

5697

5697

Form 504 Rev. April 1936	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. T-5697
State Maryland	
LOCALITY	
Chesapeake Bay	
Chester River	
Crumpton and Vicinity	
Photographs taken April 30, 1937	
1940	
CHIEF OF PARTY	
L.W. Swanson	

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DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

REG. NO.  
T5697

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. T-5697

REGISTER NO. T5697

State Maryland

General locality Chesapeake Bay

Locality Chester River Crumpton and Vicinity

Scale 1:10,000 x .985 Date of ~~Survey~~ Photographs April 30, 1937

Vessel Air Photographic Survey Party No. 2.

Chief of party L.W. Swanson

Field Inspection: W.C. Russell, D.A. Jones, N. Kaslow.  
~~Surveyed by~~

Inked by W.H. VanLoon

Heights in feet above ----- to ground to tops of trees

Contour, Approximate contour, Form line interval ----- feet

Instructions dated H.T. 215 May 13th, 1938

Remarks:

DATA RECORD    T-5697

Photographs

Nos.	Date	Time	Scale	Altitude	Stage of Tide
1324-1325	4/30/37	3:12	1:0.985	Aprox.	1.3 ft. above M.L.W.
1234-1236	"	12:10	"	6875 ft.	1.9 ft. above M.L.W.
1206-1207	"	11:45	"		1.9 ft. above M.L.W.

Tide from predicted tables (Chestertown., Chester River) mean range 1.9 ft.  
spring " 2.2

Camera: U.S. Coast & Geodetic Survey nine lens, F 8 $\frac{1}{4}$  inches  
Negatives on file in Washington Office.

General Information

~~See next page for date of survey~~

Chief of Party:	L.W. Swanson	
Projection by:	Ruling Machine	Date unknown
Projection checked by:	Washington Office	" "
Radial Points pricked by:	R.A.G. N.L.K.	
Additional radial points by:	W.H. VanLoon	9/25/40 to 10/2/40
Control plotted by:	J.N. Jones	11/10/39 to 11/13/39
Control checked by:	L.W. Swanson	11/13/39 to 11/14/39
Additional control checked by:	L.W. Swanson	12/13/40
Radial plot by:	R.A. Gilmore	11/21/39
Shoreline inked by:	W.E. Schmitt	11/20/39 to 11/29/39
Detail inked by:	W.H. VanLoon	10/7/40 to 11/9/40
Preliminary review by:		

STATISTICS

Area (land)	30.0 sq. statute miles
Shoreline (more than 200m. from opposite shore)	8.0 " " "
Shoreline (creeks)	6.5 " " "
Roads, streets, trails.	99.0 " " "

Reference Station

Reference Station: Travilla, 1934 N.A. 1927 Datum  
Latitude: 39 14 49.459 (1525.2m.) adjusted  
Longitude: 75 59 03.284 ( 78.8m.) adjusted

Time required for compilation exclusive of Radial Plot.

Pricking and locating additional radial points 6-----	7 days
Shoreline -----	4 days
Detailing -----	20 days
Total time required	31 days

X coordinate: 1,087,670.71 FT.

Y coordinate: 516,461.76 FT.

Field inspection date    Shoreline 1939 (approx)  
   Interior 1938 (approx)

details on T 5697 are of the date of the photographs, 4/30/37  
except for the road mentioned on page 2 of the review.

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DESCRIPTIVE REPORT  
to accompany  
AIR PHOTOGRAPHIC SURVEY SHEET NO. T-5697  
STATE OF MARYLAND  
CHESAPEAKE BAY, CHESTER RIVER ---

Date of report ----- December 10, 1940.

INSTRUCTIONS:

The topography on this sheet is a part of Project HT-215, the instructions for which are dated May 13, 1938. A Directors letter Aug. 28, 1939.

CONTROL:

The control for this sheet consists of three stations shown by the triangulation symbol. Following is a list of the control and its source.

