

8168

Diag. 1221-2

8168

Form 504 Rev. June 1941 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Air Photographic Plane Table Hydrographic	Sheet Survey No. T-8168 (Field)
VIRGINIA  WALLOPS ISLAND QUADRANGLE  N3745-W7522.5/7.5	
LOCALITY	
State Virginia	
General locality Wallops Island	
Locality	
1942	
CHIEF OF PARTY	
Lieut. Comdr. Kenneth G. Crosby	

U. S. GOVERNMENT PRINTING OFFICE 315681

September 19, 1945

## DATA RECORD

T- 8168

Quadrangle (II): Wallops Island

Project No. (II): CS-278-C

Field Office: Salisbury, Md.

Chief of Party: F. L. Gallen

Compilation Office: Tampa, Fla.

Chief of Party: Kenneth G. Crosby

Instructions dated (II III):

Mar. 4, Mar. 27, Aug. 13, 1942

Copy filed in Descriptive

Report No. T- (VI)

Completed survey received in office: 10/12/42

Reported to Nautical Chart Section: 10/12/42

Reviewed: 1/25/43

Applied to chart No.

Date:

Redrafting Completed: 3/19/43

Registered: 9/12/45

Published: 7/15/43

Compilation Scale: 1:20,000

Published Scale: 1:31,680

Scale Factor (III): Unity

Geographic Datum (III): N.A. 1927 Datum Plane (III): Mean sea level

Reference Station (III): ASSAWOMAN 4, 1934

Lat.:  $37^{\circ}-49'-50.30''$  (1550.8 m) Long.:  $75^{\circ}-29'-33.15''$  (810.2 m) ~~adjusted~~  
 Unadjusted

State Plane Coordinates (VI):

Virginia South Zone

X = 2868486.68

Y = 558990.07

Military Grid Zone (VI) "A"

PHOTOGRAPHS. (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
9065	4/22/42	1:59	1:20,000	1.9
9066	4/22/42	2:01	1:20,000	1.9

Tide from (III): Chincoteague Inlet, Virginia (Predicted tides)

Mean Range: 2.6' Spring Range: 3.1'

Camera: (Kind or source) C. & G. S. 9 lens

Field Inspection by: C. Silver date: June & July 1942

Field Edit by: G. C. Fryer date: October 1942

Date of Mean High-Water Line Location (III): 4/22/42

Projection and Grids ruled by (III) Washington Off. date:

" " " checked by: Washington Office date:

Control plotted by: C.A.P.J. V.F.S. date: Sept. 1942

Control checked by: A.L.K., E.L.M., V.F.S. date: Sept. 1942

Radial Plot by: Tampa Office date: Sept. 1942

Detailed by: V.F.S. date: Sept. 1942

Reviewed in compilation office by: E.L.M. date: Oct. 1942

Elevations on Field Edit Sheet  
checked by: Salisbury Office date: Oct. 1942

### STATISTICS (III)

Land Area (Sq. Statute Miles):	4.9
Shoreline (More than 200 meters to opposite shore):	11
Shoreline (Less than 200 meters to opposite shore):	21
Number of Recoverable Topographic Stations established:	3
Number of Temporary Hydrographic Stations located by radial plot:	none
Leveling (to control contours) - miles:	none

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:

DESCRIPTIVE REPORT  
TO ACCOMPANY  
SHEET NO. T-8168

GENERAL

The general locality of the area covered by this sheet is Wallops Island and the southwestern portion of Fishing Point.

Wallops Island consists mainly of marsh and pine, with beach on the eastern shore.

CONTROL

The following five triangulation stations fall within the tracing limits of the sheet and were used for control:

<u>STATION</u>	<u>YEAR</u>	<u>ESTABLISHED BY</u>
Wallops Beach C.G. Tower (Old)	1937	I. E. Rittenberg
Assawaman 4	1934	J. C. Tison, Jr.
Watch House	1909	- - - -
Bogue (V.F.C.)	1933	- - - -
Easy (V.F.C.)	1933	- - - -

MAIN RADIAL PLOT

A continuous main radial plot was laid on September 17 and 18, 1942, to locate radial points, hydrographic and topographic stations, bench marks, and photograph centers. The plot extended over the areas covered by Sheets Nos. T-8157, T-8158, T-8159, T-8160, T-8165, T-8166, T-8167 and T-8168.

