

5696

5696

Form 504
U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE
DESCRIPTIVE REPORT
Type of Survey <u>Air Photo (Topographic)</u>
Field No. <u>T-5696</u> Office No. <u>T-5696</u>
LOCALITY
State <u>Maryland</u>
General locality <u>Chester River</u>
Locality <u>Chestertown</u>
Photos taken <u>May, July 1937</u>
<u>1940</u>
CHIEF OF PARTY
<u>L.W. Swanson</u>
LIBRARY & ARCHIVES
DATE _____

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

REG. NO.

T5696

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 - 5696

T5696

REGISTER NO.

State MARYLAND

General locality CHESTER RIVER

Locality PRIMROSE POINT TO POSSUM POINT

Scale 1:10,000  $\times 0.985$  Date of <sup>Photographs</sup> ~~survey~~ May & July, 19 37

Vessel Air Photographic Party No. 2

Chief of party L. W. Swanson

Field Inspection -- Wm. C. Russell, A.L. Wardwell & N.L. Kaslow  
Surveyed by Radial Plot -- R.A. Gilmore

Inked by Ned L. Kaslow, B.A. Jones & J.E. Deal

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

Contour, Approximate contour, Form line interval        feet

Instructions dated 5/13/38 & 8/28/39, 19       

Remarks:

T5696

DATA RECORD

T - 5696

PHOTOGRAPHS

Number	Date	Time	Scale	Alt.
1373, 74, 75	5/1/37	9:50-10:01 a.m.	1:10,000	6,875 ft. Unknown
1559, 60, 61, 72	5/2/37	9:07-9:32 a.m.	"	do
1678, 79, 80, 91, 92	7/8/37	10:23-11:24 a.m.	"	6,875 ft. " 1.0 " " "

Camera: U.S. Coast & Geodetic Survey Nine Lens (Focal length  $8 \frac{1}{4}$  inches).

Tides from predicted tables for Chestertown, Md.

SUPPLEMENTAL SURVEYS

*Details on T 5696 are of the date of the photographs. The field inspection noted no changes subsequent to the photography*

GENERAL INFORMATION

Chief of Party.....L.W. Swanson  
 Projection by.....Ruling Machine, Wash. Office, Date Unknown  
 Projection checked by.....Washington Office,..... Date Unknown  
 Hydrographic Radial Points pricked by Wm. C. Russell, A.L. Wardwell during the Fall of 1939, and Ned L. Kaslow during June, 1940.....  
 Additional Radial points pricked by.....J. E. Deal, Ned L. Kaslow & D.A. Jones.  
 Control Plotted by.....D.A. Jones, 11/13/39.....  
 Control checked by.....L.W. Swanson, 11/14/39.....  
 Radial Plot by.....R. A. Gilmore....  
 Shoreline Inked by.....D.A. Jones.....Dec. 7 - 20, 1939  
 Detail Inked By.....Ned L. Kaslow and J.E. Deal...Sept.--Oct., 1940...  
 Preliminary Review by.....

STATISTICS

Area (land).....32.0 Square Statute Miles  
 Shoreline (More than 200 m. from opposite shore)....14.5 Statute Miles.....  
 Shoreline (creeks).....8.9 " " .....  
 ROADS, Streets, Trails and Railroads.....87.5 " " .....

REFERENCE STATIONS

COLLEGE, 1934

Latitude 39 13' 05.744" (177.1 m)  
 Longitude 76 04' 07.894" (189.4 m)

Datum, - N.A. 1927,  
 Adjusted.

*x coordinate: 1,063,815.20 FT.  
 y coordinate: 505,713.71 FT.*

DESCRIPTIVE REPORT  
to accompany  
AIR PHOTOGRAPHIC SURVEY SHEET NO. T- 5696  
STATE OF MARYLAND

CHESTER RIVER - PRIMROSE POINT TO POSSUM POINT

DATE OF THIS REPORT.....October 31, 1940.

INSTRUCTIONS:

This roughdraft map drawing is a part of project HT 215, dated May 13, 1938, and supplemental instructions contained in the Director's letter dated August 28, 1939.