U.S. Coast & Geodetic Survey Triangulation		
Travilla	1934	N.A. 1927
Hyde	1934	N.A. 1927
Saw	1934	N.A. 1927

A list of the above stations and the geographic positions used in plotting same on this sheet appears in the appendix of this report. Also a copy of the recovery notes for the triangulation stations and the data used to prick the stations on the photographs are in the appendix. *Not attached to report. Baff*  
*Rao*

SCALE PLOT

The scale plot for this sheet was run by flight lines. Celluloid templates made from the photographs showing flight lines and a minimum of radial lines to control points and well defined objects were layed down and oriented so that flight lines intersected adjacent centers and so that the best possible intersections of the most radials existed.

In order to hold these orientations the templates were secured together with scotch tape. A comparison was then made between distances taken from triangulation or scaled from charts, and the corresponding distances (on 1/10,000 meter bar) as scaled from the resulting layout of templates.

This method was carried out for each of the flight lines falling on the sheets to be radially plotted together. The average resulting ratio equalled 0.985 the scale factor to which the projections for the map drawings of these sheets were drawn was therefore 1/10,000x 0.985.

## RADIAL PLOT

A combined radial plot involving sheets 5693, 5694, 5696, 5697, 5699 and 5700 was run November 21, 1939 by the usual template method.

The same radial points as pricked on the 20,000 pictures in this area were pricked on the 10,000 pictures, and where necessary to give a good distribution of points, additional points were pricked, 150 control points as determined from the 20,000 plot, previously run, were plotted on the map drawing sheets and transferred to the dummy sheets and were held to (in most cases) in conjunction with the triangulation in running the new 10,000 plot. It is believed that although the triangulation stations in the area covered by these 6 sheets were sparse, the addition of so many auxilliary points resulted in a very good plot.

A greater ammount of strength could have been added to the plot had the 20,000 pictures been flown with more overlap both as to pictures and to flight lines. (See letter dated Dec. 5, 1939 in regards to this).

A junction of points was made with sheets 5692, 5695, 5698, and 5701 by running an auxilliary plot to eliminate any differences that occurred between the plot involving the above sheets and the present 6 sheets.

*The above plot is described in detail in R.A.G.  
the descriptive report and review T5696*

## DETAIL

All buildings except small out-buildings were shown with the exception of those located in the town of Crumpton, in which the street layout and public buildings alone were shown.

The following photographs were found to contain tilt: 1206- 8° 33' 1236- 2° 47' correction for tilt was made and new isocenters pricked on these pictures, photograph 1206 however was so badly out of scale that it could not be used for the purpose of detailing and the area between Lat. 39° 11' - 39° 13' Long. 75° 52' - 75° 53' could not be completed because of lack of photographs.

Detailing of buildings and other obscure features east of Long. 75° 54' and south of Lat. 39° 14' is partially incomplete as it occurs in the extreme wings of the photographs.

## REMARKS

The probable error is not greater than 5 meters for all radial points and well defined objects in close proximity thereof. The error of other detail of importance is probably not greater than 10 meters.

## JUNCTIONS

Junctions were made with adjoining sheets Nos. 5693, 5694, and 5696 by direct comparison.

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## COMPARISON WITH PREVIOUS SURVEYS

Comparison of this sheet was made with the following:

Plane table survey sheet No. T-3024 1909-1910.

In general there was good agreement in shoreline, most discrepancies were noted in marshy areas and downstream projections of shoreline where erosion would be expected to take place. The most notable change appeared at Chase Island which is considerably reduced in size.

## LANDMARKS

The Hydrographic party which works this area will ~~furnish their own landmarks.~~ *recommend the landmarks*

## GEOGRAPHIC NAMES

Geographic names shown on this sheet are listed on Form M234 herewith.

## ADDITIONAL CONTROL POINTS

*(This paragraph refers to Minor Control points, i.e., points located by the photo plot to control the detailing)*  
Additional control points were pricked on the photograph at convenient intervals where well defined features allowed identification of these points on the most photographs. Points circled in red are ones having at least three good cuts, those circled in green are ones which had a small triangle of error or were established with only two cuts.

The large blue circles are original control points.

