65
68
66
67

5652

77° 5

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Air Photo
Topographic
~~Hydrographic~~

Sheet No. T-5652

State MARYLAND

LOCALITY

CHESAPEAKE BAY

ELK RIVER

NORTHERN PART

Photographs Taken 1937

1938

CHIEF OF PARTY

L.W. Swanson

U.S. GOVERNMENT PRINTING OFFICE: 1934

5652

Partially applied to Chl. 570 by N.R.E. in 1938 (Am. SR.)
Applied to Chl. 570 May 8/41 SR.

Form 537a
Ed. Nov. 1929

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. T - 5652 T5652

REGISTER NO.

State Maryland

General locality Upper Elk Neck & Entrance to C. & D. Canal

Locality Elk River NORTHERN PART

Scale 1:10,000 ~~x 0.965~~ Date of photographs Apr 30 ~~& May 1~~ 1937

Vessel Air Photographic Survey Party No. 2

Chief of party L.W. Swanson

Surveyed by Field Inspection: Shoreline, J.C. Partington & E.L. Jones
Detail, Don Jones & W.C. Russell
Compilation: Wm. R. Jackson

Inked by Wm. R. Jackson

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

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

Instructions dated May 13, 19 38

Remarks: compiled at 1:10 000 X 965
and inked at scale 1:10 000

DESCRIPTIVE REPORT
To Accompany
CELLULOID MAP DRAWING SHEET NO. 5652
State of Maryland
UPPER ELK NECK & ENTRANCE TO BACK CREEK

Date of this Report: October 31, 1938.

GENERAL INFORMATION:

The field inspection for the shoreline of this area was made during August to October, 1937. The detail field inspection back from the shoreline was made during June, 1938. All field inspection was done by Air Photographic Party No. 2 of Baltimore, Md.

The photographs were taken by the U.S. C. & G. S. Nine Lens Aerial Camera,

CONTROL:

The following triangulation stations fall within the tracing limits of this sheet: Airway Beacon 63 B, 1933; Caufiel, 1934; Richardson, 1934; Creek, 1937 (field computation); A2 U.S.E., 1937 (field computation) and B, U.S.E., 1937 (field computation).

RADIAL PLOT:

The radial plot of this sheet was done by the party of S.B. Grenell and checked by the Washington Office. No other information regarding the radial plot was furnished this party.

DETAIL:

Additional points radial plotted during the detailing of this sheet were circled by small violet circles on the map drawing and by small red circles on the photographs.

There was very little adjustment of the photos to the map drawing.

Double full lines were used to show streets and maintained roads (either gravel or concrete); double dashed lines to show roads not maintained and which are not passable in wet weather; and single dashed lines to show trails.

The streams as shown on this sheet, are for the most part, drainage streams in wooded ravines and flow only during the rainy seasons. Their locations in some places are somewhat doubtful, but are assumed to follow the main axis of the ravine. The stereoscope was used to trace all drainage.

An attempt was made to show all buildings on the sheet, except small sheds and out-buildings.

JUNCTIONS:

There is no sheet joining on the north. T-5653 on the East was not complete at this time, except the shore line which makes a satisfactory junction. The junction with T-5655 on the south is in good agreement. The junction with T-5651 on the west is in good agreement, except for the following:

(1) Along longitude 75° 56', the junction of the two sheets, from Latitude 39° 31' to latitude 39° 35.5', no streams or drainage has been shown on T-5651 to join that shown on T-5652. It is recommended that this drainage be shown on T-5651

(2) At latitude 39° 35.5' the stream does not make a junction by a considerable amount. It is recommended that this discrepancy be investigated. T-5252 Correct. Noted on T5251 BGJ

(3) It is recommended that the streams in the extreme north-east corner of T-5651 be corrected to agree with T-5652, as it is felt that the control on T-5652 is better on Correction made

(4) At latitude 39° 33.6' a road shown on T-5652 as a double full line road, which is in agreement with the field inspection, is shown on T-5651 as a double dashed line rodd and in a slightly different location. It is recommended that the road on T-5651 be changed to agree with T-5652. Noted on T5251 Corrected on T5251

(5) At latitude 39° 35.3' a small portion of detail shown on T-5652 is not shown on T-5651. It is recommended that this detail be added to T-5651. Noted on T5251 Corrected on T5251

(6) At latitude 39° 36.3' a road shown on T-5651 as a double dashed line road should be changed to a double full line road to agree with T-5652 and the field inspection. Noted on T5251

(7) At latitude 39° 36.5' a three track railroad is shown on T-5652 whereas on T-5651 it is shown as a single track railroad. The railroad has been changed to a single line symbol and labelled 3 tracks BGJ.

