

5654

77-3

Form 504  
Rev. Dec. 1933  
DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

AIR PHOTOGRAPHIC SURVEY

~~Topographic~~

~~Hydrographic~~

Sheet No. 5654

State MARYLAND

LOCALITY

CHESAPEAKE BAY

ELK RIVER

SOUTHERN PART

photography 1937<sup>1938</sup>

CHIEF OF PARTY

J. C. Partington.

U. S. GOVERNMENT PRINTING OFFICE: 1934

5654

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

REG. NO.

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. 5654

REGISTER NO. 5654

State MARYLAND T5654

General locality CHESAPEAKE BAY

Locality ELK RIVER SOUTHERN PART

Scale 1:10,000 Photographs APR 30  
Date of survey May 1, 1937

Vessel Air Photographic Survey Party No. 25

Chief of party J. C. Partington

Field Inspection J. C. Partington and E. L. Jones.

Surveyed by Compilation L. W. Swanson

Inked by L. W. Swanson

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated March 14, 1934

Remarks:

# STATISTICS

AIR PHOTOGRAPHIC SURVEY SHEET NO. 5654

STATE OF MARYLAND

CHESAPEAKE BAY, ELK RIVER

## AIR PHOTOGRAPHS:

	DATE	TIME
1148	4-30-37	10:53
1226-29	"	11:58-12:01
1315-19	"	3:05-3:07

SCALE FACTOR .965 ~~119,650~~ 9 J. C. Partington

PROJECTION Ruling Machine (Scale 1:10,000) Dec. 8, 1937  
Ruling Machine (Scale 1:9,650) Jan. 17, 1938

PROJECTIONS CHECKED Washington Office No date

CONTROL PLOTTED L. W. Swanson (Scale 1:10,000) Dec. 9, 1937  
L. W. Swanson (Scale 1:9,650) Jan. 19, 1938

CONTROL CHECKED J. C. Partington Dec. 10, 1937  
Jan. 20, 1938

RADIAL LINE PLOT L. W. Swanson Dec. 10, 1937 to Jan. 20, 1938

RADIAL LINE PLOT CHECKED J. C. Partington

PRELIMINARY REVIEW J. C. Partington

AREA (land) Square Statute Miles 18.0

AREA (shoals) Square Statute Miles 0.0

SHORELINE (More than 200m from opposite shore) Statute Miles 22.6

SHORELINE (Creeks) Statute Miles 7.0

ROADS, STREETS, TRAILS, and RAILROADS Statute Miles 56.1

DATUM North American 1927

REFERENCE STATION Turkey Point, 1845, 1896  
Latitude 39 26 57.922" 1786.2m  
Longitude 76 00 34.974" 836.2m (adjusted)

Maryland system of  
Plane coordinates.  
 $X = 1,079,658.32 \text{ ft.}$   
 $Y = 590,080.91 \text{ ft.}$

# DESCRIPTIVE REPORT

to accompany

AIR PHOTOGRAPHIC SURVEY SHEET NO. 5654  
State of Maryland  
Chesapeake Bay, Elk River

## GENERAL INFORMATION:

The field inspection for this area was made during August and October 1937 by Air Photographic Survey Party No. 25 of Baltimore, Maryland. \*

The photographs were taken by the recently developed U. S. Coast and Geodetic Survey Nine Lens Aerial Camera, flown by the U. S. Army Air Corp.

## CONTROL:

Control for this work consisted of triangulation by the following Chief of Parties, R. D. Horne 1933, John Bowie Jr. 1934, and J. C. Partington, 1937, and from the U. S. Army Engineers 1937 and from the publication "Triangulation in Maryland" Special Publication No. 114.

Several radial points were plotted in the south east part of this sheet from the 20,000 scale plot run by E. H. Kirsch in the Washington Office and used as control points.

## RADIAL PLOT:

Sheets 5654, 5655 and 5651 were secured together and the radial plot was run on 5654 and on to the two other sheets making proper junctions. Many radial points were located on 5655 and a few on 5651. Templates were used on this plot and it was run twice. The second running of the plot served as a check and very few points were moved. Those radial points that were moved changed on an average of less than a millimeter.

Radial points on the 1:10,000 scale sheet were transferred by graphical means to the 1:9650 scale sheet for detailing.

The following difficulties were encountered in the radial plot.

