~1829.8 (19.9) meters~~ ~~1382.3 (94.8) meters~~ ~~Unadjusted~~State Plane Coordinates (VI): *Virginia South Zone* $X = 2,465,480.04$  ft. $Y = 367,962.78$  ft.

Military Grid Zone (VI) —

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Eastern Standard Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
7533 to 7537 incl.	11/25/41.	11:22 a.m.	1:10,000	0.6' above M.L.W.
7541 and 7542	"	11:30 a.m.	"	" above M.L.W.
7543 and 7544	"	11:34 a.m.	"	0.5' above M.L.W.
7658 to 7660 incl.	"	1:50 p.m.	"	0.1' above M.L.W.
7766	11/26/41	11:50 a.m.	"	1.0' above M.L.W.
7805 and 7806	"	12:29 p.m.	"	0.7' above M.L.W.
7807 to 7810 incl.	"	12.35 p.m.	"	0.6' above M.L.W.
and 7818				
12983 to 12984	12/31/42	2:02 PM	1:20,000	0.3 " M L W

**Tide from (III):** Predicted tables, reference station Hampton Roads, Va. with corrections for Mt. Airy, Chickahominy River, Va.

**Mean Range:** 2.2'

**Spring Range:** 2.5'

**Camera: (Kind or source)** U.S. Coast and Geodetic Survey 9 lens camera  
(focal length 8 1/4")

All negatives on file at Washington Office

**Field Inspection by:** Lt. Comdr. Henry O. Fortin

**date:** Season 1943  
Feb.

**Field Edit by:** \_\_\_\_\_

**date:** \_\_\_\_\_

**Date of Mean High Water Line Location (III):** Date of photographs supplemented by field inspection data obtained in 1943. Seasons field inspection reports previously submitted.

**Projection and Grids ruled by (III)** P.J.H. (Washington Office) **date:** 9-27-44

" " " **checked by:** B.R.C. and J.T. **date:** 9-28-44  
(Washington Office)

**Control plotted by:** Mildred M. Trautman **date:** 10-2-44

**Control checked by:** Harold R. Brooks **date:** 10-3-44

**Radial Plot by:** J. Edward Deal, Jr. and A.C. Rauck, Jr. **date:** 10-13-44

**Detailed by:** A.C. Rauck, Jr. **date:** 10-13-44 to 11-3-44

**Reviewed in compilation office by:** Harold R. Brooks. **date:** 11-6-44

**Elevations on Field Edit Sheet**  
**checked by:** \_\_\_\_\_

**date:** \_\_\_\_\_

### STATISTICS (III)

Land Area (Sq. Statute Miles): Shoreline only

Shoreline (More than 200 meters to opposite shore): 12 statute miles

Shoreline (Less than 200 meters to opposite shore): 6 statute miles  
(measured along approximate center line streams)

Number of Recoverable Topographic Stations established: 8✓

Number of Temporary Hydrographic Stations located by radial plot: 27

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:**

See:

"Field Inspection of Air Photographs, James River and  
Tributaries, Va.; Season 1943; Proj. ES-283 - F.L. Peacock,  
Chief of Party" filed with Special Reports for this project.

This Map Drawing includes that portion of the Chickahominy River and its tributaries located between Eagle Bottom and Big Marsh Point. Also included are the shorelines and minor drainage of Morris Creek and Kennon Creek, most of which were beyond the field inspection limits. These small sections of the Morris and Kennon Creeks are also believed to be above the limit of small boat navigation.

## 26. CONTROL

Fourteen horizontal control stations were used to establish photograph centers, detail points, temporary hydrographic stations, and recoverable topographic stations on this Map Drawing. ~~Reference is made to the report for additional plotted stations.~~

Thirteen of these horizontal control stations are near or beyond the west limits of the Map Drawing and are of considerable distance from that portion of the Map Drawing in which the major part of the planimetric details lie.

The other station namely: WALKER, 1932, r. 1934, r. 1942 is the only station lying near the planimetric detail which has been compiled on this Map Drawing. This poor distribution of horizontal control stations required special treatment during the running of the radial plot.