The differences in the roads between this sheet and the adjoining sheets are caused by the interpretation of what was considered a first or second-class road (Reference,- Director's letter dated June 1, 1938, 22/MEK, 1990).

COMPARISON WITH PREVIOUS SURVEYS:

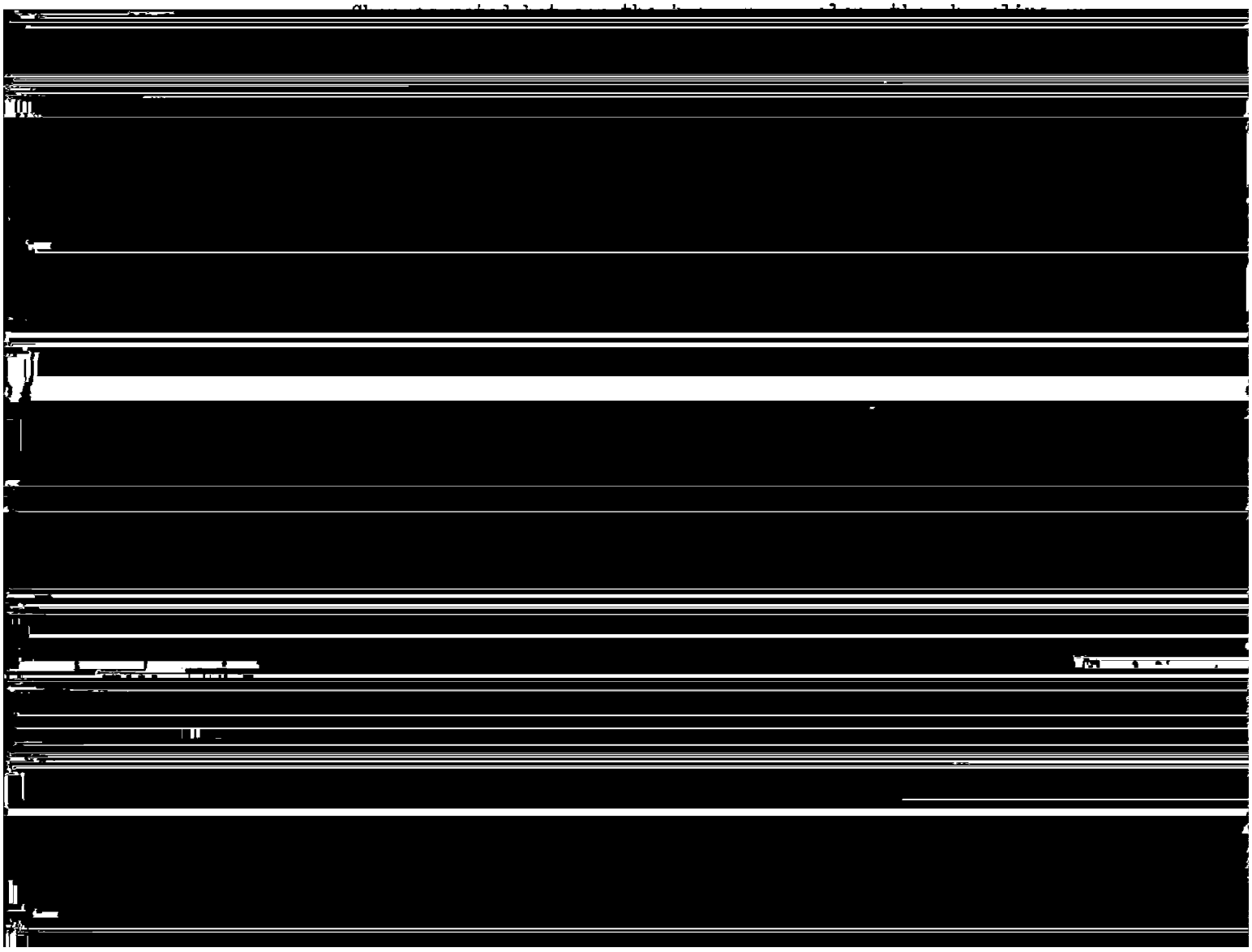
T-2717 In latitude 39° 31.5' and longitude 75° 52.7', on Welch Point, the docks as shown on T-2717 no longer exist. A small sand and marsh point has been built up since the previous survey.