The usual practice of laying the main radial plot was followed. This consisted of plotting and checking the control on the survey sheets and then transferring these points to the base grid sheets by matching individual grid squares. The amount of adjustment in each grid square was negligible. The base grid sheets were taped to the plotting table and allowed to remain for 24 hours. They were then picked up and retaped to the table because considerable movement had taken place. A final adjustment was made wherever necessary and all grid lines were matched.

The plot consisted of 35 nine-lens templates and four single-lens templates. The following list shows the number of triangulation stations which fell on each template:

<u>TEMPLATE</u>	<u>NO. OF TRIANGULA- TION STATION</u>
8537	15
8674	14
8576 and 8539	13
8673 and 9064	12
8700 and 9066	11
8577, 8536, 8781 and 5-221	10
8571, 8575, 8701, 8780 and 8782	9
8535 and 9065	8
4-146	7
8540, 8570, 8574, 8647, 8699 & 8986	6
Remaining Templates	1 to 5

Only about three percent of the radial lines failed to pass through their designated triangulation stations, and most of these shaded the control points.

This radial plot was excellently controlled by numerous, uniformly distributed triangulation stations. The most rigidly controlled templates were laid first, and the least rigidly controlled were laid last. Excellent agreement along the flight lines, as well as the intersections of the radial lines to adjacent photographic centers, was obtained throughout the plot.

Excessive tilt was encountered in the following photographs: 8700 (maximum displacement  $2\frac{1}{2}$  inches); 8701 (maximum displacement  $1\frac{1}{2}$  inches) 8575 (maximum displacement  $\frac{3}{4}$  inch). All of the other photographs show very little tilt.

The following five templates were omitted: 8538, 8572, 8579, 8675 and 8987. These templates were superfluous, ample excellent intersections already having been obtained by surrounding templates.

All of the intersections were transferred from the radial plot to the survey sheets by again matching the grid squares to those of the base grid sheets. Sixty percent of the points were located by common intersections of five to eight radial lines. Thirty-five percent of the points were located by common intersections of three to five radial lines. Four percent of the points were located by common intersections of two radial lines only and one percent of the points are indicated by one radial line only. This unusual condition occurs only on Sheet No. T-8157. The detailer will be required to investigate these points.

The western part of this plot joins a previously laid radial plot, and good agreement was obtained with previously located radial points.

The ample control, the excellent agreement along the flight lines, and the various points indicate that the positions of the radial points are not more than 0.25 m.m. from their correct location. No points were picked in triangles of error. Where such triangles of error occurred, radial lines were transferred on to the survey sheets, to be further investigated by the individual detailer.

Various colored inks were used on the mounted office prints and on the survey sheets to designate triangulation, traverse and topographic stations, etc. The following key is furnished for this information:

Photographs (Office Prints)

Triangulation & Traverse Stations.....	2.5 mm blue circle
Marked Hydro. & Topo. Signals.....	2.5 mm green circle
Radial Points (Main Plot).....	2.5 mm red circle
Radial Points (Additional).....	3.5 mm red circle
Photograph Centers.....	Double circle

Survey Sheets

Triangulation Stations.1.....	3.5 mm high black triangle
Hydro. & Topo. Signals.....	2.5 mm black circle
Radial Points (Main Plot).....	2.5 mm purple circle on back
Radial Points (Additional).....	3.5 mm purple circle on back
Radial Points (Questionable).....	3.5 mm green circle on back

This plot was laid by a Senior Engineering Aid, assisted by three

Photogrammetric Aids. The time consumed in laying this plot and transferring the radial points to the survey sheets amounted to  $63\frac{1}{2}$  man-hours.

#### FIELD INSPECTION

The field inspection was made by C. Silver in June 1942.

Field notes were sufficient for the delineation of the shoreline but were greatly lacking in other information necessary for the classification of vegetation.

#### JUNCTIONS

This sheet joins sheet T-8158 on the north and sheet T-8167 on the west. The southwest section of survey sheet T-8157 was extended beyond the detail limits of the sheet to take in Fishing Point, thereby making junction with this sheet on the east.