A full discussion, concerning the methods used to establish strong secondary control points in the area of this Map Drawing will be found in the Descriptive Report of the Combined Radial Plot for Surveys Nos. T-8073, T-8074, T-8080, T-8081, and T-8082 of Project No. CS-283, which was forwarded to the Washington Office on October 31, 1944.

Three horizontal control stations lie within the limits of this Map Drawing. They are:

United States Coast and Geodetic Survey First Order Triangulation  
Station:

WALKER, 1932, r. 1934, r. 1942 (F.I.P. ABLE AND F.I.P. LER)

United States Geological Survey Temporary Traverse Stations

ROAD FORKS

MARKLES STORE, CROSSROADS AT

Those stations outside the limits of this Map Drawing are:

United States Coast and Geodetic Survey Second Order Triangulation  
Stations:

STURGEON POINT SQUARE BRICK STACK, 1938

\* STURGEON POINT LIGHT, 1938

BACHELOR POINT LIGHT, 1938

OLDFIELD, 1938

UPPER BRANDON FARM HOUSE ON WHARF, N.W. GABLE, 1938

BRIAR, 1938 F.I.P. WASP

MILTON LIGHT, 1938

26. CONTROL (Continued)

United States Geological Survey Temporary Traverse Stations:

FIVE FORKS, CENTER OF TRIANGLE AT

RUTHVILLE, CENTER OF CROSSROADS

SECOND CLASS ROAD EAST

United States Geological Survey Monumented Traverse Station:-

P.T.S. No. 54, 1916

27. RADIAL PLOT

The radial plot for this Map Drawing is part of the combined radial plot for Surveys Nos. T-8073, T-8074, T-8080, T-8081, and T-8082, the descriptive report for which was submitted to the Washington Office on October 31, 1944.

28. DETAILING

The shoreline and immediate adjacent planimetric detail of that part of the Chickahominy River and its tributaries shown on this Map Drawing have been detailed in accordance with the original instructions dated March 26, 1942, and the Director's letters dated July 15, 1942, and September 30, 1942, pertaining to Project No. CS 283.

The conventional full heavy-weight and full light-weight, black acid ink lines were used to differentiate between the Mean High-Water Line and the offshore limits of marsh.

Due to shadows, overhang of trees, bluffs, or poor photographs, the Field Inspection Unit was unable to accurately determine portions of the Mean High-Water Line and Marsh Line. These portions of the Mean High-Water Line and Marsh Line were indicated on the field photographs with dashed red lines for the undetermined Mean High-Water Line and dashed green lines for the undetermined Marsh Line. They were delineated by the Compiler from stereoscopic examination of the office photographs in conjunction with the available field inspection data. It is believed that these portions of the Mean High-Water Line and Marsh Line have been detailed on the Map Drawing within the limits of satisfactory accuracy.

Trees were not classified by the Field Inspection Unit except in the immediate vicinity of Morris Creek. The unclassified areas were delineated and shown with the conventional symbols and classified according to the Compiler's interpretation after comparison with classified areas of similar appearance. The classification of undergrowth in dense tree areas could not be delineated, except in the vicinity of Morris Creek.

28. DETAILING (Continued)

Roads were not classified by the Field Inspection Unit, but all roads shown on this Map Drawing have been detailed with the conventional double full line and double dash line symbol according to the Compiler's interpretation after examination of the Photographs and comparison with chart No. 530 and available topographic quadrangles.

Trails are shown with the conventional single dash line symbol.

All minor drainage not visible on the photographs was delineated with the aid of the stereoscope. As this drainage was not identified by the Field Inspection Unit it has been shown with a dashed, light-weight, black acid ink line, symbolizing probable drainage, not field identified.

All buildings adjacent to the shoreline have been detailed on this Map Drawing. Minor detail points, temporary hydrographic stations and recoverable topographic stations have been plotted on this Map Drawing by the usual radial line method.

A list of abbreviations used on this Map Drawing and their definitions will be found in the lower right hand margin.