## NOTE ON BRIDGE

Mr. W.C. Russell Field Inspected the area around Crumpton Bridge and by use of Estimated Tide Prediction Table states Bridge clearance as being 2.0'. This figure has been checked within 6" by later field insp. although Bridge List shows 3.9' clearance for same. ✓

Respectfully submitted,

*William H. Van Loon*  
William H. VanLoon  
Photogrammetric Aide.

Forwarded approved : *Dec. 11, 1940*

*L. W. Swanson*  
Chief of Party.

# GEOGRAPHIC NAMES

Survey No. T5697

GEOGRAPHIC NAMES		Survey No. T5697									
Name on Survey	On Chart No. 548										
	A	B	C	D	E	F	G	H	K		
Grumpton	X	X	X	X	X	*					1
Sutton Pt.	X	X	*		X						2
Chase I.	X		*		X						3
Spry Ldg.	X		*	X	X	X					4
Deep Ldg.	X	*	X	*	X	X			X		5
Travilla Whf.	X		*	X	X	X					6
Foreman Branch	X	X	*	X	X	X					7
Pearl Cr.	X		X	*	X	*		X			8
Kirby Ldg.				X							9
Mo Ginnes		X		X			X				10
Ewingville				X			X				11
Pondtown				X			X				12
Dudley Corners				X			X				13
Red Lion Br.				X					X		14
Chester River	X	X		X					X		15
Ford Ldg.				X							16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Heck

on 3/19/41

M 234

Received by L. Heck  
 on 3/19/41



## Remarks

## Decisions

1		392759	1
2	Called Suttons Pt. on prev. surv. sheet 3024	"	2
3	" Chase I. " " " " "	"	3
4	" Sorys Whf. " " " " "	"	4
5	" Deer Ldg. Chart 1226 & U.S. Quadrangle Map	"	5
6	" Trivola Whf. on prev. surv. sheet 3024	392759	6
7	" Foremans Branch " " " "	"	7
8	" Pearl Branch on Kent Co. Map & U.S. Quad. Map	392759 U.S.G.B.	8
9		392758	9
10		392759 U.S.G.B.	10
11		"	11
12		"	12
13		391758	13
14		392759	14
15		390762	15
16		392758	16
17			17
18			
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27			

REVIEW OF AIR PHOTO COMPILATION NO. 2 - 5697

Chief of Party: L. W. Swanson

Compiled by: W.H. Van Loon

Project: H.T. 215

Instructions dated: May 13, 1938

Director's letter Dated Aug. 28, 1939.

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, c, d, ~~f~~, g and i; ~~25~~; 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 ~~e~~, n)
- ~~4~~. 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)  
None
- ~~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)  
None
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 plane table 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; ~~4~~; 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)
- ~~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)
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)  
*See note about Bridge (Crumpton)*
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 65)
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. 66)
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 Longitude 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, ~~47~~)

16. No additional surveying is recommended at this time.

17. Remarks: *Rough draft sheet.*

18. Examined and approved;

*Dec. 11, 1940*

*L. W. Swanson*  
\_\_\_\_\_  
Chief of Party

19. Remarks after review in office:

Reviewed in office by:

Examained and approved:

\_\_\_\_\_  
Chief, Section of Field Records

\_\_\_\_\_  
Chief, Division of Charts

\_\_\_\_\_  
Chief, Section of Field Work

\_\_\_\_\_  
Chief, Division of Hydrography  
and Topography.

*Copies made to field  
7/8/41  
by K.T.A.*

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5697

There are no contemporary graphic control surveys in this area.

Hydrographic Surveys

The 1940 hydrographic survey of Chester River has not yet been received in the office.

Previous Topographic Surveys

<u>T-3024</u>	<u>1909-10</u>	<u>Scale 1:20,000</u>
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There are changes in shore line of Chester River up to 30 meters, mostly along the edge of the marshy places, particularly at Chase Island which has washed away on three sides up to 30 meters.

T-5697 supersedes T-3024 for the area common to both surveys.

