

8096

Diag. Cht. No. 78-4

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Air Photographic (Shoreline)

Field No. _____ Office No. T-8096

LOCALITY

State Virginia

General locality James River

Locality Dutch Gap Cutoff - Falling Creek

1941-'43

CHIEF OF PARTY

H.O. Fortin, Chief of Field Party

F.L. Peacock, Balto. Photo. Office

LIBRARY & ARCHIVES

DATE June 14, 1950

B-1870-1 (1)

8096

DATA RECORD

Form T-1

T-8096

Quadrangle (II): Drewrys Bluff, Virginia
(U.S.G.S.) (7 $\frac{1}{2}$ minute)

Project No. (II): CS-283

Field Office:

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

Air Photographic Party No. 2

Compilation Office:

Chief of Party: Fred. L. Peacock

Baltimore Photogrammetric Office

Instructions dated (II III):

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

March 26, 1942 - July 15, 1942

Sept. 30, 1942 - Nov. 14, 1942 - Nov. 24, 1942.

Completed survey received in office: 9-26-44

Reported to Nautical Chart Section:

Reviewed: 12-23-48

Applied to chart No. 531

Date: Partially 4-4-45
Completely 2-4-47

Redrafting Completed:

Registered: 6-1-50

Published:

Compilation Scale: 1:10,000

Published Scale:

Scale Factor (III): None

Geographic Datum (III): N.A. 1927

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

Reference Station (III): CREEK, 1942, r. 1943

Lat.: 37° 24' 21.33" 657.6m. Long.: 77° 23' 58.84" 1447.2m. Adjusted
37° 24' 21.329.6m. 77° 23' 58.856.2m. Unadjusted

State Plane Coordinates (VI): Virginia South Zone

X = 2,319,595.54

Y = 392,373.30

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
7590-7591	11-25-41	12:27 P.M.	1:10,000	2.0' above M.L.W.
7593	11-25-41	12:27 P.M.	1:10,000	2.0' above M.L.W.
7621-7622	11-25-41	1:04 P.M.	1:10,000	1.6' above M.L.W.
7631	11-25-41	1:20 P.M.	1:10,000	1.4' above M.L.W.

Tide from (III); Predicted tables, Reference Station - Washington, D. C., with corrections for Kingsland Creek Entrance, James River, Virginia.

Mean Range; 3.5 feet

Spring Range; 4.0 feet

Camera: (Kind or source) U.S.C. & G.S. nine lens camera (focal length $8\frac{1}{4}$ "). All negatives are on file in the Washington Office.

Field Inspection by: Lieut. Commander 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: May 4, 1944
Washington Office

" " " checked by: B.R.C. Washington Office date: May 4, 1944

Control plotted by: J.E. Sunderland & A. C. Rauck, Jr. date: May 15, 1944
Aug. 7-14, 1944

Control checked by: W. E. Schmidt & J. E. Deal, Jr. date: May 16, 1944
Aug. 7-14, 1944

Radial Plot by: J. E. Deal, Jr., A. C. Rauck, Jr. date: Aug. 7-14, 1944

Detailed by: H. R. Brooks date: Aug. 15-22, 1944
Sept. 8-18, 1944

Reviewed in compilation office by: A. C. Rauck, Jr. date: Sept. 19-21, 1944

Elevations on Field Edit Sheet
checked by: None

date:

STATISTICS (III)

Land Area (Sq. Statute Miles): Shoreline only.

Shoreline (More than 200 meters to opposite shore): 12.6 Statute Miles.

Shoreline (Less than 200 meters to opposite shore): 5.0 Statute Miles.
(Measured along approximate centerline of stream).

Number of Recoverable Topographic Stations established: 28

Number of Temporary Hydrographic Stations located by radial plot: 32

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:

Field Inspection

Field inspection data for the area of T-8096 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 the Division of Photogrammetry, General Files.

26 CONTROL:

This Map Drawing includes that portion of the shoreline and adjacent planimetry of the James River and its tributaries falling between "Aiken Swamp - Dutch Gap Cutoff" and Falling Creek.

The following horizontal control stations fall within the limits of the Map Drawing.

