

5660

5660

Form 504 Rev. Dec. 1933 DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Air Photographic Topographic Hydrographic	Sheet No. T-5660
State MARYLAND	
LOCALITY	
Chesapeake Bay	
Headwaters of Sassafras River	
Fredericktown and Vicinity	
Photographs taken April 1937	
1939	
CHIEF OF PARTY	
L. W. Swanson	

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 - 5660

REGISTER NO.

T5660

State MARYLAND

General locality Chesapeake Bay, northern part

Locality Headwaters of Sassafras River Fredericktown and vicinity

Scale 1:10,000 x 0.965 Date of survey 1913

Vessel Air Photographic Party No. 2, Baltimore, Md.

Chief of party L. W. Swanson

Field inspection by J. C. Partington, D. A. Jones,
Surveyed by and Ross A. Gilmore

Inked by Arthur L. Wardwell

Heights in feet above _____ to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated May 13, 19 38

Remarks: Scale factor 0.965

DATA RECORD, T - 5660

Photographs:

No.s	Date	Time	Scale	Altitude	Stage of Tide
1182 - 1184	April 30, 1937	11:23	1:10,000	6,900 ft.	2.2 ft. above M.L.W.
1201 - 1203	" " "	11:40	1:10,000	"	2.2 ft. above M.L.W.
1209 - 1212	" " "	11:50	1:10,000	"	2.2 ft. above M.L.W.

Stage of Tide from predicted tides, Georgetown, Md., mean range 2.3 ft., spring range 2.4 ft.

Camera: U. S. Coast and Geodetic Survey nine lens, $F = 8\frac{1}{4}$ inches.

Supplemental Surveys:

	Reg. No.	Field No.	Date (mo. & year)
Graphic Control Surveys	NONE		
Hydrographic Surveys	# 6369	<i>4</i>	<i>Sept.</i> 1938 (Mikawa)
Field Inspection by:	J. C. Partington		1937
	D. A. Jones		1938
	R. A. Gilmore	<i>July</i>	1939 -

The details on T-5660 are of the date of the photographs except for items which were located by supplemental surveys as ~~discussed in detail on~~ *follows* the following pages.

1. *Revision of minor details of marsh and grass from # 6369 (1938)*
2. *addition of several small pieces from # 6369*
3. *addition of several small pieces from field inspection July 1939. (1938)*

Chief of Party: L. W. Swanson
Projection by: Ruling machine, Nov. 1937
Projection checked: Washington office, Nov. 1937
Control plotted by: E. H. Kirsch, Dec. 1937
Control checked by: I. M. Zeskind, Dec. 1937
Radial plot by: L. C. Lande, Dec. 1937
Compiled by: A. L. Wardwell 1938 & 1939
Smooth drafted by:

Reference Station: POORE 1934 Datum: N. A. 1927

Latitude: 39 22 25.290 (779.9)
Longitude: 75 50 24.493 (586.3) adjusted ✓

$$x = 1,127,895.6$$

$$y = 563,062.9$$

STATISTICS

Map Drawing T-5660.

AREA (land) ----- 34 square statute miles.
Shoreline (more than 200 meters from opp. shore) 10.8 statute miles.
Shoreline (less than 200 meters from opp. shore) 7.5 statute miles.
Roads and Trails ----- 60 statute miles.

Time required to complete the detailing by the rough draft method was 22 working days. Detailing was about 35% completed in 1938, but considerable time (probably 4 days) was spent in checking and revising it to agree with the field inspection notes now available.

DESCRIPTIVE REPORT

To accompany celluloid Map Drawing Sheet No. T-5660.

MARYLAND

Chesapeake Bay -- Headwaters of Sassafras River.

Date of this report: August 3, 1939

General Information:

The photographs were taken with the U. S. Coast and Geodetic Survey nine lens aerial camera on April 30, 1937.

Field inspection on this area was done by J. C. Partington in 1937, Don Jones in 1938, and Ross A. Gilmore in 1939.