#### GEOGRAPHIC NAMES

The geographic names on this sheet were taken from U. S. Coast and Geodetic Survey Chart No. 1221.

#### LANDMARKS AND NON-FLOATING AIDS TO NAVIGATION

There are no prominent landmarks on this sheet.

Wallops Beach Coast Guard Cupola (old) recommended by field edit party.

Two beacons were plotted by sextant fixes on the sheet and their scaled geographic positions are shown on attached form 567.

Respectfully submitted,

*Vincent F. Simmons*  
Vincent F. Simmons

Forwarded by:

*Kenneth G. Crosby*  
Kenneth G. Crosby,  
Chief of Party.

Form 524, for  
Topographic Stations  
sent in by compilation party

Dec, 1942

Mar, 1942

Nov, 1942

## LANDMARKS FOR CHARTS

TO BE CHARTED  
TO BE DELETED } STRIKE OUT ONE

Tampa, Florida

Oct. 6, 1942, 19

I recommend that the following objects which have not 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.

~~Kenneth G. Crosby~~

**Chief of Party.**

[illegible]

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data shown shall be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.





FIELD EDIT REPORT  
Quadrangle T-8168  
F. L. Gallen, Chief of Party

5. There were no wye level lines run on this quadrangle because it was apparent on the field inspection that there were no points of elevation that would nearly approach a contour, or 20 foot elevation. The elevations shown on the manuscript were established by C. C. Fryer, Senior Photogrammetric Aid, during field edit to show the highest points on the sheet. This was done by a hand level and rod. These high points are the tops of shifting sand dunes and the maximum elevation found was 13 feet.
17. Political boundaries were obtained from maps issued by the Virginia State Roads Commission and were verified in the field.
18. All Geographic Names on this quadrangle have been covered in the Special Report on Investigation of Geographic Names, Virginia-Maryland, Cape Charles to Virginia-Maryland Line. Project CS-278-C (South) July 18, 1942.
19. A dredging project has been set up, and is now in progress to dredge out the channel, beginning at the south side of Bogues Bay through Assawoman Creek to Assawoman Inlet. Since the project is in its early stages additional information relative to it may be obtained from the War Department.
46. The field edit was done by making a visual inspection of the area. This area can only be traversed by foot, since it consists of low marshy ground and a small strip of a somewhat higher land on the east side.  
  
All corrections have been noted on the sheet with colored inks as follows: All deletions in green ink, additions in black ink, marsh areas in blue ink and elevations in brown ink.
48. There were no vertical or horizontal accuracy tests on this quadrangle. A horizontal accuracy test was run on compilations T-8159 and T-8154, which are the two nearest accuracy tests to this quadrangle.

Submitted by

C. C. Fryer per H. G.  
C. C. Fryer,  
Senior Photogrammetric Aid

Approved:

F. L. Gallen  
F. L. Gallen,  
Chief of Party

GEOGRAPHIC NAMES LIST FOR T-8168

Atlantic Ocean  
Assawaman Creek / Hog Creek - pending with USRB  
Assawaman Inlet  
Bogues Bay  
Cat Creek  
Chincoteague Inlet  
Fishing Point  
Hog Narrows = part of Assawaman Cr. as reported by field party  
Island Hole Narrows (Hog Creek on ch. 1241)  
Little Cat Creek  
Tom Cove ~~Pie Hammock~~  
Wallops Beach Pending with USRB  
Wallops Island  
" Beach C. 6 Sta.



NAMES FOUND IN GEOGRAPHIC NAMES REPORT  
NOT SHOWN ON COMPILATION

Gunboat Channel - on TR158

Pie Hummock added list on preceding page

Turners Lump (Turner Lump) = submerged feature to E.  
of this quadrangle



## Remarks.

## Decisions

1		378754
2		"
3		"
4		"
5		"
6		" USGB
7		"
8		"
9	Apply this instead of Assawamen Creek pending USGB decision: delete name Hog Narrows shown on compilation	"
10		"
11		"
12		378753
13	Apply this name instead of Assateague Anchorage pending USGB decision	"
14	Recent decision: Chincoteague Inlet no Ocean City .. L.H.	U.S.G.B.
15		
16		
17	added to Field Edit sheet in office Taken from	
18	Virginia Political dist maps 1941- H.S. 3/5/43	
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