FIELD INSPECTION:

Shoreline by Lieut. (j.g.) Wm. C. Russell and Ensign A.L. Wardwell during the Fall of 1939. Additional hydrographic signals by Photogrammetric Aid (Field) Ned L. Kaslow during June, 1940.

Names by Lieut. (j.g.) Ross A. Gilmore during the Fall of 1939.

PHOTOGRAPHS:

The photographs were taken with the U.S. Coast & Geodetic Survey Nine Lens Camera.

CONTROL:

All control used on this sheet were M.S.F.S. stations, except for the following which were U.S.C. & G.S. Stations:

College, 1934.

Chestertown Municipal Water Tank, 1934.

RADIAL PLOT:

A combined radial plot involving sheets Nos. 5693, 5694, 5696, 5697, 5699 and 5700 was run on November 21, 1939, by the usual template method. Due to lack of control on the 10,000 pictures, a 20,000 plot was first run on which about 150 radial points were located. These radial points which were common to the 10,000 and 20,000 pictures were plotted on the 10,000 Sheets and used as control in conjunction with the triangulation in the running of the 10,000 plot. Where necessary to give a good distribution of points, additional points were pricked on the 10,000 pictures.

It is believed that although the triangulation stations in the area covered by these 6 sheets were sparse, the addition of so many additional auxiliary points resulted in a very good plot. A greater amount of strength could have been added to the plot had the 20,000 pictures been flown with more overlap both as to pictures and flight lines. (See letter dated December 5, 1939.) Also a more uniform spacing of the 10,000 flight lines would have been of considerable help in radial plotting.

*See also letter of work.*

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

Tilt was computed and new centers established for the following pictures, - Nos. 1560, 1572 and 1692. These new centers improved the radials on pictures Nos. 1560 and 1692, while on picture No. 1572, due to twist in the outer chambers, the radials were incorrect. However, detail was taken from this picture.

The 1300 and 1500 flights were found good for scale, while the 1600 flight was not. Because of this difference in scale, the detail from the 1600 flight was gotten by means of the projector.

#### HYDROGRAPHIC SIGNALS:

A number of natural objects have been located on this sheet for use as hydrographic signals. These objects are shown by black circles 1.5 mm. in diameter.

#### RECOVERABLE TOPOGRAPHIC STATIONS:

No recoverable topographic stations are shown as none occur in the area covered by this sheet.

*Hydrographic signals of a more permanent nature have been considered.*  
DETAIL: *as recoverable topographic stations and will appear on the printed copies of T-5696. R.E.E. 5-6-42*

Buildings: In the City of Chestertown all buildings along the water front and only the public buildings in the city proper are shown. On the rest of the map all other buildings are shown.

Roads: Roads were detailed according to the field inspector's notes shown on the field inspection prints.

#### COMPARISON WITH PREVIOUS SURVEYS:

T-3024: In general there has been little change in the shoreline, and where changes do occur, they are at marshy areas. Practically all changes have been recessions.

The bridge at Chestertown has been relocated; the N.W. end appears to have been held, while the S.E. end has been shifted N.E. about 75 meters.

Chart No. 548, Revised to April 21, 1939: Same as T-3024, except that the bridge location is correct.

Chart No. 1226, Revised to September 8, 1939: Same as Chart No. 548.

#### JUNCTIONS:

On the <sup>West</sup> ~~East~~: (T - 5695) Junction is in good agreement with this sheet.

On the ~~West~~<sup>East</sup>: (T - 5697) This sheet is now being detailed by this party. The shoreline junctions only were compared and found to be in good agreement.

On the South: (T - 5699) This sheet is now being detailed by this party. The shoreline junctions only were compared and found to be in good agreement.

On the North: (T - 5693) The junction is in good agreement with this sheet. (T - 5692) There is a slight discrepancy in the junction between long. 76 06' and 76 08', but in view of the fact that the plot of sheet No. 5696 is considered the stronger, it is recommended that the junction of Sheet No. T - 5692 be made to agree with sheet No. T - 5696.