Control:

The following-named triangulation stations fall within the tracing limits of this sheet:

Poore 1934
Woodall 1934

Radial Plot:

The radial plot for this sheet was partially done in the Washington office, completed by S. B. Grenell in Norfolk, Va.

*This sheet was plotted in connection with T5658 and T5659
see descriptive report T5658 for details Bgg*

Scale:

The scale of this sheet is $\frac{1}{10,000} \times 0.965$

Detail:

The area within the tracing limits was well covered by the photographs except for a strip in the vicinity of longitude $75^{\circ} 53'$, this being between two flights having an overlap of only 40%.

The shoreline and many of the roads and other detail near the river were inked in Norfolk, Va. in 1938. On that part several changes have been made to conform with the field inspection notes now available. Many of the roads are exaggerated in width and in weight of line, and have notes telling the correct width to be used on the finished drawing. Instructions were given to complete the

detailing by the rough draft method, so on the detail inked in 1939 the centerline only of all roads is shown, with notes as to type and width of road. Fences are shown as solid lines, and labeled.

An attempt was made to show all buildings, except sheds and small outbuildings on farms, and in the towns, where only the schools, churches, post-offices, and prominent buildings along the waterfront were shown. Due to the lack of clarity on some of these pictures, some of the buildings are only approximately correct as to size and shape of outline.

As the field inspection notes were in some places incomplete regarding location and height of bluffs along the shore, some of this information was obtained from an old survey (T-2381) made by planetable. No attempt was made to show, by the bluff symbol, the exact location of the top and bottom of the slope. The line of bluff symbols marks the general location of the steepest part of the slope, determined by field inspection notes, stereoscopic examination of the pictures, and comparison with the old survey T-2381.

Two docks and a small marine railway which have been built at Fredericktown since the photographs were taken were put in from field inspection notes.

Comparison with Previous Survey T-2381:

For the most part, the shoreline and roads agree very well between the old survey and the new map drawing, but there are some places where what was shown as marsh on the old survey has grown up there to trees and brush, and so is now shown as fast land. Some of the points show a little erosion.

Junctions:

This sheet joins the following map drawings:

T-5659 on the west.
T-5655 (on the north .
T-5656
T-5694 on the south.

Sheet T-5659 was being detailed at the same time as this one, so the junction was checked at once.

Sheet T-5694 has not yet been detailed.

Comparison was made with the advance print of sheet T-5656, and a satisfactory junction effected.

Comparison was made with the completed print of sheet T-5655, and the junction was found to be satisfactory with the exception of

a fence at longitude 75° 51.6' which should be added to T-5655.

No sheet is as yet laid out to join this one on the east.

There will be no sheet on the East. pgg

Comparison with Chart No. 1226:

As nearly as could be ascertained, the shoreline agrees with that on chart 1226. However, due to the great difference in scale, there can be no good comparison made.

Two roads shown on the chart are not now of sufficient importance for charting. One of these is shown on the chart as going easterly from the highway between Georgetown and Galena, and crossing Mill (or Sawmill) Creek. That road is now only a trail. The second of these roads is a short section running nearly north and south between two side roads which leave the highway to the eastward about 1.5 miles north of Fredericktown. There is now only a fence there.

Names:

Geographic names shown on this sheet and listed on Form M 234.

Landmarks:

The water tank at Cecilton (red, elevated) is a recoverable topographic station, and is listed on Form 567, "Landmarks for Charts". *This object was never needed by the air photographic party.*

Remarks:

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 radial points, well defined objects along the water front, and well controlled areas. The error of other detail of importance is believed to be not greater than 10 meters. *Because of the lack of control for the radial plot for T 5658, 59 and 60 as discussed in the descriptive report*

Remarks.

Decisions.