29. SUPPLEMENTAL DATA

No supplemental data was furnished the compilation office for use in detailing this Map Drawing.

30. MEAN HIGH WATER LINE

The Mean High Water Line is shown on this Map Drawing with a full, heavy-weight, black acid ink line and the outer limits of marsh bordering the Mean High Water Line is shown with a full, light-weight, black acid ink line. This full light-weight line is the indication of low wet land at Mean High Water and is not to be considered the Mean High Water Line. It is referred to in this Descriptive Report as the Marsh Line.

At the north limits of this Map Drawing, at Big Marsh Point, it will be noted that no definite Mean High Water Line or Marsh Line has been delineated or shown bounding the cypress swamp area. No attempt was made by the Field Inspection Unit to determine the Mean High Water Line or Marsh Line in this area.

It was evident after stereoscope examination of the nine lens photographs, that no definite line could be delineated in this area, due to the large quantity of cypress trees growing in the water which obscured nearly all evidence of a Mean High-Water Line, or a Marsh Line.

The Mean High-Water Line or Marsh Line is not shown in this area,

*Limit of vegetation determined during review.*

*J. R.  
5/46*

30. MEAN HIGH-WATER LINE (Continued)

except in a few places where stereoscope examination revealed small sections of Marsh Line. These small sections have been shown with a full, light-weight line and the remainder of the limits of navigation in this area is detailed by showing the outer limits of vegetation, i.e.; cypress trees, growing in the water.

This cypress swamp at Big Marsh Point has been detailed in accordance with the U. S. Coast and Geodetic Survey, Field Memorandum No. 1, dated June 20, 1938, Fig. 3 (A).

31. LOW-WATER AND SHOAL LINES

No Mean Low-Water Line has been shown on this Map Drawing and none was indicated by the Field Inspection Data or was visible on the nine lens photographs.

It is noted that in the descriptive report for "Field Inspection Report of Air Photographs, Season 1943," by Lieutenant Commander Henry O. Fortin, a dotted green line on the Field Inspection Photographs, indicates a shoal line.

These shoal lines are shown on the Map Drawing with a short dash, light-weight, black, acid ink line, with the word "SHOAL" lettered within the shoal area. In places where the Field Inspection data indicated "MUD" in these shoal areas, the words "MUD SHOAL" were lettered within the area on the Map Drawing.

32. DETAILS OFFSHORE FROM THE MEAN HIGH-WATER LINE

All details offshore from the Mean High-Water Line, identified by the Field Inspection Unit has been shown on this Map Drawing.

Detail, such as cribbing, duck blinds, and cypress trees, were shown and, in some instances, radially plotted on the Map Drawing. Several of these offshore details were recommended by the Field Inspection Unit as temporary hydrographic stations or recoverable topographic stations and are shown with a 2.5 mm. black acid ink circle.

In several places the Field Inspection Unit indicated net areas and stake areas. These could not be seen on the office photographs and were transferred directly from the field inspection photographs by holding to common points of detail and are shown with a dotted, black, acid ink line enclosing the area.

One wreck is shown on this Map Drawing off the south shore of the Chickahominy River, in the vicinity of Mt. Airy. This is not shown with the conventional wreck symbol, but is radially plotted and shown with a 2.5 mm



32. DETAILS OFFSHORE FROM THE MEAN HIGH-WATER LINE (Continued)

black, acid ink circle as it has been selected as a temporary hydrographic station.

At another place off the south shore of the Chickahominy River, just south of Big Marsh Point, is an old shed. This has also been selected as a temporary hydrographic station and is shown as such.

33. WHARVES AND SHORELINE STRUCTURES

Piers, catwalks, and cribbing were identified by the Field Inspection Unit on the field photographs. These are detailed on the Map Drawing accompanied by appropriate notes. No other shoreline structures were visible on the office photographs.