NAMES:

The geographic names shown on this sheet are listed on form M-234 in the appendix.

LANDMARKS:

There are none in the area covered by this sheet.

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 of radial points and of well defined objects along the shoreline is not greater than five meters. The error of inland radial points and detail of importance is not greater than 10 meters.

Respectfully submitted,

*J. Edward Deal*

J. Edward Deal,  
Photogrammetric Aid (Field)

Approved: Nov. 2, 1940

*L. W. Swanson*

L.W. Swanson,  
Chief of Party.

T5696

## Remarks

## Decisions

1		392 760
2		"
3	(c) Morgans Creek	"
4	(a) Barrail Point. roll, property owner, Chestertown. (d) Barroll Point, Morris Keene Bar/	"
5	<del>Radcliffe Creek</del> on Highway signs. (a) "Red Cliff". (c) "Ratcliffe".	"
6	4 and 5 will be submitted to U.S.G.B.	391 760
7		392 760
8		"
9		"
10		"
11		391 760
12		391 760
13		390 762
14		392 760
15	E. & W. High St. Divides City N. & S., Cross St. Divides City/	
16		
17		
18		
19		
20	(c) Shown as Spring Ave. on Atlas.	
21		
22		
23		
24		
25		
26		
27		

# GEOGRAPHIC NAMES

Survey No. T 5696

15696

Name on Survey	A. On Chart No. 1226 or 548	B. On previous survey No. T-3024	C. On U. S. quadrangle Maps	D. From local information	E. Kent Co. Map 1903 & 1929	F. On local Maps	G. P. O. Guide or Map	H. Atlas-Kent & Queen Anne Roads on New York Atlas 1891-Lake Griffin-Stevenson	I. U. S. Light List	J. Rand McNally Map
<del>CATLIN</del>			x							1
CHESTERTOWN ✓	x	x		x	x	x				2
MORGAN CREEK ✓	x	x	x	x	x		x c			3
BARREL POINT ✓	x	x a		x d						4
RADCLIFF CREEK ✓	x	x a	x	x	x		x c			5
PINEY GROVE ✓	x				x					6
ROUNDTOP WHARF ✓	x	x	x	x	x					7
PEACHTREE POINT ✓	x	x		x						8
ROSIN CREEK ✓	x	x		x						9
LONG POINT ✓	x	x		x						10
PRIMROSE POINT ✓	x	x		x						11
HAMBLETON CREEK ✓	x		x	x	x					12
CHESTER RIVER ✓	x	x								13
POSSUM POINT ✓	x	x		x						14
STREET NAMES - CHESTERTOWN, MD.										15
Lynchburg St.				x						16
College Ave.				x			x			17
Kent St.				x			x			18
Mill St.				x			x			19
Spring St.				x			x c			20
Cross St.				x			x			21
Queen St.				x			x			22
Front St.				x			x			23
Cannon St.				x			x			24
High St.				x			x			25
Calvert St.				x			x			26
Prospect St.				x						27



T5696

Remarks.

Decisions

1		
2		
3		
4		
5		
6		
7		
8	(c) "Bridge St."	
9	(e) R.R. Shown, but no name. (a) "Baltimore & Delaware Bay R.R." (c) "Kent Co. R.R."	
10		
11		
12		
13		
14		
15		
16		
17		
18	(a) "Buckingham Landing." (b) "Buckingham Landing."	392760
19		391761
20		
21		
22		
23		
24		
25		
26		
27		