Along Back Creek from Welch Point to the limits of this sheet there are three large marsh areas shown on the present survey that are not shown on T-2717.

Such roads and detail that existed when the previous survey was made check exceptionally well with the present survey.

T-2465 In latitude 39° 32.5 to 39° 32.8 and longitude 75° 52.6', the several bights as shown on survey T-2465 are marsh areas and are so shown on this survey.

At the entrance to Plum Creek there are differences in the marsh areas as shown on the two surveys.



the chart. The limits of the marsh areas are approximately the same. However, it is very hard to determine a definite marsh line from the photographs, as the grass grows in water and does not show a strong definite line. It is felt that the way the marsh is shown on the map drawing is a true representation. checked and corrected in Hydro Dept. and correction applied to T-5652

[redacted]

T-5652

	Remarks	Decisions
1		395759
2		"
3		"
4		395758 U S G B
5		"
6		"
7		"
8		"
9		"
10		"
11		"
12		395759
13		395758
14		"
15		"
16		"
17	Ford is a very common name in vicinity.	"
18		394759
19		395758 U S G B
20		"
21		
22		
23		
24		
25		
26		
27		

M 234

GEOGRAPHIC NAMES

Survey No. 5652

Name on Survey	On Chart No. 1226 * 307 A,	On previous survey No. B,	On U. S. quadrang. Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atla. G	U. S. Light List H	K	
Piney Cr. Cove	* x	T-2465 x	x	a,b						1
Muddy Cr.	x	x		a,b						2
Jones Cr.	* x	x		b						3
Bull Minnow Pt.	* x	x	Tom Pt.	f,b						4
Welch Pt.	* x	T-2717 x	x	a		x		x		5
Little Welch Pt.	* x	x		a						6
Herring I.	* x			a						7
Plum Pt.	x	T-2465 x	x	a		x		x		8
Plum Cr.	x	x	x	a		x				9
Ft. Defiance	x	x		a						10
Manor	x	Balto. Manor		?						11
Hog Hills	x	x	x	a						12
Back Cr.	* x	T-2717 x	x	a				x		13
Henderson Pt.	x	x		a				x		14
Paddy Piddles Cove	x	x								15
Sandy Pt.	* x	x		e						16
Ford Cove	[illegible]	T-2465 x		?						17
Elk River	* x	x	x	a				x		18
Little Elk Cr.			x							19
Wattys Pt	*	T2717 *								20
Bacon Hill										21
										22
			Names underlined in red approved							23
			by L. Heck at 8/10/38							24
6/23/38 by D.A.J										25
										26
										27

M 234

	Remarks	Decisions
1		
2		
3		
4	Lort Pt. (a)	
5		
6		
7		
8		
9		
10		
11	Not known in Elkton (County Seat) P.O. (a);Northeast P.O. (Postmaster); or at Elk Neck Store (f).	
12		
13		
14	Henderson's Pt. on T 2717	
15	Paddy Biddles Cove (a,b)	
16	(a,b) ?	
17		
18		
19	U.S.C. & G.S. Chart #1226 = Little Elk River U.S.G. Quad. = Little Elk Cr.	
20	S Y M B O L S	
21	a Mr. L.T.Boulden, P.O. Employee, Elkton, Md.	
22	b Mr. Chas W. Cooling, Chesapeake City, Md.	
23	Mr. Andrew Leybold, Earleville, Md. R.D. #1	
24	d Mr. Harry H. Austin, Earleville, Md. R.D. #1	
25	e Mr. J.G. Steele, Chesapeake City, Md.	
26	f Mr. E.M.Wood, North East, Md. R.F.D.	
27	? Not known locally.	