34. LANDMARKS AND AIDS TO NAVIGATION

The following object was recommended by the Field Inspection Unit for charting as a landmark, and its radially plotted position is being submitted on Form No. 567:

70' BRICK CHIMNEY AT BRICKYARD ON NORTH BANK

No fixed aids to navigation were identified by the Field Inspection Unit within the area of this Map Drawing; none were visible on the office photographs, and none were charted on the U. S. Coast and Geodetic Survey Chart No. 530.

35. HYDROGRAPHIC CONTROL

The Compilation Office was furnished the identification of twenty-seven (27) temporary hydrographic stations and eight (8) recoverable topographic stations. These stations were identified on the 1:10,000 scale field photographs by numbers and their descriptions listed in a field sketch book (Form No. 274) by corresponding numbers. The field identified locations of these stations were transferred to the office photographs, and radially plotted on the Map Drawing. The numbers and descriptions of these stations have been noted near the station to which they refer, directly on the Map Drawing.

Form No. 524 is being submitted for each of the eight (8) recoverable topographic stations. They are:

. 70' BRICK CHIMNEY AT BRICKYARD (also Landmark), 1943/d)	
. NORTH GABLE, TWO STORY BRICK HOUSE	" "
. SOUTH GABLE, WHITE HOUSE	" "
. FORKED BUSHY CYPRESS (45')	" "
. EAST GABLE, UNPAINTED SMALL BARN	" "
. LONE CYPRESS, NORTH OF DUCK BLIND	" "
. CYPRESS TREE ON BIG MARSH POINT	" "
. PEAK OF ROOF, YELLOW COTTAGE	" "

36. LANDING FIELDS AND AERONAUTICAL AIDS

The Compilation Office has not been furnished any data for landing fields or aeronautical aids within the limits of this Map Drawing, and none were visible on the nine lens photographs.

37. JUNCTIONS

To the north - A satisfactory junction has been made with Map Drawing for Survey No. T-8081

To the east - A satisfactory junction has been made with Map Drawing for Survey No. T-8074

To the south - A satisfactory junction has been made with Map Drawing for Survey No. T-8079

To the west is the Map Drawing for Survey No. T-8083. There is no shoreline and adjacent planimetric detail falling at the junction between these two Map Drawings.

38. GEOGRAPHIC NAMES

As instructed, no geographic names investigation was furnished the Compilation Office.

The geographic names shown on this Map Drawing were obtained from the following available sources, namely:

U. S. COAST AND GEODETIC SURVEY CHART NO. 530, dated March 6, 1944  
U. S. GEOLOGICAL SURVEY, TOANO, VA. 15' QUADRANGLE, edition of 1930

A list of geographic names, believed to be undisputed, is attached to this descriptive report.

39. HORIZONTAL ACCURACY

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

40. RECOMMENDATION FOR FUTURE SURVEYS

This rough draft, shoreline survey for the Map Drawing of Survey No. T-8080 is believed to be complete in all details for charting and no other surveys are deemed necessary.

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

Comparison was made with the U. S. Geological Survey, Toano, Va. 15' quadrangle, scale 1:62,500, edition of 1930. Due to scale difference a visual comparison only could conveniently be made. All common shoreline detail and adjacent planimetry was in good agreement.

45. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with the U. S. Coast and Geodetic Survey Chart No. 530, scale of 1:40,000, dated March 6, 1944.

The following differences were noted:

There is a difference between the Map Drawing and the Chart as to the manner in which Parsons Creek empties into the Chickahominy River. The Map Drawing shows the creek as flowing into the Chickahominy River by a northern branch of the creek which is shown on the chart as a stream thread. The part of the creek which is shown on the chart as flowing into the Chickahominy River is not shown connected to the main creek on the Map Drawing.

At Big Marsh Point, a definite marsh line is shown bounding the marsh or swamp area shown on the chart. This marsh or swamp line has not been delineated and shown on the Map Drawing. (See par. 30, entitled "Mean High-Water Line".)

Off the small marsh area on the north shore of the Chickahominy River, west of Watts Point, there appears on the chart a very small marsh island. This island could not be seen on the nine lens office photographs and is not shown on the Map Drawing.