### (a) Paper distortion.

The office prints for the photographs were printed on Haloid Pressed Bromide Paper. Extremely large distortions were taken on by the paper during the drying period. The photographs were in general, large on one edge and small on the adjacent. To correct for this a celluloid template was

\* The field inspection added no detail subsequent to the date of the photography, May 1, 1937. Shoreline and other details are essentially of the date of the photography except for additions in the water area resulting from the hydrographic survey now in progress. Sheet 5654 is added to 5655 when vicinity of the hydrographic survey and dated from.

prepared from a standard template and revolved about the principal point until the best adjustment of the corners of the photographs was obtained. Corrections were applied proportionally to the radial lines on the templates.

(b) Transforming Printer.

The Transforming Printer had not been completely adjusted when the photographs for this work were printed. In some photographs a chamber appears to be out and adjustment could not be satisfactorily made.

(c) Tilt

Tilt on several of the photographs was determined by the Anderson Method of Scale Ratio Changes. The tilt was determined after the radial plot was completed. The tilt found was less than two degrees, which causes a relatively small displacement of the plumb point from the principal point. It does, however, cause large differences of scale near the border of the photographs.

(d) Scale

The radial plot was run on a celluloid sheet (scale 1:10,000) while the average scale of the two flights on this sheet was approximately 1:9,700. The photographs vary greatly in scale factor. The detail was done on a sheet with the scale of 1:9,650.

(e) Relief

There are differences of relief on this sheet. The greatest elevation as taken from the U. S. Geological Survey quadrangle maps is 306 feet, which is at Bull Mountain.

The differences of scale and relief do not in themselves cause difficulty in running radial plots but do cause trouble when combined ~~with~~ paper distortion, tilt, and perhaps a slight error caused by the Transforming Printer not being in proper adjustment.

DETAIL:

Additional radial points not shown on the sheet were established during the detailing in areas where the photographs were off scale or where there were large differences in relief. Adjustments of several meters per hundred were not uncommon.

The double full line has been used to show paved and well maintained roads (either gravel or concrete); the double dashed line to show roads not maintained and also private roads. Single dashed lines show trails or field roads.

It should be noted that the greater part of this sheet was detailed prior to the Directors letter of March 4, 1938 covering "Instructions for Detailing of the Chesapeake Bay Air Photographic Survey".

It would have been desirable to have had more information from the field inspection party concerning the nature of the roads on this sheet.

An attempt was made to show all buildings ~~on the~~



on the sheet except small sheds and outbuildings. Where information was available from the field inspection party the marsh areas are shown in accordance with The Director's letter of Feb. 4, 1938.

Except for the control and the names on the overlay sheet all other information shown on the sheet was taken from the field inspection notes and the photographs.

#### COMPARISON WITH PREVIOUS SURVEYS

T. 2465 *1904*

The point in Latitude 39 27.2, Longitude 75 59.8 has built up approximately 50 meters in a northeasterly direction. The small bight to the north has changed approximately the same amount. Here the high water line is shown to have receded on this survey.

In Latitude 39 27.65 at Greenbush Point there is a noted change, the shoreline having built up approximately 40 meters.

*Point*  
In Latitude 39 28.05, the bight north of Timber Neck has receded approximately 50 meters.

In Latitude 39 <sup>28</sup>~~00~~ (Beaver Dam Cove from T. 2465) there is considerable change in the high water line. The long narrow neck of land shown above high water on the old work does not exist. This was checked by field inspection. Grass growing in water is off from the high water line indicating shoal water. The exact limit of this grass patch should be determined by the hydrographic party as this feature does not show on the photographs.

Except for the above noted changes this survey agrees exceptionally well with that of the previous work, both as to shoreline and detail common to the two surveys.

T. 2668

In Cabin John Creek from the mouth to the limits of this sheet there are numerous changes.

At Pearce Creek the general limits are shown on this survey in a dashed line. This creek has been purchased by the U. S. Army Engineers and is used as a disposal area for dredged material. It has undergone a considerable change since the photographs were taken.

In Latitude 39 26.7, Longitude 75 58.6, there has been a receding of the high water line approximately 70 meters. The large dock shown on the old work in Latitude 39 26.9 no longer exists.

With the above exceptions the shoreline and detail common to the two surveys agree exceptionally well.

COMPARISON WITH CHART NO. 1226 Corrected to Feb. 4, 1938.

The pond as shown on the above chart at Turkey Point (Latitude 39 27 ) does not exist and should be expunged. This is probably a contour line.

The neck of land shown in approximately Latitude 39 28, Longitude 76 00 does not exist as shown. See compilation.

The large dock charted in Latitude 39 26.8 Longitude 75 58.5 (Reybold Wharf) does not exist.

The compilation shows considerable change in the tributaries emptying into Cabin John and Pearce Creeks.

NAMES:

Geographic names shown on this sheet are listed on form M234 in the appendix.

RECOVERABLE TOPOGRAPHIC STATIONS (Card form 524).