M 234

REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: L.W. Swanson Compiled by: W.R. Jackson

Project: H.T. 215 Instructions dated: May 13, 1938

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, ~~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 were made.

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. 68~~)

None accompany this sheet.

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.

There was no contemporary planetable survey - This party has not had access to the Hydrographic survey. del of the manner

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)

This party received no information in regards to the radial plot of this sheet. other than it was accomplished by the party of SB Grinell + checked in Washington Office.

7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 46, 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 52) ✓

[redacted]

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~~)
This has been placed on accompanying Title Sheet. As per Office Instructions

16. No additional surveying is recommended at this time.

17. Remarks:

18. Examined and approved;
Dec. 8, 1938

L W Swanson
Chief of Party

19. Remarks after review in office:

M-350

T-5652

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 " ON RULING MACHINE

Grid inked on machine by "

Intersections inked by —

Points used for plotting grid:

x=1,105,000 FT. y=620,000 FT.	x 1,115,000 y 635,000
x 1,105,000 y 650,000	x y
x 1,120,000 y 620,000	x y
x 1,120,000 y 650,000	x y

Triangulation stations used for checking grid:

1. Richardson, 1934 (Ref. Sta.)
2. Caufield, 1934
   X=1,105,576 - Y=646,064
3. Airway Bn #C3-B, 1933
4. _____
5. _____
6. _____
7. _____
8. _____

5652

Plane coordinates on Lambert projection

State Md. Station $x = 1,115,000$ $y = 635,000$

$\phi = 39° 34' 17.81$ $\lambda = 75° 52' 57.48$

Tabular difference of R for 1" of ϕ =

R (for min. of ϕ)			y' (for min. of ϕ)		
Cor. for sec. of ϕ		−	Cor. for sec. of ϕ		+
R		25,736,040.3	y'		633,072.5
			y'' (=2R $\sin^2 \frac{\theta}{2}$)		+ 1,927.8
		° ' "	y		635,000.3
θ (for min. of λ)					
Cor. for sec. of λ		−			
θ		+ 0 42 046708	$\frac{\theta}{2}$		° 21' 02.3354
θ''	For machine computation	"		For machine computation	
			log θ''		
log θ''			colog 2		9.69897000
S for θ			S for $\frac{\theta}{2}$		
log sin θ	sin θ	.0122396438	log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	.0061199365
log R				R sin $\frac{\theta}{2}$	
log x'			log sin^2 $\frac{\theta}{2}$	R sin^2 $\frac{\theta}{2}$	963.91
x'	R sin θ	315	log R		
		2,000,000.00	log 2		0.30103000
		1,115,000	log y''		
x					

$x = 2{,}000{,}000.00 + R \sin \theta$

$y = y' + 2R \sin^2 \frac{\theta}{2}$

y' = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and θ are given in special tables

(R 340)

5652

Plane coordinates on Lambert projection

State Md. Station

$x = 1,105,000$

$y = 620,000$

39° 21' 50.74 ; -75° 58' 07.44

[redacted]

5652

Plane coordinates on Lambert projection

State Md. Station

x = 1,120,000
y = 620,000

39°31'48.96) – 75° 51' 56.02

[redacted]

R (for min. of ϕ)			y' (for min. of ϕ)		
Cor. for sec. of ϕ		–	Cor. for sec. of ϕ		+
R		25,751,101.3	y'		618,011.4
			y'' (=2R $\sin^2 \frac{\theta}{2}$)		+ 1,988.3
θ (for min. of λ)		° ' "	y		619,999.7
Cor. for sec. of λ		–			
θ		+ 0 42 43.2452	$\frac{\theta}{2}$		° 21 21.6226
θ''	For machine computation	"		For machine computation	
			log θ''		
log θ''			colog 2		9.69897000
S for θ			S for $\frac{\theta}{2}$		
[illegible]	[illegible]	0.2426.64356	[illegible]	[illegible]	.00621 34477 2