United States Coast and Geodetic Survey Second Order
Triangulation Stations:

- ✓ CHAFFIN, 1942-1943, r. 1943
- ✓ CREEK, 1942-1943, r. 1943
- ✓ DREWRY, 1942-1943

United States Coast and Geodetic Survey Triangulation Inter-
section Stations:

- (Not on T-8094) → Falling River Light, 1943 — See Review Report.
- ✓ CUPOLA - GRAY ELEVATED WATER TANK, 1942-1943
 - ✓ SHELL OIL CO., RED BRICK STACK, 1942-1943
 - ✓ SILO No. 1, WHITE, N. END OF LARGE GRAY BARN
1942-1943, r. 1943
 - ✓ SMALL BLACK STACK, 1942-1943
 - ✓ W.LY. OF 2 RED TWIN SILOS, 1942-1943, r. 1943
 - ✓ WOODEN TOWER, 1942-1943
 - ✓ SILO No. 2 at S. CORNER OF GRAY ROOFED BARN, 1942, r. 1943

United States Geological Survey Temporary Traverse Stations:
(All were established in 1937 and recovered in 1942-1943):
See Review Report

278	440A
283A	443A
332	447+
338+	451
343A	453A
349+	473+
353+	477+
392A	493+
437A	496+

Corps of United States Engineers Stations:

- ✓ JR 47, ^{USE}r. 1938, 1942, 1943 (Monumented station)
(Date established unknown)

JR 25, r. 1938, 1942, 1943 (Date established unknown)
Mark is gone but station can be located by measurements
from reference points. Deleted. See Review Report

26 CONTROL: (Cont'd.)

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

United States Coast and Geodetic Survey Second Order
Triangulation Stations:

DUTCH, 1932
HARR, 1942-1943
STONEMAN, 1943, r. 1943
BETHEL, 1942, r. 1943

United States Coast and Geodetic Survey Triangulation Inter-
section Stations:

CHIMNEY, WHITE HOUSE, RED ROOF, 1942, r. 1943
DUTCH GAP LIGHT, 1942, r. 1943

United States Geological Survey Monumented Stations:

RICHMOND B. M. No. 50, 1932
RICHMOND B.M. No. 660
P.T.S. TT6T, 1937, r. 1943

United States Geological Survey Temporary Traverse Stations
(All were established in 1937 and recovered in 1942-1943):

265A
272A
326+
328+
434+

The above listed horizontal control stations, both inside and outside the limits of the Map Drawing, were used to establish photograph centers, secondary control points, and detail points.

27 RADIAL PLOT:

The radial plot for this Map Drawing is part of the combined Radial Plot for Surveys Nos. T-8089, T-8090, T-8091, T-8094, T-8095, and T-8096, the Descriptive Report for which was submitted to the Washington Office on September 1, 1944. Filed in Div of Photogrammetry -
General Files

28 DETAILING:

The shoreline and immediate adjacent culture of the part of the James River shown on this Map Drawing has 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. Filed in Div. of Photogrammetry - Office Files

Positions of minor detail points, temporary hydrographic stations and recoverable topographic stations were determined by the usual radial line method.

The shoreline data furnished the Compilation Office by the Field Inspection Unit were transferred to the office photographs. Portions of the Mean High-Water Line which could not be definitely identified by the Field Inspection Unit were shown on the field inspection photographs by red dashed lines. These undetermined sections of shoreline were delineated, with the aid of the stereoscope, from the nine lens office photographs. It is believed that the position of the Mean High-Water Line in these areas, as shown on the Map Drawing, has been accurately determined by the compiler.

All drainage falling within the area of this Map Drawing, which flows into the James River and its tributaries has been detailed. Drainage not identified by the Field Inspection Unit has been shown with a light weight dashed acid ink line.

Roads were classified and shown according to the compiler's interpretation from the nine lens photographs after comparison was made with available charts and topographic quadrangles.

Tree areas were interpreted by the compiler, in a like manner, and these have been detailed and shown with the conventional symbols.

All buildings immediately adjacent to the shoreline have been detailed. Buildings which were believed to be located at a sufficient elevation so as to be visible from the navigable waters have also been detailed.