This form will be forwarded as soon as the field inspection notes are received from the Washington Office.

JUNCTIONS:

This sheet forms a junction with air photographic survey sheet No. 5651 on the north, sheet No. 5655 on the east and sheets Nos. 5658 and 5659 on the south.

LANDMARKS:

Turkey Point Lighthouse and Arnold Point Light are charted and are in existence. These are both triangulation stations and are shown as such on the compilation.

RECOMMENDATION FOR FUTURE SURVEYS:

This sheet is believed to be complete in all detail of importance for charting and no additional surveys are required.

The probable error is not greater than 5 meters for all radial points and well defined objects along the water front and in the areas well controlled. The error of other detail of importance on the sheet is probably not greater than 10 meters.

Respectfully submitted,

*L. W. Swanson*  
L. W. Swanson,  
Jr. H & G. E.

Approved:

*J. C. Partington*  
J. C. Partington,  
Chief of Party.

## Remarks.

## Decisions

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22	This name is not charted nor on U.S. Quadrangle Map.	
23	See D. R. - H-6363 ✓	File No. 394 759
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25		
26		
27	See D. R. - H-6363 ✓	File No 395 759



# GEOGRAPHIC NAMES

Survey No. T-5654

GEOGRAPHIC NAMES		Survey No. T-5654									
Name on Survey		<div>On Chart No. 1226</div> <div>On previous survey No. 2381 &amp; 2465</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div>									
		A,	B,	C,	D	E	F	G	H	K	
<u>Elk Neck</u>	Village & Neckland	✓		✓	Note Add for ELK NECK land feature					1	
<u>Bull Mt.</u>		✓	✓	✓						2	
<u>Rocky Pt.</u>		✓	✓	✓						3	
<u>Mauldin Mt</u>		✓	✓	✓	Location 39-29.2 ; 75-59.5					4	
<u>Maulden Mt.</u>		✓	✓	✓							
<u>Turkey Pt.</u>		✓	✓	✓						5	
<u>Jacobs Nose</u>		✓	✓	✓						6	
<u>Greenbush Pt.</u>		✓	✓	✓						7	
<u>Rogues Harbor</u>		✓	✓	✓						8	
<u>Stony Pt.</u>		✓	✓	✓						9	
<u>Thackery Pt.</u>		✓	✓	✓						10	
<u>Timber Neck</u>	Point	✓	✓	✓						11	
<u>Hylands Pt.</u>		✓	✓							12	
<u>Fords Landing</u>		✓		✓						13	
<u>Cabin John Creek</u>		✓		✓						14	
<u>Arnold Pt.</u>		✓		✓						15	
<u>Reybold Wharf</u>		✓		✓						16	
<u>Pearce Creek</u>		✓		✓						17	
<u>Wroths Pt.</u>		✓	✓	✓						18	
<u>Pond Neck</u>		✓		✓						19	
<u>Pond Creek</u>		✓	✓	✓						20	
<u>Elk River</u>		✓		✓						21	
<u>Beaver Dam Cove</u>			✓							22	
<u>White Crystal Beach</u>	<del>Major</del>									23	
<u>Pearce Neck</u>										24	
<u>Veazey Neck</u>										25	
<u>chesapeake Bay</u>										26	
<u>Piney Creek</u>										27	

Names underlined in red approved by JHE on 9/8/38

M 234

Names underlined in red approved  
by SAE on 9/8/38

## REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: *J.C. Partington*Compiled by: *L.W. Swanson*Project: *HT-215*

Instructions dated:

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b, ~~x~~, d, e, g and i; 26; and 64)
2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g, n)
3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d, e)  
*No ground surveys.*
4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)  
*No blue-prints or maps transmitted.*
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.  
*No contemporary surveys.*
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c, h, i)
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

8. 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)
9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)  
*See page 4, Descriptive Report.*
10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)  
*See page 4, Descriptive Report.*
11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)  
*No bridges*
12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k) ✓
13. The geographic datum of the compilation is *N.A. 1927* and the reference station is correctly noted. ✓
14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j) ✓
15. The drafting is satisfactory and particular attention has been given the following:
  1. Standard symbols authorized by the Board of ✓  
Surveys and Maps have been used throughout  
except as noted in the report.
  2. The degrees and minutes of Latitude and Longi- ✓  
tude are correctly marked.

