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5674

5674

Form 504 Rev. Dec. 1933 DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. T 5674
State MARYLAND	
LOCALITY	
SUSQUEHANNA RIVER	
Photographs taken ^{Apr 30} May 1 , 1937	
1938	
CHIEF OF PARTY	
L. W. SWANSON	

appears to Chh. 572 - Apl. 1900 - D.S.D.

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 - 5674

REGISTER NO.

T5674

State Maryland

General locality havre de Grace to Port Deposit 7

Locality Susquehanna River

Scale 1:10,000 x 0.965 Date of photographs April 30 - May 19 37.

~~Vessel~~ Air Photographic Survey Party No. 2

Chief of party L.W. Swanson

Field inspection : Shoreline , L.W. Swanson and E.L. Jones
Surveyed by Detail , L.W. Swanson and W.C. Russell
Compilation: I.M. Zeskind

Inked by I.M. Zeskind

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

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

Instructions dated May 13, 1938

Remarks: _____

STATISTICS

AIR PHOTOGRAPHIC SURVEY SHEET NO. T - 5674
STATE OF MARYLAND
SUSQUEHANNA RIVER

AIR PHOTOGRAPHS DATE TIME

1284-85 14-30-37 2:39-2:40
1305-087 " 2:53-2:54
1310-11 " 2:57-2:58

SCALE FACTOR-----J.C.Partington----- 1 + 9650
PROJECTION-----Ruling Machine-----Washington Office
PROJECTION CHECKED-----Washington Office
CONTROL PLOTTED BY----J.C.Partington-----Mar.23,1938
CONTROL CHECKED BY----W.C.Russell-----Mar.28,1938
RADIAL LINE PLOT--JC.Partington, L.W.Swanson,
E.L.Jones and W.C.Russell--Mar.23 to 24,1938.
RADIAL POINTS PRICKED BY---E.L.Jones, ADDITIONAL POINTS BY--
W.C.Russell, I.M.Zeskind
SHORE LINE INKED BY----W.C.Russell and I.M.Zeskind -----
DETAIL INKED BY-----I.M.Zeskind-----
AREA (land)-----19.6 square statute miles-----
AREA (Shoals)----- 0.0 " " "
SHORELINE (more than 200 meters from opposite shore) -----
-----21.3 statute miles
SHORELINE (Creeks)----- 1.0 " "
RAILROADS-----23.0 " "
ROADS, STREETS, TRAILS-----103.0 " "
DATUM-----North American 1927
REFERENCE STATION-----Meigs, 1933
Latitude 39°33'43.999" (1356.9 m) *adjusted*
Longitude 76°07'56.534" (1349.6 m)
PRELIMINARY REVIEW-----L.W. Swanson

$x = 1,044,631$ FT

$y = 630,814$ FT

Maryland System Plane Coordinates

$x = 1,044,631$ FT.

$y = 630,814$ FT.

Field inspection in Nov. 1937 and May 1938

*Details on T.5674 are of the date of the
photographs except for two small pieces located by
#6364 in 1938 and sextant fixes
to strengthen location of upper end of the Susquehanna
River on T.5674.*

Bgg.

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 = 1,035,000 FT
y = 650,000 FT

x 1,055,000
y 620,000

x 1,035,000
y 620,000

x
y

x 1,045,000
y 635,000

x
y

x 1,055,000
y 650,000

x
y

Triangulation stations used for checking grid:

$L = 1,049,631 - y = 630,812$

1. Meigs

5. _____

$y = 1,058,039 - y = 623,065$

2. Harve de Grace Lt. Ho.

6. _____

3. _____

7. _____

4. _____

8. _____

1

DESCRIPTIVE REPORT
to accompany
AIR PHOTOGRAPHIC SURVEY SHEET NO. T-5674
State of Maryland
SUSQUEHANNA RIVER

GENERAL INFORMATION .

The field inspection of shore line was made in November 1937, and that of land area during May 1938, by Air Photographic Survey Party #2 of Baltimore, Md.