# GEOGRAPHIC NAMES

Survey No. T-8168

WALLOPS ISLAND quadrangle

Name on Survey	A. On Chart No.	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	
✓ Wallops Island ✓									1
✓ Wallops Beach ✓									2
✓ Wallops Beach Coast Guard Station									3
✓ Bogues Bay ✓									4
✓ Island Hole Narrows ✓									5
✓ Assawamen Inlet									6
✓ Cat Creek ✓									7
✓ Little Cat Creek ✓									8
✓ Hog Creek ✓									9
✓ Pie Hammock ✓									10
✓ Chincoteague Inlet ✓									11
✓ Fishing Point ✓									12
✓ Tom Cove ✓									13
Assateague Island ✓									14
									15
METCALPARKIN	political	District							16
ATLANTIC	Political	District							17
CHINCOTEAGUE	Political	District							18
									19
									20
									21
									22
									23
									24
									25
									26
									27

## RECORDS

Between January, 1942 and July, 1944, this Bureau completed 323 quadrangles. These maps have been published, or are in the process of being published on scales of 1:31,680 or 1:25,000. This series of quadrangles includes a land area of approximately 15,000 square miles. Incident to this work, a considerable volume of survey records and data has accumulated which will be filed for future reference. This material is filed as follows:

### Registered and Filed in the Vault

Cloth-mounted copy of the published quadrangle.  
published quadrangle at 1:20,000 scale.  
Black and white cloth-mounted copy of the ~~map~~ <sup>published quadrangle at 1:20,000 scale.</sup>  
~~manuscript.~~ This copy is filed to preserve original survey detail shown on the manuscript at 1:20,000 scale which may not have been shown on the published sheet. For ~~political boundaries,~~ woodland, ~~marsh, and swamp limits,~~ refer to the published quadrangle for the finally adopted ~~positions.~~ outlines.

Descriptive Report.

Nautical Charts

Filed in the Photogrammetric Section - Surveys Branch

Field inspection photographs.

Contoured photographs (on which planetable contouring work was performed.)

Field edit sheet.

Descriptions of recoverable topographic stations (Form 524), filed in Reviewing Unit.

Supplementary traverse and level records.

Field notes, computations, lists of positions, and tabulations of results of horizontal and vertical accuracy tests.

Reproduction proof.

Correction sheet (copy of quadrangle showing in red changes to be made when next printed.)

Check lists of work performed on each sheet in the Washington Office during review, drafting, edit, and reproduction.

Original celluloid manuscript.

Copies of specifications and all instructions  
to field parties and field offices.

Filed in Reproduction Branch

Glass negatives of the color separation drawings.

Filed in the Library

~~Special report on field work by Commander K. T.  
Adams, 1944.~~

Special report on office work by B. G. Jones, 1944.

Season's report on field work by Commander F. L.  
Gallen, 1944.

Season's report on field work by Commander R. L.  
Schoppe, 1944. --

Delivered to the Army Map Service in accordance  
with the contract

Film negatives and film positives of the color  
separation drawings.

All color separation drawings.

~~Original celluloid manuscript.~~

A correction sheet consisting of a copy of the  
first edition of the quadrangle with notes in red  
indicating changes desirable at the next printing.



## General Procedure in the Production of Topographic Quadrangles for the War Department

This quadrangle, together with similar adjoining maps produced under Project C.S.278-Q was prepared by the Coast and Geodetic Survey for the War Department under "General Specifications for War Department Mapping Program" issued about December 1941, in which is incorporated the "Standard of Accuracy for a National Map Production Program" issued by the Bureau of the Budget under date of June 10, 1941.

The general procedure in the production of this and the adjoining quadrangles was:

### FIELD SURVEYS

Aerial photography with the Coast and Geodetic Survey nine-lens camera, with airplane and flight crew furnished by the U. S. Coast Guard. The photographs were taken to the scale of 1:20,000.

Ground inspection of the photographs for identification of control points, and classification and clarification of planimetric details on the photographs.