The chart shows a marsh island in the Chickahominy River, approximately 0.5 mile east of Mt. Airy. This has been identified by the Field Inspection Unit as a mud bar and is shown on the Map Drawing as a shoal area with the words "MUD BAR, SHOAL" lettered within the shoal area. *Now shown as marsh Id.*

Southwest of this shoal area, just off the south shore of the Chickahominy River, a wreck has been shown on this Map Drawing, as a temporary hydrographic station. The position of this wreck has not been charted on Chart No. 530.

All other common shoreline detail, (mean high-water line and marsh or swamp line) and adjacent planimetry are in good agreement.

*The landmark, the 70' brick chimney, is not shown.*

Respectfully submitted:  
November 4, 1944

Albert C. Rauck, Jr.  
Albert C. Rauck, Jr.  
Senior Photogrammetric Aid

Compilation and Descriptive  
Report, Reviewed by:

Harold R. Brooks.  
Harold R. Brooks  
Senior Engineering Aid

Compilation of Map Drawing  
Supervised by:

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

Approved and Forwarded:  
November 7, 1944

Fred. L. Peacock  
Fred. L. Peacock  
Chief of Party, C & G Survey  
Officer in Charge  
Baltimore Photogrammetric Office



GEOGRAPHIC NAMES

(Undisputed)

- Barrows Creek
- Big Marsh Point
- Chickahominy River
- Eagle Bottom
- Kennon Creek
- Morris Creek
- Mt. Airy
- Old Neck Creek
- Parsons Creek
- Parsons Island
- Sunken Marsh
- Watts Point

• " - Road

Names preceded by • are  
approved L. Heck  
5/12/47

## Division of Photogrammetry

### Review Report

#### Shoreline Survey T-8080

#### 28. Detailing.

The 1:20,000 scale photographs 12983 and 12984 taken in December 1942 became available after this manuscript had been compiled. Although they contained no field inspection data, they were very useful during review in correcting the shoreline detail and bringing it up-to-date. All additions and corrections made during review have been shown in red.

#### 30. Mean High Water Line.

The shoreline at Big Marsh Point was shown with a dash line because the compiler and field inspector considered it indefinite. During review, it was found possible to determine a definite limit of vegetation by using the newer 1:20,000 scale photographs and by examining the 1:10,000 scale photographs under the stereoscope. The shoreline was then corrected and shown with a solid line.

The mud bar at Lat.  $37^{\circ}21.1'$ , Long.  $76^{\circ}54.4'$  was redetailed and shown as a marsh island. This interpretation is more consistent with that of other marsh areas visible on the photographs and also agrees with the previous topographic survey.

#### 32. Details Offshore from the High Water Line.

Some cypress trees growing in the water offshore and a duck blind at Lat.  $37^{\circ}21.6'$ , Long.  $76^{\circ}54.1'$  have been added during review.

#### 34. Landmarks and Aids to Navigation.

One landmark "70 foot brick chimney" recommended for charting in Chart Letter # 279-1946 has not been shown on chart # 530.

#### 40. Comparison with Previous Topographic Surveys.

T-1337a & b (1873-5), 1:20,000, and T-2729 (1906), 1:20,000, are superseded completely except for contours and detail further inshore than that shown on this survey.

45. Comparison with Nautical Charts.

T-8080 has not been applied to chart 530 prior to review.

Note:

This shoreline survey has been reproduced and printed from the original compilation without redrafting.

Reviewed by:

Reviewed under direction of:

Jack L. Rihn 5/27/46  
Jack L. Rihn  
Photogrammetrist

S. V. Griffith  
S. V. Griffith  
Chief, Review Section

APPROVED BY:

B. J. Jones 5/47  
Technical Assistant to the  
Chief, Div. of Photogrammetry

J. H. Huntington  
Chief, Nautical Chart Branch  
Division of Charts

K. T. Adams  
Chief, Div. of Photogrammetry

C. K. Green  
Chief, Div. of Coastal Surveys 1947

## NAUTICAL CHARTS BRANCH

SURVEY NO. 8080

### Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.