[redacted]

5652

Plane coordinates on Lambert projection

State md Station $x = 1{,}120{,}000$ $y = 650{,}000$

$\phi = 39°\ 36'\ 45.43$ $\lambda = 75°\ 51'\ 51.25$

Tabular difference of R for 1" of ϕ =

R (for min. of ϕ)			y' (for min. of ϕ)		
Cor. for sec. of ϕ		−	Cor. for sec. of ϕ		+
R		25,721,103.4	y'		648,009.3
			y'' (=2R $\sin^2 \frac{\theta}{2}$)		+ 1,990.7
		° ' "			650,000.0
θ (for min. of λ)			y		
Cor. for sec. of λ		−			
θ		+ 0 42 46.2391	$\frac{\theta}{2}$		°21' 23".11955
θ''	For machine computation	"		For machine computation	
			log θ''		
log θ''			colog 2		9.69897000
S for θ			S for $\frac{\theta}{2}$		
log sin θ	sin θ	.0124411573	log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	.0062206990
log R				R sin $\frac{\theta}{2}$	160,003.242
log x'			log $\sin^2 \frac{\theta}{2}$	R $\sin^2 \frac{\theta}{2}$	995.33
x'	R sin θ	320,000.3 8	log R		
		2,000,000.00	log 2		0.30103000
x		1,120,000.3	log y''		

$x = 2{,}000{,}000.00 + R \sin \theta$

$y = y' + 2R \sin^2 \frac{\theta}{2}$

y' = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and θ are given in special tables

(R 340)

5652

Plane coordinates on Lambert projection

State Md Station $x = 1{,}105{,}000$ $y = 650{,}000$

$\phi = 39^\circ 36' 47''.23$ $\lambda = 75^\circ 55' 02''.90$

Tabular difference of R for 1" of ϕ =

R (for min. of ϕ)			y' (for min. of ϕ)		
Cor. for sec. of ϕ		−	Cor. for sec. of ϕ		+
R		25,720,921.3	y'		648,191.5
			y'' (=2R $\sin^2 \frac{\theta}{2}$)		+ 1,808.4
		° ' "			649,999.9
θ (for min. of λ)			y		
Cor. for sec. of λ		−			
θ		+ 0 40 45.9530	$\frac{\theta}{2}$		° 20 22.9765
θ''	For machine computation	"		For machine computation	
			log θ''		
log θ''			colog 2		9.69897000
S for θ			S for $\frac{\theta}{2}$		
log sin θ	sin θ	.01185580368	log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	.00592912 26
log R				R sin $\frac{\theta}{2}$	152,502.496
log x'			log $\sin^2 \frac{\theta}{2}$	R $\sin^2 \frac{\theta}{2}$	904.21
x'	R sin θ	304,999.6	log R		
		2,000,000.00	log 2		0.30103000
x		1,104,999.6	log y''		

$x = 2{,}000{,}000.00 + R \sin \theta$

$y = y' + 2R \sin^2 \frac{\theta}{2}$

y' = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and θ are given in special tables

(R 340)

Plane coordinates on Lambert projection

State Md. Station Airway Bn 63-B

ϕ = 39° 36' 08.278 λ = 75° 54' 56.897

Tabular difference of R for 1" of ϕ =

R (for min. of ϕ)			y' (for min. of ϕ)		
Cor. for sec. of ϕ		−	Cor. for sec. of ϕ		+
R		25,724,863	y'		644,250
			y'' (=2R $\sin^2 \frac{\theta}{2}$)		+ 1 814
		° ' "	y		646,064
θ (for min. of λ)					
Cor. for sec. of λ		−			
θ		+ 0 40 49.7206	$\frac{\theta}{2}$		° ' "
θ''	For machine computation	"		For machine computation	
			log θ''		.00000 05258
log θ''			colog 2		9.69897000
S for θ			S for $\frac{\theta}{2}$		
log sin θ	sin θ	.011876 3005	log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	
log R				R sin $\frac{\theta}{2}$	
log x'			log sin^2 $\frac{\theta}{2}$	R sin^2 $\frac{\theta}{2}$	
x'	R sin θ		log R		
		2,000,000.00	log 2		0.30103000
x		~~2,305,516~~ 1,105,576	log y''		

x = 2,000,000.00 + R sin θ

y = y' + 2R $\sin^2 \frac{\theta}{2}$

y' = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and θ are given in special tables