3. All station points are exactly marked by fine black dots. ✓
4. Closely spaced lines are drawn sharp and clear for printing. ✓
5. Topographic symbols for similar features are of uniform weight. ✓
6. All drawing has been retouched where partially rubbed off. ✓
7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground. ✓

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time. ✓

17. Remarks:

18. Examined and approved;

May 14, 1938

J. C. Partington  
Chief of Party

19. Remarks after review in office:

Reviewed in office by:

## PLANE COORDINATE GRID SYSTEM

Positions of grid intersections used for fitting the grid to this compilation were computed by Division of Geodesy and the computation forms are included in this report.

Positions plotted by H. D. REED, JR.

Positions checked by "

Grid inked on machine by "

Intersections inked by "

Points used for plotting grid:

x = 1,080,000 FT  
y = 610,000 FT

x 1,090,000  
y 595,000

x 1,080,000  
y 580,000

x  
y

x 1,100,000  
y 610,000

x  
y

x 1,100,000  
y 580,000

x  
y

Triangulation stations used for checking grid:

x = 1,079,658.32 y = 590,080.91

1. Turkey Point, 1845 (Ref. Sta.)

~~4-1823.33~~ ~~4-583.16~~

2. Constable, 1933

6.

3.

7.

4.

8.

addition to the Review of T5654  
7/20/39

comparison with #6363, 1:10 000 (1938)

The field inspection of the photographs  
~~of~~ on T5654 was incomplete as regards  
marsh limits and shore line details.

The ~~for~~ following corrections and additions  
to T5654 have been made after comparison  
with #6363:

1. Wreck added at lat  $39^{\circ}-26.9'$  long  $76^{\circ}-00.7'$
2. Marsh added at lat  $39^{\circ}-27.4'$  long  $75^{\circ}-56.5'$  to ~~#657~~

The above corrections have been made  
directly on the original of T5654 ~~and on~~  
prior to reproduction and also on the  
temporary ozalid file copy.

B.G. Jones  
7/20/39



Section of Field Records

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5654

Scale 1:10,000

Photographs taken May 1, 1937

Compiled May, 1938

Refer to page 1 of descriptive report for additional data.

Chief of Party, J. C. Partington

Radial plot by L. W. Swanson

Radial plot checked by J. C. Partington

Inked by L. W. Swanson

There are no contemporary planetable surveys in this area. Shore-line and stations for the control of the hydrography were located by the photograph plot.

Contemporary Hydrographic Surveys

The contemporary hydrographic survey in this area, field No. 1002, is not yet in the office. Upon receipt of the hydrographic survey in this office a comparison will be made with T-5654. Any corrections or additions to T-5654 resulting from the hydrographic survey will be added in red on the temporary ozalid file copy. These same corrections and additions will be made on the celluloid T-5654 prior to reproduction. Upon completion of this comparison an additional discussion will be added, if necessary, at the end of this review.

Temporary stations located on T-5654 for hydrographic control will remain on the celluloid and on the ozalid file copy as a semipermanent record but these stations will not appear on the finished prints of T-5654.

All stations and other details in black on the hydrographic boat sheet and smooth sheet were printed direct from a reproduction of T-5654 and require no verification as regards correctness of transfer.

Previous Topographic Surveys

*See also ~~add~~ opposite page page.*

T- 184 (1844), 1:10,000	T-2331 (1898), 1:10,000
T- 185 (1844), 1:10,000	T-2351 (1898), 1:10,000
T- 186 (1845), 1:20,000	T-2384 (1901), 1:20,000
T- 778 (1860), 1:20,000	T-2465 (1904), 1:20,000
	T-2668 (1904), 1:20,000

Comparison of T-5654 with the previous topographic surveys listed above shows that T-5654 is complete and adequate to supersede the sections of those surveys which it covers with the exception of the contours shown on the old surveys.

Refer to page 3 of the descriptive report regarding comparisons made by the field party.

Comparison with Chart 1226

Refer to page 4 of the descriptive report.

Landmarks in this area are to be submitted by the hydrographic party.

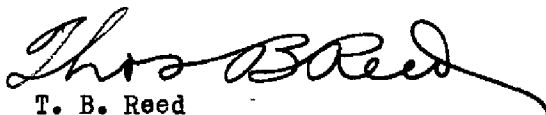
Office Work

The air photographic survey and the descriptive report were complete as submitted from the field. No additional topographic surveys are needed for charting in this area.

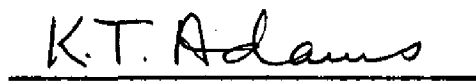
Reviewed in the office by L. C. Lande


Inspected by B. G. Jones

Examined and approved:

  
T. B. Reed  
Chief, Section of Field Records

  
Fred. L. Peacock  
Chief, Section of Field Work

  
K. T. Adams  
Chief, Division of Charts

  
G. H. Hude  
Chief, Division of H. & T.