## GEOGRAPHIC NAMES

Survey No. T - 5696

**T5696**

Name on Survey

GEOGRAPHIC NAMES											
Survey No. T - 5696											
<b>T5696</b>											
Name on Survey		A. On Chart No. 1226 or 548	B. On previous survey No. T-3024	C. On U. S. quadrangle Maps	D. From local information	E. Kent Co. Map On local Maps 1903-1929	F. P. O. Guide or Map	G. Atlas-Kent & Queen Anne's Roads-Maryland Atlas 1937-Lake, Griffing, Strawn.	H. U. S. Light List	K. Rand, M.S. Nally Map	
Mt. Vernon Ave.				x							1
Washington Ave.				x							2
Kent Circle				x							3
Campus Ave.				x							4
Park Row				x							5
Court St.				x			x				6
Church St.				x			x				7
Maple Ave.				x			x o				8
Delaware R.R. (Chester-town Branch) (P.R.R. System)	x e		x a				x c		x		9
ROADS, Names of, - Gotten from Md. State Roads Commission Highway											10
Maps for Queen Anne & Kent Counties											11
Md. State Hwy. No. 20											12
446											13
447											14
289											15
U.S. Hwy. 213											16
											17
BUCKINGHAM WHARF ✓	x	x	x a	x	x b						18
Mill Pond ✓											19
											20
											21
											22
											23
											24
											25
											26
											27

L. Heck on 3/18/45

M 234

T5696

## REVIEW OF AIR PHOTO COMPILATION NO. T-5696

Chief of Party: L.W.Swanson

Compiled by: J.E.Deal Jr.

Project: Project H. T. 215

Instructions dated: May 13, 1938

Director's letter of 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. 16h, b, c, d, e, g and ~~f~~; 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)

*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 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. 16h, 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." 11-07

- #. 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)
- #. 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. ~~28~~, ~~30~~, and ~~37~~)
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 ~~38~~)
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)
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. 66j)
15. The drafting is satisfactory and particular attention has been given the following: *This is a rough draft sheet.*
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.

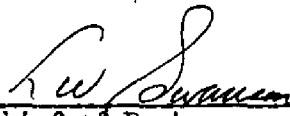
(Par. 34, 35, 36, ~~37~~, ~~38~~, ~~39~~, 40, ~~41~~, 42, 43, ~~44~~, ~~45~~, ~~46~~)

16. No additional surveying is recommended at this time.

17. Remarks:

18. Examined and approved;

*Nov. 6, 1941*

  
Chief of Party

19. Remarks after review in office:

Reviewed in office by:

Examained and approved:

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

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

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

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

✓ by Capt Adams  
copy to field  
6/7/41

DIVISION OF CHARTS

T5696

Section of Field Records

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5696

*Compiled as a rough drawing, to be redrafted in Washington office*

There are no 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

T-3024 (1910) 1:20,000

Refer to page 2 of the Descriptive Report for a comparison between T-3024 and T-5696 made by the field party.

T-5696 supersedes that section of T-3024 which it covers.

Comparison with Charts 548 (printed 4/21/39) and 1226 (printed 8/8/39)

T-5696 has not been applied to the charts at the date of this review. The survey shows numerous minor changes in both physical and cultural details for chart corrections.

Control

- Two triangulation stations, Chestertown M. E. Church spire, 1896, and Chestertown M. P. Church spire, 1896, were added to T-5696 in this office. These stations were not recovered by the field inspection, but from a stereoscopic examination of the photographs they appear to exist.

Field Inspection and Detailing

The field inspection was adequate except for the recovery of two stations mentioned in the preceding paragraph.

In detailing this survey not enough use was made of the stereoscope. In a number of cases minor corrections have been made to streamlines after stereoscopic examination.

Radial Plot

The main radial plot for surveys Nos. T-5693 to T-5694, T-5696 to T-5697, and T-5699 to T-5700 is described on pages 1 to 2 of the descriptive report. This description would be much more complete had the following pertinent information regarding the plot been included:

Air photo survey T-5696 - 2

- (1) Statement as to the number of templates contained in the 1:20,000 scale control plot and the number of these templates which were fixed by three or more ground control stations.
- (2) The approximate percentage of the total number of points located on the 1:20,000 plot which had triangles of error greater than 1 mm. across.
- (3) A list of ground control stations which were not held to within .2 mm. and the reasons these stations could not be held.
- (4) A repetition of the same information listed under (1) to (3) above for the 1:10,000 scale plot.
- (5) The approximate percentage of the 1:20,000 scale control points which were relocated by the 1:10,000 plot and changed in position more than 1 mm. The maximum difference found in relocating the 1:20,000 scale control points on the 1:10,000 scale plot.