The photographs were taken by the U.S. Coast and Geodetic Survey Nine Lens Camera (Aerial) by the U.S. Army Air Corps on April 30 and May 1, 1937.

CONTROL.

The control for this survey consisted of triangulation stations "Meigs, 1933" established by R.D. Horne in 1933; "Pt. Concord, Havre de Grace Light House, 1897"; and "Standpipe, Aberdeen, 1898" both of which appear in Special Publication No. 114, "Triangulation in Maryland".

RADIAL PLOT.

The notation under this heading in Descriptive Report T-5676 applies to this sheet except for the following:

(c) Relief.

There are considerable differences in relief in the portion of this sheet approximately north of lat. $39^{\circ}35.5'$. Most of the differences in relief occur on the east coast of the Susquehanna River north of the above-mentioned latitude.

Attention is also called to the fact that in detailing from picture #1285 considerable descriptancy was found in wings Nos. 2, 7 & 9. It was necessary to adjust each wing for detailing.

Attention is also called to the fact that in the area north of a diagonal running between projection intersections lat. $39^{\circ}36'$, long. $76^{\circ}09'$, and lat. $39^{\circ}38'$, long. $76^{\circ}07'$, it was not possible to get 3 radial cuts to pricked points, as this is the outside flight. These points were, therefore, shown on this ^{calculated} sheet by green circles. The shore line and islands on the west side of the Susquehanna River north of lat. $39^{\circ}36'$ are not in agreement with the photographs. The shore line and islands as delineated by the hydrographic party of Lt. Gallen

~~Refer also to revision at back~~

Note Because of the weakness of the plot in that area the shoreline of the Susquehanna River above lat. $39^{\circ} 36'$ was first ~~was~~ located by the photo plot for the hydrographic party and then readjusted to sextant locations made by the hydrographic party. This is accepted by the office review as of sufficient accuracy for charting on scales of 1:20,000 or smaller scales. The plot and adjustment as made in the field is accepted as the best that can be accomplished with the available control and photographs.

B.G. Jones

12/4/39

was used on this sheet, since their shore line was located graphically by sextant cuts or fixes. The shore line of the two surveys are therefore now in agreement. This area was not originally detailed by this party, as it was felt that due to lack of control and pictures the detailing should not be carried beyond the southern end of Spencer Island. This additional work to the north was asked for by the commanding officer of the "Mikaw". See Hydrographic Sheet and Descriptive Report of this area.

DETAIL

Additional radial points shown by blue circles were plotted during the detailing of this sheet in areas where the photographs were off scale or where there were large differences in relief.

The detail on this sheet was shown in accordance with instructions for detailing Chesapeake Bay Sheets dated May 13, 1938.

Except for control, all information shown on this sheet was taken from the field inspection and from the photographs.

The northern part of this sheet bounded by projections lat. $39^{\circ}36'$ to lat $39^{\circ}37'$ and long. $76^{\circ}05'$ to long. $76^{\circ}06'$ was not completed due to lack of pictures.

The name of the one track railroad running along the west bank of the Susquehanna River north of Havre de Grace is shown on the overlay as "Stone & Webster (Private) R.R." The name is not definitely known, but was built by Stone & Webster for use in the construction of the Conowingo Dam. This track is maintained and is used by one supply train a week, which runs from Havre de Grace to the Conowingo Dam.

COMPARISON WITH PREVIOUS SURVEYS.

A comparison between this sheet and a bromide enlargement of plane table sheet T-2382, 1899, shows good agreement in the inland areas along roads, houses, creeks, railroads, fences and wooded areas.

In general the shore line agreement is good. However, in the vicinity of lat. $39^{\circ}35.1'$ and long. $76^{\circ}07'$, the peninsula shown on this sheet does not extend as far south as shown on T-2382. There is no indication on the pictures of the island shown on T-2382, just ~~west~~ ^{East} of the southern end of the above mentioned peninsula.