A bridge, a part of which falls within the area of this Map Drawing and which did not exist on the date the nine lens photographs were taken, is detailed on this Map Drawing. See the Descriptive Report for Map Drawing, Survey No. T-8089, paragraph 28, for full details.
See Review Report for T-8089

The number of nine lens photographs covering the area of this Survey was sufficient to adequately compile the Map Drawing. Their average scale was in good agreement with the scale of the Map Drawing projection. The spacing of the photographs provided fairly good center chamber coverage for the area detailed on the Map Drawing.

28 DETAILING: (Cont'd.)

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:

The conventional full, heavy-weight and light-weight black acid ink lines have been used to differentiate between the Mean High-Water Line and the outer limits of marsh bordering the Mean High-Water Line, respectively. The light-weight line is an indication of the outer limits of low wet land at Mean High-Water and is not to be considered to be the Mean High-Water Line.

According to a letter from Lieutenant Commander H. O. Fortin, dated February 11, 1943, the indefinite shoreline, mentioned previously in paragraph 28, could not be interpreted by the Field Inspector due to shadows, overhang of trees, bluffs, or poor photographs; and sometimes a combination of all four. These indefinite sections of shoreline were carefully examined under the stereoscope by the compiler and the resulting interpretation supplemented by the Field Inspector's interpretation was then detailed on the Map Drawing with a full, heavy-weight line.

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.

Several mud areas, identified by the Field Inspection Unit, are outlined on the Map Drawing with a light-weight, dotted, black acid ink line and labeled "Mud".

Several "grass in water" areas are shown by the conventional symbol.

32 DETAILS OFFSHORE FROM THE HIGH WATER LINE:

Several piling areas, identified by the Field Inspection unit, have been detailed and labeled on the Map Drawing. The extent to which

32 DETAILS OFFSHORE FROM THE HIGH-WATER LINE: (Cont'd.)

these piles bare or cover at Mean High-Water was not furnished the Compilation Office.

33 WHARVES AND SHORELINE STRUCTURES:

Numerous jetties, piers, and catwalks were identified by the Field Inspection unit on the field photographs. These are detailed on the Map Drawing, accompanied by appropriate notations. No other shoreline structures were visible on the office photographs.

34 LANDMARKS AND AIDS TO NAVIGATION:

There are no objects recommended for charting as landmarks within the limits of this Map Drawing. See Chart Letter 275(46) for recommendation of the hydrographic party

Falling within the limits of this Map Drawing are the following Fixed Aids to Navigation which have been radially plotted:

Falling Creek Light, Fl. W., 5 sec. James River Lt 165
James River Light No. 141, Fl. W., 5 sec. James River Lt 163
James River Light No. 138, Fl. W., 5 sec. James River Lt 158
Chaffin Bluff Light, Fl. W., 5 sec. James River Lt 160
James River Light No. 137, Fl. W., 5 sec. James River Lt 157
(Kingsland Creek Light in Light List)
James River Light No. 136, Fl. W., 5 sec. James River Lt 156
(Kingsland Reach Light in Light List)
Dutch Gap Light No. 3, Fl. W., 5 sec. James River Lt 153
(Aiken Swamp Cut 3 in Light List)
Dutch Gap Light No. 4, Fl., R., 5 sec.
(Aiken Swamp Cut 4 in Light List) see Descriptive Report
for Map Drawing, Survey No. T-8089.

Form No. 567 is being submitted for the above eight lights.
Chart Letter 678(44)

The following two lights are shown on U. S. C. & G. S. Chart No. 531, and are listed in the 1944 Light List. They were indefinitely located by the Field Inspection unit and, therefore, were not radially plotted on the Map Drawing. See the note for each on the Map Drawing. They are:

James River Light No. 135, Fl. W., 5 sec.
Drewrys Bluff Light, Fl. W., 5 sec.

A Fixed Aid to Navigation, namely: "Shell Oil Co. Pier", "3 F.G.", is shown on Chart No. 531, issued March 6, 1944. The Field Inspection unit did not furnish the Compilation Office an identified location for this

34 LANDMARKS AND AIDS TO NAVIGATION: (Cont'd.)

light. The Shell Oil Company Pier has been detailed and a pertinent note has been lettered on the Map Drawing calling attention to the approximate location of the above named light. Form No. 567 or Form No. 524 are not being submitted.