Section of Field Records

REVIEW OF AIR PHOTOGRAPHIC SURVEY NO. T-5652
Scale 1:10,000

Chief of Party - L. W. Swanson.
Photographs taken - April 30, 1937.
Compiled - August to October (inclusive) 1938.
Radial Plot by - S. B. Grenell.
Detailed by - W. R. Jackson.

The details on T-5652 are of the date of the photographs (April 30, 1937), with the exception of details in Back Creek which were taken from graphic control survey T-6556a of September 1938.

Field inspection for interpretation of the photographs was made during October 1937 and June 1938.

Comparison with Graphic Control Survey T-6556a (1938)
Scale 1:5,000

T-6556a shows numerous changes in the shoreline since the photographs were taken. These changes are largely due to dredging. Air photographic survey T-5652 has been corrected to agree with T-6556a.

A number of U. S. Engineer stations, piling, lights, and beacons located by T-6556a have been transferred to T-5652.

T-6556a shows a magnetic declination of 9° 03' west and 8° 32' at two stations less than one mile apart. The declinatoire was not checked.

The azimuth of the range at the entrance to Back Creek is shown on T-6556a as 48° 53' and was determined by plane table in accordance with Field Memo. No. 2, 1936.

Engineer stations in Back Creek, as located onT6556a which are piling have been shown on T-5652 as piling without the station symbol.

All details on T-6556a within the area of T-5652 are shown on T-5652 except the magnetic meridian, floating aids, temporary topographic stations, and the range azimuth at the entrance to Back Creek.

Previous Topographic Surveys.

Comparison with the previous topographic surveys listed below shows that T-5652 is complete and adequate to supersede the section of those surveys which

it covers except for the details noted.

Refer to page 3 of the descriptive report for comparison made by the field party.

There have been numerous cultural changes in the area since these surveys were made and also some comparatively large shoreline changes. These latter are due to dredging and to changes in the unstable marsh areas.

T-170	(1:20,000)	1843	
T-186	(1:20,000)	1855	except for contours
T-2352	(1:5,000)	1898	
T-2411	(1:10,000)	1899	
T-2465	(1:20,000)	1900	except for contours
T-2668	(1:20,000)	1904	" " "
T-2717	(1:20,000)	1905	" " "

Contemporary Hydrographic Surveys

H-6359	(1:5,000)	1938
H-6360	(1:10,000)	1938

The above surveys have not been reviewed at this date. Pencil notes have, therefore, been made directly on H-6359 and H-6360 to indicate details which should be transferred from T-5652.

The temporary stations located on T-5652 for control of the hydrography will remain on the celluloid drawing but will not appear on the printed copies.

Marsh limits in Elk River at latitude 39° 34' and latitude 39° 31.6' have been revised to agree with the position as shown on the hydrographic survey.

Landmarks and Fixed Aids to Navigation.

There are no landmarks in the area covered by T-5652. Fixed aids to navigation in Back Creek were transferred from T-5665a and checked from positions given in Chart Letter 198 (1939). These aids were located by graphic control survey T-6556a made in September 1938.

Comparison with Chart 570 (1/6/39) and Chart 1226 (4/5/39).

T-5652 shows additional piling and shoreline in Back Creek.

There are also numerous minor shoreline changes throughout the sheet.

Recoverable Topographic Stations.

Descriptions of recoverable topographic stations are filed under T-6556a.

Conclusion.

The descriptive report and compilation of details on T-5652 are complete and the drawing is satisfactory.

Reviewed in office by - H. D. Reed.

Inspected by - B. G. Jones.

Examined and approved:

T. B. Reed,
Chief, Section of Field Records.

K. T. Adams
Chief, Division of Charts.

Fred L. Peacock
Chief, Section of Field Work

Chief, Division of H. & T.