The island shown on this sheet ~~west~~ ^{East} of the northern end of this peninsula does not appear on T-2382. However, north-
~~east~~ ^{west} of the location of this island there appears on T-2382 a group of small islands which does not appear on this sheet.

Field and stereoscopic examination of pictures indicate that the Susquehanna and Tidewater Canal shown on T-2382 no longer exists. It has been filled in. See hydrographic sheet of this area.

See note on opposite page.

This means blue circles on the celluloid, not hydrographic stations.

Shown on T-5674 as a Private Railroad without a name.

COMPARISON WITH CHART NO. 1226.

Very little of the area detailed on this sheet is shown on the above chart.

JUNCTIONS.

Junctions were made with the following sheets:

On the east with T - 5673
" " S.E. " T - 5675
" " S.W. " T - 5676

The junctions were everywhere in good agreement except of the road in lat. $39^{\circ}35.5'$ and long $76^{\circ}05'$. *The junction of the road shown on T 5673 is about 7 metres south of that shown on this sheet. It is recommended that the road on T 5673 be made to agree with that shown on this sheet, as the control is stronger and therefore, better intersections could be obtained on this sheet. * This junction has been corrected 4/22/39

GEOGRAPHIC NAMES.

Geographic names shown on this sheet are listed on form M 234 herewith.

LANDMARKS.

Pt. Concord, Havre de Grace Lighthouse 1897, is the only charted landmark falling on 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 is not greater than 5 meters for all radial points and well defined objects along the shoreline and in the areas which are well controlled. The error of the other detail of importance on this sheet is probably not greater than 10 meters.

Respectfully submitted,

J. M. Jeskind
J. M. Jeskind,
Draftsman

Forwarded approved

L. W. Swanson
L. W. Swanson,
Chief of Party

REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party:

Compiled by:

Project:

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, 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, h)
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)
*Tracing from "Mikawé" accompanies this sheet.
See Report of Hydrographic Sheet this vicinity by
Launch "Mikawé" 1938*
- no { 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. ✓
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. 126; 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 52~~)
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 ^{not} 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 66K)
13. The geographic datum of the compilation is *N.A. 1927 adj.* 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 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, 48)

16. No additional surveying is recommended at this time.
17. Remarks: *Additional control would have been desirable in the northern limits of this sheet.*
18. Examined and approved; ✓
19. Remarks after review in office:


Chief of Party

Remarks.

Decisions

1	Garretts I. - T 2382	Great Id. - P.O. Dept. Map Harford Co., Md.	395760	U S G B
2			395761	
3	Happy Valley Branch	Sometime Local Use -U.S.G.S. Quad Havre de Grace	"	U S G B
4			396761	
5			395761	
6			"	
7			395760	
8			"	
9			395761	
10			"	
11			"	
12			394761	
13			396761	
14			"	
15			"	
16			"	
17				
18			396761	
19			395761	
20			396761	
21	<i>Not shown on Photo Survey T 5674 1899</i> Location not definite. Can be added from hydro Survey		395761	
22			"	
23				
24			395760	
25			395761	
26			396761	
27			"	

GEOGRAPHIC NAMES

Survey No.