Contouring by planetable directly on the photographs. Supplementary vertical control was established by means of an extensive subordinate level net, furnishing unmarked elevations at road intersections, drive-ways, and numerous other points identifiable on the photographs.

### COMPILATION OF MANUSCRIPT

Compilation on the map manuscripts by radial plot methods (celluloid hand templates) of all planimetry and contours. These manuscripts were drawn on the scale of 1:20,000 on celluloid sheets on which polyconic projections had been ruled with the Projection Ruling Machine in the Washington Office. Compilation was accomplished in the ~~Baltimore~~ Tampa Photogrammetric Office.

### FIELD EDIT

Comparison of a copy of the manuscript with the ground. This included inspection for completeness and accuracy as well as the location by planetable methods of additional details, checking of nautical and aeronautical aids to navigation, etc.

Accuracy Tests - Application of systematic horizontal and vertical accuracy tests to check the maps for conformity with the specifications. These tests consisted of comparison of the map position and elevation of selected random points with the true position and elevation as independently determined by standard survey methods.

#### PROCESSING IN THE WASHINGTON OFFICE

Review - Examination of the manuscript for accuracy and completeness of compilation and compliance with specifications, correcting where necessary; addition of military and state grids and other special features; and verification of the general adequacy of the manuscript as a basis for the production of a finished map.

Drafting and Reproduction - Preparation of smooth color separation drawings on 1:20,000 scale on metal-mounted "blue-line" copies of the manuscript. From these drawings, negatives and printing plates were prepared for reproduction of the finished map on the scale of 1:31,680 or 1:25,000.

## DIVISION OF CHARTS

### SURVEYS BRANCH

#### REVIEW OF AIR PHOTOGRAPHIC SURVEY T-8168

##### WALLOPS ISLAND QUADRANGLE

This quadrangle manuscript has been examined for completeness, accuracy, and conformity with the specifications. It is adequate for smooth drafting, reproduction and publication. Revisions found to be necessary in this office are discussed on the next page.

Horizontal and Vertical Accuracy Refer to the Descriptive Report for quadrangle T-8159 for a copy of the results of the nearest horizontal accuracy test.

The nearest vertical accuracy test was performed on the field edit sheet for quadrangle T-8166.

##### Previous Surveys

This manuscript has been compared with the following previous topographic surveys of this Bureau and other agencies. This map is satisfactory to supersede the previous surveys over the common area.

T-522	1:20,000	1849	T-723	1:20,000	1858
T-523	1:20,000	1849	T-3094	1:20,000	1910
T-524	1:20,000	1849	T-2897a	1:20,000	1914
T-378	1:20,000	1851	T-2897	1:20,000	1908
T-492	1:20,000	1855	T-3533	1:20,000	1915
T-704	1:20,000	1857	T-3308	1:20,000	1911
T-589	1:20,000	1856	T-5201	1:20,000	1933

(Continued on next page)

##### Comparison with Nautical Charts No. 1221

The manuscript has not been applied to the charts at the date of this review. The following comments are pertinent to the compilation and correction of nautical charts:

Only minor changes were apparent during comparison of this chart with the manuscript.

The following revisions of the map manuscript were found to be necessary and were accomplished as a part of this review:

Only minor corrections were necessary during the review of this quadrangle.

Previous Surveys (Cont'd)

T-5194	1:20,000	1934	T-6237a	1:10,000	1934
T-5193	1:20,000	1934	T-6236	1:10,000	1934
T-4914	1:20,000	1934	T-6235	1:10,000	1934
Hallwood	1:62,500	1919	U.S.E.		

Reviewed 1/25/43  
under direction of D. H. Benson

By Peter L. Lenz  
per J.H.S.

Inspected by B. G. Jones B.G. Jones

Examined and approved:

Charles Peice  
Chief, ~~Surveys Branch~~  
CHART DIVISION

J. B. Gordon  
Chief, Div. of Charts

K.T. Adams  
Chief, Topography Section

Ramond B. Egan  
Acting Chief, Div. of Coastal  
Surveys

## NAUTICAL CHARTS BRANCH

SURVEY NO. T-8168

### 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.