1		393758
2		"
3	Called "Swan Creek" on State Highway Comm. maps on U.S.G.S. quadrangle maps	393758 U.S.G.B
4	Called "Sawmill Creek" on State Highway Comm. maps " " " on U.S.G.S. quadrangle maps	" "
5	Called "Sawmill Creek" on Chart No. 1226	393758 U.S.G.B
6		393758 U.S.G.B
7	Called Frederick on old survey No. T-2381, and on Chart No. 77	"
8		394758
9		393758
10	* Known locally as Dyer CREEK (1+2)	"
11		393760
12	* " " " Fox Hole WHARF (1+2)	393758 U.S.G.B
13	" " " HALL CREEK (1+2)	393759
14		393758
15		393758
16		393758
17		
18	MR. WALTER WOODALL, GEORGETOWN MD	} 1
19	MR. PAUL PENNINGTON " "	
20	MR. JOHN E ROSS " "	
21		
22	Mr N. L. Riggiv " "	2
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES

Survey No. T-5660

Name on Survey	A. On Chart No. 1226	B. On previous survey No. 12381	C. On U. S. quadrang. Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	K.
. Hen Island				1-2					1
. Budd Landing			✓	1-2					2
. Jacobs Creek	✓	✓		2					3
Swantown Swan Creek	✓	✓		2					4
. Mill Creek	Saw-mill Cr	✓		2					5
. Georgetown	✓	✓	✓	Local Sign					6
. Fredericktown	✓	Frederick	✓	Local Signs					7
. Cecilton	✓		✓	1-2	✓				8
. Galena	✓	✓	✓	✓	✓				9
Dyer French Creek	✓	✓		*					10
. Sassafras River	✓		✓	✓	✓				11
Fox Hole Landing Flyers Wharf	✓		✓	*					12
Hall Trist Creek	✓	13 ✓		*					13
. Duffy Creek			✓	1-2					14
. Wilson Pt. Wharf	✓		✓	1-2					15
<u>Olivet Hill</u>									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

Names underlined in red approved

by L. Heck on 6/7/40

LANDMARKS FOR CHARTS

TO BE CHARTED }
TO BE DELETED } STRIKE OUT ONE

Baltimore, Md.

Aug. 3, 1939

I recommend that the following objects which ~~have~~ *have not* been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing.

L. W. Swanson

Chief of Party.

[illegible]

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

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 ROLING MACHINE

Grid inked on machine by "

Intersections inked by _____

Points used for plotting grid:

x = 1,135,000 FT
y = 545,000 FT

x 1,125,000
y 560,000

x 1,115,000
y 545,000

x
y

x 1,135,000
y 575,000

x
y

x 1,115,000
y 545,000

x
y

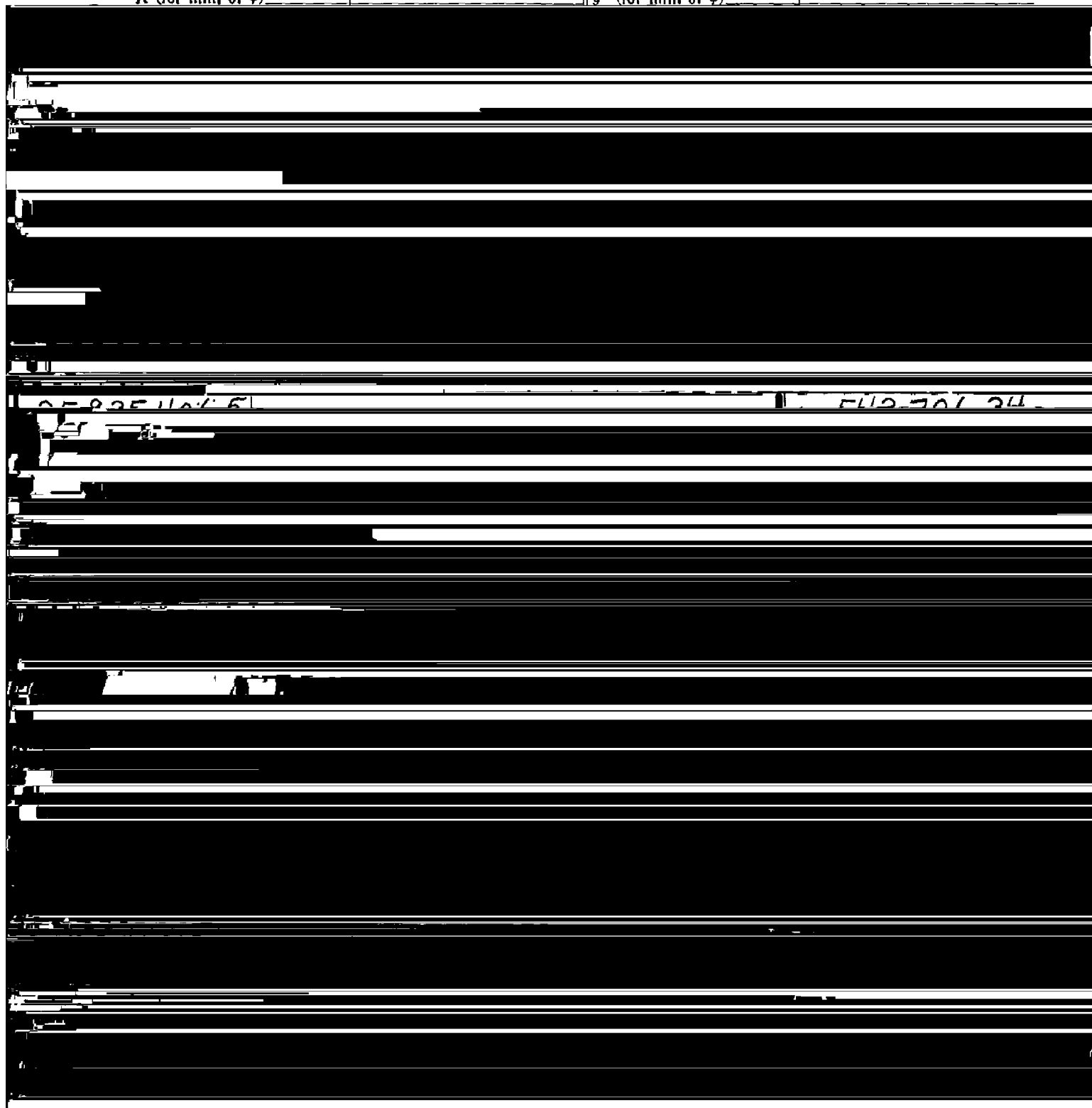
Triangulation stations used for checking grid:
x = 1,127,895.6 - y = 563,062.9

1. Poore, 1934 (Ref. Sta.) 5. _____
- x = 1,119,300.1 - y = 545,680.2
2. Woodall, 1934 6. _____
3. _____ 7. _____
4. _____ 8. _____

PLANE COORDINATES ON LAMBERT PROJECTION

State md Station Woodall, 1934
 $\phi = 39^{\circ} 19' 34.562''$, $\lambda = 75^{\circ} 52' 16.675''$
Tabular difference of R for $1''$ of $\phi =$

R (for min. of ϕ)		y' (for min. of ϕ)	
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PLANE COORDINATES ON LAMBERT PROJECTION

State Ind Station Poore, 1934
 $\phi = 39^{\circ} 22' 25.290''$, $\lambda = 75^{\circ} 50' 24.493''$
 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		25,808,133.0	y'		560,979.8
θ (for min. of λ)			$y'' (-2R \sin^2 \frac{\theta}{2})$		+
Cor. for sec. of λ		-	y		2083.1
θ		+ 43 40.6907	$\frac{\theta}{2}$		21 50.34535
θ''	For machine computation			For machine computation	
$\log \theta''$			$\log \theta''$		
S for θ			$\log 2$		9.69897000
$\log \sin \theta$		.0127051252	S for $\frac{\theta}{2}$		
$\log R \sin \theta$			$\log \sin \frac{\theta}{2}$		.0063526908
$\log x'$			$\log \sin^2 \frac{\theta}{2}$		
x'		327,895.6	$\log R$		1041.53
x		2,000,000.00	$\log 2$		0.30103000
		1,127,895.6	$\log y''$		

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

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

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.