Name on Survey		On Chart No. 1226		On previous survey No. T 2-382		On U. S. quadrang. Maps		From local information		On local Maps		P. O. Guide or Map		Rand McNally Atl.		U. S. Light List		
		A.	B.	C.	D.	E.	F.	G.	H.	K.								
<u>Garrett Island</u>	✓	x	x	x	x													1 *
<u>Mt. Ararat</u>	✓	x	x															2 *
<u>Happy Valley Branch</u> <u>Heron Run</u>	✓	x	x		x													3 *
<u>Port Deposit</u>	✓	x	x	x	x													4 *
<u>Lapidum</u>	✓	x	x	x	x													5 *
xxxx <u>St. Catherine Id.</u>	✓	x		x	x													6 *
<u>Havre de Grace</u>	✓	x	x	x	x		x											7 *
<u>Concord Pt.</u>	✓	x		x	x		x											8 *
<u>Oakington</u>	✓	x		x			x											9 *
<u>Swan Creek (vill.)</u>	✓	x		x	x		x											10 *
<u>Gasheys Creek</u>	✓			x	x		x											11 *
<u>Swan Creek</u>	✓	x		x	x		x											12 *
<u>Roberts Island</u>	o			x			x											13 *
<u>Wood Island</u>	o			x			x											14 *
<u>Snake Island</u>	✓			x			x											15 *
<u>Spencer Island</u>	✓	x		x			x											16 *
<u>Pa.R.R. - Columbia & Port Deposit Branch</u>				x														17
<u>Rock Run (vill.)</u>	o			x														18 *
<u>Velvet Rock Branch</u>	✓			x														19 *
<u>Tome Institute</u>					x													20
<u>Carrs Battery</u>		x			x													21 *
<u>M.T. FELIX</u>	✓			✓														22 *
<u>CHESAPEAKE BAY</u>																		23 *
<u>PUSQUEHANNA RIVER</u>																		24 *
<u>Earlton</u>	✓			✓														25 *
<u>Rock Run</u>	o																	26
<u>Steels I.</u>	o																	27

Names underlined in rec approved

by L. Heck on 6/23/39

5674

Plane coordinates on Lambert projection

State Ind.

Station

Point Concord ^{Harzudo Grace} $\phi = 39^{\circ} 32' 26.130''$ $\lambda = 76^{\circ} 05' 06.342''$ Tabular difference of R for 1" of $\phi =$

R (for min. of ϕ)		y' (for min. of ϕ)	
Cor. for sec. of ϕ	-	Cor. for sec. of ϕ	+
R	<u>25,747,341</u>	y'	<u>621,772</u>
		y'' (= $2R \sin^2 \frac{\theta}{2}$)	+
			<u>1293</u>
θ (for min. of λ)		y	<u>623,065</u>
Cor. for sec. of λ	-		
θ	<u>+ 0 34 27.2121</u>	$\frac{\theta}{2}$	
θ''	For machine computation		For machine computation
		log θ''	<u>.0000502214</u>
log θ''		colog 2	<u>9.69897000</u>
S for θ		S for $\frac{\theta}{2}$	
log sin θ	sin θ	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	
	<u>800,000.00</u>	log 2	<u>0.30103000</u>
	<u>-2,000,000.00</u>	log y''	
x	<u>2,258,039</u>		
	<u>1,008,039</u>		

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

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

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

5674

Plane coordinates on Lambert projection

$$x = \frac{1,035,000}{2,235,000}$$

State

Md.

Station

$$y = 650,000$$

$$\phi = 39^{\circ} 36' 54.50''$$

$$\lambda = 76^{\circ} 09' 57.26''$$

Tabular difference of R for 1" of $\phi =$

(6.33)

R (for min. of ϕ)		y' (for min. of ϕ)	
Cor. for sec. of ϕ	-	Cor. for sec. of ϕ	+
R	25,720,186	y'	648,927
		y'' (= $2R \sin^2 \frac{\theta}{2}$)	+
			1,074
θ (for min. of λ)		y	650,001
Cor. for sec. of λ	-		
θ	+ 0 31 24.6221	$\frac{\theta}{2}$	
θ''	For machine computation		For machine computation
		log θ''	.0000417415
log θ''		colog 2	9.69897000
S for θ		S for $\frac{\theta}{2}$	
log sin θ	sin θ	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	
	800,000.00	log 2	0.30103000
	-2,000,000.00	log y''	
x	2,235,000		
	1,035,000		

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

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

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

Grid Applied
4-11-39
HXR

Plane coordinates on Lambert projection

State md. Station 1,035,000
 $\phi = 39^{\circ} 31' 58.02''$ $\lambda = 76^{\circ} 10' 00.75''$ (1.74)
 Tabular difference of R for $1''$ of $\phi = - .7$