See Review Report.

35 HYDROGRAPHIC CONTROL:

The Compilation Office was furnished the identification of thirty-two (32) Temporary Hydrographic Stations and ^{eight}~~nine~~ (9) Recoverable Topographic Stations. These 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. 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.

^{Seven}~~Eight~~ (8) of the ^{eight}~~nine~~ (9) Recoverable Topographic Stations shown on this Map Drawing, are the Fixed Aids to Navigation listed first under paragraph No. 34 "Landmarks and Aids to Navigation". The one other station is: *S. Gable,*

S. GABLE, ~~ONE STORY WHITE HOUSE~~, 1943

Form No. 524 is being submitted for these ^{eight}~~nine~~ (9) Recoverable Topographic Stations. *General Files, Div. Photogr.*

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 -- Junction will be made with the contemplated Map Drawing, Survey No. T-8097 when the compilation for that Map Drawing is being detailed. *Junctin checked during review*

To the east -- The junction with Map Drawing, Survey No. T-8089, is in satisfactory agreement.

To the south -- The junction with Map Drawing, Survey No. T-8095, is in satisfactory agreement.

To the west -- No contemporary survey.

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

As instructed, no Geographic Names Investigation was furnished the Compilation Office by the Field Inspection unit. The geographic names shown on the Map Drawing were taken from the United States Coast and Geodetic Survey Chart No. 531, dated March 6, 1944, and United States Geological Survey Drewrys Bluff, Va., 7½ minute Quadrangle, surveyed in 1938. A list of undisputed geographic names and a list of of disputed geographic names are attached to this Descriptive Report.

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:

This rough draft, shoreline Survey for the Map Drawing, Survey No. T-8096, 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 United States Geological Survey, Drewrys Bluff, Va., 7½ minute Quadrangle, scale 1:24,000, surveyed in 1938, advance unedited edition. The following differences were noted:

On the west shore of the James River, just north of Proctors Creek, a small swamp area is shown on the Quadrangle. In this area a definite stream is visible on the nine lens photographs and it has been detailed on the Map Drawing. ✓

On the east shore, directly across the river from the above, a large sand and gravel pit was indicated by the Field Inspection Unit and is shown on the Map Drawing. This is not shown on the United States Geological Survey Quadrangle.

All other shoreline detail and immediate adjacent planimetry are in good agreement.

45 COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with the United States Coast and Geodetic Survey Chart No. 531, scale 1:20,000, dated March 6, 1944. The following differences were noted:

45 COMPARISON WITH NAUTICAL CHARTS: (Cont'd.)

The stream and the sand and gravel pit mentioned in paragraph No. 44 do not appear on the chart.

At latitude $37^{\circ} 23' 40''$ and longitude $77^{\circ} 23' 00''$ a break, in the shoreline indicating an inlet, is shown on the chart. This break is not visible on the nine lens photographs and, therefore, is not shown on the Map Drawing

The large marsh area shown on the chart on the west side of the James River, north of Proctor's Creek is not visible on the office photographs. The large swamp in the vicinity of Cornelius Creek shown on the Map Drawing is not shown on the chart.

Respectfully Submitted:
September 22, 1944

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

Compilation and Descriptive
Report, Reviewed By:

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

Compilation of Map Drawing,
Supervised By:

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

Approved and Forwarded:
September 26, 1944

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

T 8096

GEOGRAPHIC NAMES

(Undisputed)

- ✓. Chaffin Bluff
- ✓. Coles Run
- ✓. Cornelius Creek
- ✓. Drewrys Bluff
- ✓. Falling Creek
- ✓. Hatcher Road
- ✓. James River
- ✓. Kingsland Creek
- ~~✓. Kingsland Beach~~
- ✓. Kingsland Road
- ✓. Osborne Turnpike
- ✓. Proctor Creek

• Aiken Swamp - Dutch Gap Cutoff

Names preceded by •
are approved. 12/10/48
L. Heck

T8096

GEOGRAPHIC NAMES

(Disputed)