Comparison with Charts 1226 and 548

The same differences were found on charts 1226 and 548 as stated above in connection with topographic survey T-3024 insofar as the sheets overlap. Chart 1226 shows more of Chester River than T-3024 and in this area it is noted that an island at Lat.  $39^{\circ} 14.7'$ , Long.  $75^{\circ} 54'$  shown on the 1226 is not indicated as an island on T-5697 but is shown as a marshy area in the river. The photographs were taken at about high tide and the area in question is distinctly awash.

Charts 548 and 1226 have not been corrected in accordance with T-5697 on June 13, 1941.

Radial Plot

The combined radial plot for T-5697 and the adjoining surveys are discussed briefly on page 3 of the Descriptive Report. This plot is discussed in greater detail in the Descriptive Report and review T-5696 and in a letter from the chief of party dated December 5, 1939, which has been made a part of the report for T-5696.

The plot is accepted as within the limits of accuracy stated on page 3 of this Descriptive Report without checking in this office.

Field Inspection and Detailing

The field inspection and the detailing of T-5697 are complete except as noted in the report - that is the detailing of some buildings in the southeast corner of the sheet is not complete due to the fact that there were insufficient photographs to cover the entire area and the extreme edges of the wing prints were not clear enough to plot the buildings with sufficient accuracy.

A road at Lat.  $39^{\circ} 12.5'$ , Long.  $75^{\circ} 55.8'$  shown on the compilation is apparently later than the photographs although there is no note on the field inspection prints to indicate the fact.

Many of the approximate stream locations through wooded ravines were changed in the office after careful examination of the photographs under the stereoscope.

Several small ponds and sections of marshy ground were added in the office.


This party has not been adequately equipped with viewing stereoscopes for convenient examination of nine lens photographs. Efforts are being made at this time to improve this equipment so this party will have at least two stereoscopes for nine lens photos.


Reviewed in office by D. H. Benson, June 13, 1941.  
Inspected by B. G. Jones, June 17, 1941.


*Redrafted in the office.*

Examined and approved:

  
Chief, Surveys Section

  
Chief, Division of Charts

  
Chief, Section of Topography

  
Chief, Division of Coastal  
Surveys

## 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 N. L. Wilansky

Positions checked by J. P. Dunich

Grid inked on machine by N. L. Wilansky

Intersections inked by F. Holz

## Points used for plotting grid:

$\theta = 39^\circ 14' 35.3040''$   $x = 1,085,000$   $\theta = 39^\circ 12' 54.7919''$   $x = 1,100,000$   
 $\lambda = 75^\circ 59' 37.4347''$   $y = 515,000$   $\lambda = 75^\circ 56' 28.2642''$   $y = 505,000$

$\theta = 39^\circ 14' 32.4608''$   $x = 1,110,000$   $x$  \_\_\_\_\_  
 $\lambda = 75^\circ 54' 19.6951''$   $y = 515,000$   $y$  \_\_\_\_\_

$\theta = 39^\circ 12' 07.0505''$   $x = 1,085,000$   $x$  \_\_\_\_\_  
 $\lambda = 75^\circ 59' 39.5351''$   $y = 510,000$   $y$  \_\_\_\_\_

$\theta = 39^\circ 12' 04.2089''$   $x = 1,110,000$   $x$  \_\_\_\_\_  
 $\lambda = 75^\circ 54' 21.9795''$   $y = 510,000$   $y$  \_\_\_\_\_

## Triangulation stations used for checking grid:

Treville, 1934 1.  $\theta = 39^\circ 14' 44.459''$   $x = 1,087,670.71$  5. \_\_\_\_\_  
 $\lambda = 75^\circ 59' 03.284''$   $y = 516,461.76$   
Hyde, 1934 2.  $\theta = 39^\circ 14' 38.390''$   $x = 1,112,592.18$  6. \_\_\_\_\_  
 $\lambda = 75^\circ 53' 46.653''$   $y = 515,631.12$   
3. \_\_\_\_\_ 7. \_\_\_\_\_  
4. \_\_\_\_\_ 8. \_\_\_\_\_