As regards the accuracy of the main radial plot covering this survey no attempt has been made to recheck the plot during this review. Individual photographs have been reoriented under the survey as indicated by the centers and minor control points marked in blue by the field party. Generally, all radials pass within zero to 0.5 mm. of the positions noted on the survey sheet, with occasional radials falling off as much as 1 mm.

One photograph, No. 1560, at the center of the survey reaches eight ground control stations all on the southeastern section of the photograph. When held to the plot, as indicated by the minor control points, four triangulation stations on the Chester River do not hold. One of these stations was questioned on the photographs and can be disregarded. Three stations, namely Emory, Ing, and Queen, miss by 0.7 to 1.0 mm. Probably, there were adequate reasons for not holding these stations in making the plot, but these were not given in the descriptive report.

The plot is accepted as sufficiently accurate for charting and it is thought that recoverable points are within from 0 to .8 mm. of correct position with possibly a few points outside of those limits.

It was noted that, in general, azimuths between flight lines were not used in making the radial plot. These should be used in making radial plots containing two or more flight lines. Even though these azimuths cannot always be held rigidly because of identification, or tilt they are useful in analyzing the plot and in tying the flight strips together.

*See other letter at back.*


Air photo survey T-5696 - 3

The method of using a 1:20,000 scale plot for control of the 1:10,000 plot was adopted as an expedient in this area. It is not recommended for the best graphic accuracy for the obvious reason that all drafting errors or other errors in the 1:20,000 scale locations are multiplied twice when used on the 1:10,000 scale. Also in the case of this particular plot the 1:20,000 photographs did not completely cover the area.

Reviewed by: D. H. Benson 4/13/41

Inspected by: B. G. Jones 5/28/41 and Jan. 1943

Examined and Approved:



Chief, Section of Field Records



Chief, Division of Charts.



Chief, Topography Section.



Chief, Division of  
Coastal Surveys.



T5696

POST-OFFICE ADDRESS: 307 Convention Building, Fort McHenry, Baltimore, Md.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

December 5, 1939

To: The Director,  
U.S. Coast and Geodetic Survey,  
Washington, D.C.

From: Lieut. (j.g.) L.W. Swanson,  
U.S. Coast and Geodetic Survey.

Subject: Air Photographs, 20,000 Scale.

The enclosed sketch was primarily made to graphically indicate the amount of overlap of the 1:20,000 air photographs used to augment the control of the 1:10,000 air photographs in the area embodied by Map Drawing Sheets 5693, 5694, 5696, 5697, 5699 and 5700, Eastern Shore, Chesapeake Bay, Maryland. The shaded areas indicate the maximum limit that it is possible to get at least 3 cut intersections on control points. These areas amount to only 15% of the entire area covered by the 20,000 photographs. Actually, only the central portions of these areas will give good strong points, because points chosen at the extreme edges of the photographs are apt to be questionable due to distortion and lack of clearness of the pictures.

It was found that the pictures had an overlap of approximately 57% and a flight overlap of only 22%. One hundred and fifty carefully chosen points were pricked on the 20,000 pictures in order to give a check on the large number of 2 cut intersections resulting from this small amount of overlap. Out of these 150 points, only 22 gave auxiliary control points determined by at least radial cuts. From a comparison of control points as determined from the 20,000 plot against the final point used, as determined from the 10,000 plot, it was found that the average difference of all points (including 2 cut intersections) was 5.9 meters and that a comparison of 3 (or more) cut intersections gave an average difference of 4.5 meters. 44% of the later showed no difference in the two plots.

It is believed, from the results obtained from this 20,000 plot, that with a larger overlap of pictures and flights, that very good results can be obtained by using the 20,000 pictures to augment control in areas where the triangulation is sparse, and that a considerably less number of auxiliary control points than was determined in the above plot, can be used.

Enclosure.