Recommended

• Aiken Swamp - Dutch Gap Cutoff

Disputed

Dutch Gap Channel

Descriptions of Photo-Hydro Stations
T-8096

- 34 - End of grass on stone jetty, S. of light.
- 35 - Capstan on top of dolphin, E. of pier, on W. side of river.
- 36 - W. gable of dark roofed house on S. side of river. House is on top of high bank.
- 37 - N. gable of dark gray boat house on S. side of river.
- 38 - W. gable of red roofed house with white end.
- 39 - Outer end of jetty on S. side of river. There is a large, flat stone close to the end of the jetty.
- 40 - Outer end of second jetty E. of No. 39
- 41 - Center, outer end of jetty, first one S. of old pier.
- 42 - Center, outer end of jetty, first S. of old pier.
- 43 - Center, outer end of jetty, second N. of light.
- 44 - Center, outer end of jetty, second S. of light.
- 45 - Center, outer end of jetty, first N. of catwalk.
- 46 - Center, outer end of jetty, first N. of old pier.
- 47 - Center, outer end of jetty, third N. of No. 46
- 48 - N. gable of house with dark roof and light sides. First one S. of light.
- 50 - Boat house, W. end, red gable.
- 52 - Center, outer end of jetty, first one W. of houseboat in bight.
- 52A - Outer end of catwalk
- 52B - End of old pier.
- 53 - W. gable, green roof, white sides. S. side of river.
- 54 - Center, outer end of jetty, first N. of catwalk
- 55 - Center, outer end of jetty, second N. of No. 54
- 56 - Center, outer end of jetty, second N. of No. 55
- 57 - Center, outer end of jetty, opposite light.
- 801 - NE. gable of bungalow with white trim. Gable faces river.
- 802 - End of abandoned catwalk.
- 803 - Tip of bank, S. end.
- 804 - End of second jetty N. of entrance to gravel pit.
- 807 - End of first jetty going NW on river.
- 808 - End of abandoned catwalk.
- 809 - End of jetty, second below catwalk.
- 810 - End of fifth jetty below light.

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

STRIKE OUT ONE

Baltimore, Maryland
Sept. 19 1944

I recommend that the following objects which have ~~(1785-1786)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(detached from)~~ the charts indicated.

The positions given have been checked after listing by

Copy of chart letter 678 (44) for Aids on T-8096

Fred L. Peacock

Chief of Party.

[illegible]

Division of Photogrammetry
Review Report of
Shoreline Map Manuscript T-3096

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

26 - Control. - All unmarked U.S.G.S. temporary traverse stations were removed from the map manuscript.

The station "JR 25 (USE), 1938", was removed from the map manuscript. The station marker is lost.

The radially plotted position for Falling Creek Light (New name - James River Light 165) does not agree with the position for triangulation station Falling Creek Light, 1943, a "no check position." The light is clearly identified on the photograph and a good radial intersection was obtained. This position has been accepted and Geodesy has been notified.

34 - Land Marks and Aids to Navigation. - A copy of Chart Letter 678 (44) was prepared and made a part of the descriptive report.

The names of all aids to navigation along the James River in the area covered by the map manuscript have been changed. The new Light List names have been shown on the map manuscript.

The approximate positions of three lights were deleted from the map manuscript. These lights could not be accurately identified on the photographs.

37 - Topographic and Photo-Hydro Stations. - A list of descriptions of photo-hydro stations was prepared and made a part of the descriptive report.

44 - Comparison with Existing Surveys:

USGS Drewrys Bluff Quadrangle	1:31680	1943
T- 428	1:10,000	1853
T-1439	1:10,000	1877
H-3227	1:10,000	1911
H-3241	1:10,000	1911

Common features on all previous surveys are superseded by the map manuscript in common area. *for nautical charting purposes.*

45 - Comparison with Nautical Charts:

Chart No. 531	1:20,000.	1947
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A new landmark "Stack", has been shown on the nautical chart. Chart Letter 275(46).

51 - Application to Nautical Charts. - The map manuscript has been applied to the nautical chart.

Reviewed by:

Charles Heurer
C. Heurer
12-25-48

S. V. Griffith
S. V. Griffith *R.H.M.*
Chief, Review Section

Approved by:

H.C. Jones, Tech. Asst.
H.C. Jones, Tech. Asst.
Chief, Div. of Photogrammetry

A. R. Edmonston
A. R. Edmonston
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