R (for min. of ϕ)		y' (for min. of ϕ)	
Cor. for sec. of ϕ	-	Cor. for sec. of ϕ	+
R	25,750,185	y'	618,928
		y'' (= $2R \sin^2 \frac{\theta}{2}$)	+ 1,072
θ (for min. of λ)		y	620,000
Cor. for sec. of λ	-		
θ	+ 0 31 22.4317	$\frac{\theta}{2}$	
θ''	For machine computation	$\frac{\theta}{2}$	For machine computation
		log θ''	.0000416444
log θ''		colog 2	9.69897000
S for θ		S for $\frac{\theta}{2}$	
log sin θ	sin θ	log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$
log R		log sin $\frac{\theta}{2}$	R sin $\frac{\theta}{2}$
log x'		log sin $\frac{\theta}{2}$	R sin $\frac{\theta}{2}$
x'	R sin θ	log R	
	800,000.00	log 2	0.30103000
	-2,000,000.00	log y''	
x	2,235,000		
	1,035,000		

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

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

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

5674

Plane coordinates on Lambert projection

1,045,000

 $x = 2,245,000$ State Md.

Station

 $y = 635,000$ $\phi = 39^{\circ} 34' 25.33''$ $\lambda = 76^{\circ} 07' 51.31''$

(75.62)

(-20.09)

Tabular difference of R for 1" of $\phi =$

R (for min. of ϕ)		y' (for min. of ϕ)	
Cor. for sec. of ϕ	-	Cor. for sec. of ϕ	+
R	25,735,280	y'	633,833
		$y'' (= 2R \sin^2 \frac{\theta}{2})$	+
			1166
θ (for min. of λ)		y	634,999
Cor. for sec. of λ	-		
θ	+ 0 32 43.6726	$\frac{\theta}{2}$	
θ''	For machine computation	$\frac{\theta}{2}$	For machine computation
		log θ''	.0000453166
log θ''		colog 2	9.69897000
S for θ		S for $\frac{\theta}{2}$	
log sin θ	sin θ	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	
	800,000.00	log 2	0.30103000
	2,000,000.00	log y''	
x	2,245,000		
	1,045,000		

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

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

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

5674

Plane coordinates on Lambert projection

1,055,000

 $x = 2,255,000$ $y = 650,000$

State Md.

Station

 $\phi = 39^\circ 36' 52.61''$ $\lambda = 76^\circ 05' 41.72''$

(22.04)

(42.20)

Tabular difference of R for 1" of $\phi =$

R (for min. of ϕ)		y' (for min. of ϕ)	
Cor. for sec. of ϕ	-	Cor. for sec. of ϕ	+
R	25,720,377	y'	648,736
		$y'' (= 2R \sin^2 \frac{\theta}{2})$	+
			1,264
θ (for min. of λ)		y	650,000
Cor. for sec. of λ	-		
θ	+ 0 34 05.0077	$\frac{\theta}{2}$	
θ''	For machine computation	$\frac{\theta}{2}$	For machine computation
		log θ''	.0000491483
log θ''		colog 2	9.69897000
S for θ		S for $\frac{\theta}{2}$	
log sin θ	sin θ	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	
	800,000.00	log 2	0.30103000
	2,000,000.00	log y''	
x	2,255,000		
	1,055,000		

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

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

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

5674

Plane coordinates on Lambert projection

1,055,000

 $\chi = 2,255,000$

State

Md.