5660

PLANE COORDINATES ON LAMBERT PROJECTION

State md Station Y λ 1,125,000
 $\phi = 39^\circ 21' 55.38''$ $\lambda = 75^\circ 51' 01.85''$
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		25,811,159	y'		557,953.6
			y'' ($= 2R \sin^2 \frac{\phi}{2}$)		+ 2,046.2
θ (for min. of λ)			y		559,999.8
Cor. for sec. of λ		-			
θ		0 43 17.2442	$\frac{\theta}{2}$		21 38.6221
θ''	For machine computation			For machine computation	
log θ''			log θ''		
S for θ			colog 2		9.69897000
log $\sin \theta$		sin θ .0125914625	S for $\frac{\theta}{2}$		
log R			log $\sin \frac{\theta}{2}$		sin $\frac{\theta}{2}$.0062958560
log x'			$R \sin \frac{\theta}{2}$		
x'		325	log $\sin^2 \frac{\theta}{2}$		$R \sin^2 \frac{\theta}{2}$ 1023.10
		2,000,000.00	log R		$2 R \sin^2 \frac{\theta}{2}$
x		1,125,000	log 2		0.30103000
			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.

PLANE COORDINATES ON LAMBERT PROJECTION

State md Station Y x 1,135,000
 y 575,000
 $\phi = 39^\circ 24' 22.36''$ $\lambda = 75^\circ 48' 52.06''$
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>25,796,288</u>	y'		<u>572,824.6</u>
θ (for min. of λ)			$y'' (= 2R \sin^2 \frac{\theta}{2})$		+
Cor. for sec. of λ			y		<u>2,175.3</u>
θ		<u>+ 44 38.7048</u>	$\frac{\theta}{2}$		<u>22 19.3524</u>
θ''	For machine computation			For machine computation	
$\log \theta''$			$\log \theta''$		
S for θ			$\text{colog } 2$		<u>9.69897000</u>
$\log \sin \theta$	$\sin \theta$	<u>.0129863623</u>	S for $\frac{\theta}{2}$		
$\log R$			$\log \sin \frac{\theta}{2}$		<u>.0064933180</u>
$\log x'$			$\sin \frac{\theta}{2}$		
x'	$R \sin \theta$	<u>335</u>	$R \sin \frac{\theta}{2}$		
		<u>2,000,000.00</u>	$\log \sin^2 \frac{\theta}{2}$		<u>1087.65</u>
x		<u>1,135,000</u>	$R \sin^2 \frac{\theta}{2}$		
			$\log R$		<u>2 R \sin^2 \frac{\theta}{2}</u>
			$\log 2$		<u>0.30103000</u>
			$\log y''$		

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

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

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.

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PLANE COORDINATES ON LAMBERT PROJECTION

State md Station Y X 1,135,000
 $\phi = 39^{\circ} 19' 25.87''$ $\lambda = 75^{\circ} 48' 57.02''$ Y 545,000
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>25,826,286</u>	y'		<u>542,826.8</u>
θ (for min. of λ)			$y'' (= 2R \sin^2 \frac{\theta}{2})$		<u>+ 2,172.8</u>
Cor. for sec. of λ		-	y		<u>544,999.6</u>
θ		<u>44 35.5917</u>	$\frac{\theta}{2}$		<u>22 17.79585</u>
θ''	For machine computation			For machine computation	
$\log \theta''$			$\log \theta''$		
S for θ			$\text{colog } 2$		<u>9.69897000</u>
$\log \sin \theta$	$\sin \theta$	<u>.0129712708</u>	S for $\frac{\theta}{2}$		
$\log R$			$\log \sin \frac{\theta}{2}$	$\sin \frac{\theta}{2}$	<u>.0064857718</u>
$\log x'$			$R \sin \frac{\theta}{2}$		
x'	$R \sin \theta$	<u>335</u>	$\log \sin^2 \frac{\theta}{2}$	$R \sin^2 \frac{\theta}{2}$	<u>1086.39</u>
		<u>2,000,000.00</u>	$\log R$	$2 R \sin^2 \frac{\theta}{2}$	
x		<u>1,135,000</u>	$\log 2$		<u>0.30103000</u>
			$\log y''$		

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

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

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.