Respectfully,

L. W. Swanson,  
Chief of Party.

*copies of sketch  
have been mailed  
to Swanson Bgg.*

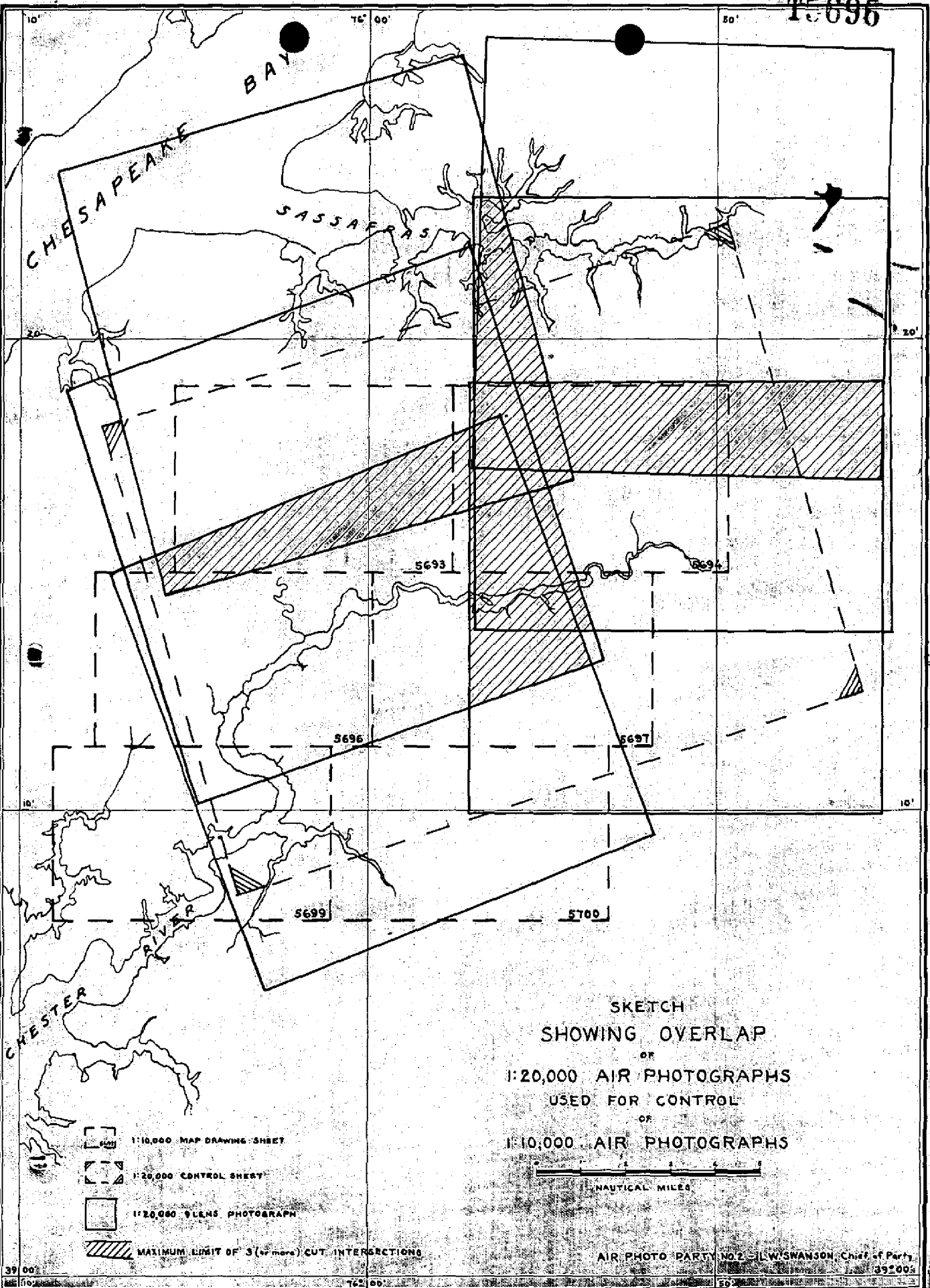
*80 Jna Bgg.  
208A  
22 → 26 or 23*

DEC 11 1939

RECEIVED BY H. A. 1 DIV FOR LHMAG

1990  
under

TE 696



Applied to Reconstruction of Chart 548 - July 25, 1941 - J. Walker