Station

 $y = 620,000$ $\phi = 39^{\circ} 31' 56.14''$ $\lambda = 76^{\circ} 05' 45.51''$ Tabular difference of R for 1" of $\phi =$

(33.54)

-2

R (for min. of ϕ)		y' (for min. of ϕ)	
Cor. for sec. of ϕ	-	Cor. for sec. of ϕ	+
R	25,750,375	y'	618,738 -1
		$y'' (= 2R \sin^2 \frac{\theta}{2})$	+ 1,263
θ (for min. of λ)		y	620,001
Cor. for sec. of λ	-		
θ	+0 34 02.6290	$\frac{\theta}{2}$	
θ''	For machine computation		For machine computation
		log θ''	.0000490340
log θ''		colog 2	9.69897000
S for θ		S for $\frac{\theta}{2}$	
log sin θ	sin θ	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	
	800,000.00	log 2	0.30103000
	2,000,000.00	log y''	
x	2,255,000		
	1,055,000		

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

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

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

5674

Plane coordinates on Lambert projection

State md. Station Meigs
 $\phi = 39^{\circ} 33' 43.999''$ $\lambda = 76^{\circ} 07' 56.534''$

Tabular difference of R for 1" of $\phi =$

R (for min. of ϕ)		y' (for min. of ϕ)	
Cor. for sec. of ϕ	-	Cor. for sec. of ϕ	+
R	25,739,462	y'	629,651
		$y'' (= 2R \sin^2 \frac{\theta}{2})$	+ 1163
θ (for min. of λ)		y	630,814
Cor. for sec. of λ	-		
θ	+ 0 32 40.3938	$\frac{\theta}{2}$	
θ''	For machine computation		For machine computation
		$\log \theta''$	.0000451652
$\log \theta''$		$\operatorname{colog} 2$	9.69897000
S for θ		S for $\frac{\theta}{2}$	
$\log \sin \theta$	$\sin \theta$	$\log \sin \frac{\theta}{2}$	$\sin \frac{\theta}{2}$
$\log R$			$R \sin \frac{\theta}{2}$
$\log x'$		$\log \sin^2 \frac{\theta}{2}$	$R \sin^2 \frac{\theta}{2}$
x'	$R \sin \theta$	$\log R$	
	2 800,000.00 2,000,000.00	$\log 2$	0.30103000
x	2,244,631 1,644,631	$\log y''$	

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

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

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

Field Records Section

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5674.

Scale 1:10,000.

There are no graphic control surveys in this area.

Contemporary Hydrographic Surveys.

H-6364 (1938) 1:10,000.

Refer to last par. page 1 and page 2 of the descriptive report of T-5674 regarding extension of shoreline at the upper Susquehanna River for the hydrographic survey.

Two small piers at Lat. 39°32.3', Long. 76°05.4', built since the date of the photographs, were added to T-5674 from H-6364.

Except for minor differences along the upper Susquehanna River which are not sufficiently large to require adjustment, shoreline on H-6364 agrees with that on T-5674.

Former Topographic Surveys.

T-189 (1845) 1:10,000; T-2382 (1899) 1:20,000.

The tide water canal shown on the above surveys has been filled in. Except for the above mentioned this air photographic survey and the above surveys are in good agreement.

T-5674 is complete and adequate to supersede those portions of the above surveys which it covers except for contours on T-2382.

Comparison with Chart 1226.

T-5674 shows numerous additional shoreline and interior details for chart correction.

General.

The compilation and descriptive report are complete and satisfactory.

Reviewed by - L. C. Lande.

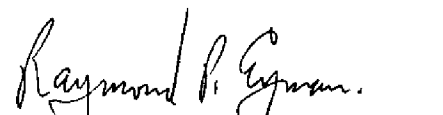
Inspected by - B. G. Jones, December 4, 1939.

Examined and Approved:



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


Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H. & T.

Descriptive Report T 5674 Supplemental

9/17/40

Items in red applied to Supplemental
T 5674 9/17/40. The road and new
bridge shown in red have been
located from nine lens photographs
nos. ~~24~~ 04941 and 04942 which were
taken July 5, 1940. Plotted in the office
by S. V. Griffith.

No data is available in the air photo
unit on the bridge clearances. The spans
shown on the drawing are tress spans
but appear to be fixed.

R. J. Jones