5660

PLANE COORDINATES ON LAMBERT PROJECTION

State Md Station X 1,115,000
Y 575,000
 $\phi = 39^{\circ} 24' 24.85''$ $\lambda = 75^{\circ} 53' 06.84''$
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		25,796,036	y'		573,076.5
			$y'' (= 2R \sin^2 \frac{\phi}{2})$		+ 1,923.3
θ (for min. of λ)			y		574,999.8
Cor. for sec. of λ		-			
θ		+ 41.58.7962	$\frac{\theta}{2}$		$^{\circ} 20' 59.3981$
θ''	For machine computation			For machine computation	
log θ''			log θ''		
S for θ			colog 2		9.69897000
log sin θ	sin θ	.0122111651	S for $\frac{\theta}{2}$		
log R			log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	.0061056964
log x'				$R \sin \frac{\theta}{2}$	
x'	$R \sin \theta$	315	log sin $\frac{\theta}{2}$	$R \sin^2 \frac{\theta}{2}$	961.66
		2,000,000.00	log R	$2 R \sin^2 \frac{\theta}{2}$	
		1,115,000	log 2		0.30103000
x			log y''		

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

PLANE COORDINATES ON LAMBERT PROJECTION

State Md Station Y X 1,115,000
545,000
 $\phi = 39^{\circ} 19' 28.36''$ $\lambda = 75^{\circ} 53' 11.50''$
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		25,826,034	y'		543,078.8
			$y'' (= 2R \sin^2 \frac{\phi}{2})$		+ 1,921.1
θ (for min. of λ)			y		544,999.9
Cor. for sec. of λ					
θ		41 55.8714	$\frac{\theta}{2}$		20 57.9357
θ''	For machine computation			For machine computation	
log θ''			log θ''		
S for θ			colog 2		9.69897000
log sin θ		.0121969863	S for $\frac{\theta}{2}$		
log R			log sin $\frac{\theta}{2}$		.0060986066
log x'			$R \sin \frac{\theta}{2}$		
x'		315	log sin $\frac{\theta}{2}$		960.55
		2,000,000.00	log R		2 $R \sin^2 \frac{\theta}{2}$
x		1,115,000	log 2		0.30103000
			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.

DIVISION OF CHARTS

Section of Field Records

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5660 (1939) Scale 1:10,000

There are no contemporary plane table surveys in this area.

Contemporary Hydrographic Surveys.

H-6369 (1938) 1:10,000. T-5660 and H-6369 have been compared and minor discrepancies have been adjusted by the hydrographic reviewer.

Previous Topographic Surveys.

T-279 (1846) 1:20,000.
T-2381 (1900) 1:20,000.

Except for contours T-5660 supersedes, for charting, the sections of the above surveys which it covers.

Charts 572 and 1226.

T-5660 has not been applied to Chart 1226 but has been applied to Chart 572 at this date, August 14, 1940. No changes have been made in T-5660 since its application to Chart 572.

The landmark recommended on the attached Form 567 has been reported to the Nautical Chart Standards.

General.

The main radial plot for this sheet was made in a unit with T-5658 and T-5659 and is discussed in the report for T-5658.

In common with all sheets in this area the compilation of map details on T-5660 was difficult because of the long air base between photographs and the broken terrain.

The definition of the photographs at Fredricktown and at Georgetown is poor. The larger water front details are shown but small details of buildings, bulkhead lines and piers may have been omitted. The more important objects have been covered by

field inspection and the map detailing is accepted
as sufficiently complete for the 1:40,000 scale
chart.

Reviewed by - L. C. Lande, September 1939.

Inspected by - B. G. Jones, September 1939 and August 14, 1940.

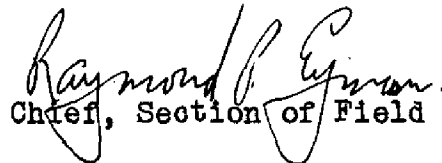
Examined and approved:



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



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.