5099

ORIGINAL

5099

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R.S.Patton, *Director*

State: New Jersey

DESCRIPTIVE REPORT

Photo
Topographic
~~*Hydrographic*~~ } *Sheet No.* T-5099

LOCALITY
~~Barnegat Bay~~
~~Upper Long Beach.~~
City
~~Surf to south of Barnegat City.~~
ATLANTIC Coast
UPPER LONG BEACH

1932

CHIEF OF PARTY

R. C. Bolstad, Jr. H. & G. Engr.

U. S. GOVERNMENT PRINTING OFFICE: 1932

Applied to drawing & Chart 1216 - Aug. 2, 1937 - J.P.W.
" " compilation " 825 1938 R.L.J.

COMPILER'S REPORT

for

AIR PHOTO TOPOGRAPHIC SHEET

FIELD NO. 49

REGISTER NO. T-5099

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. 49

REGISTER NO. T-5099 T5099

State New Jersey

General locality ~~Upper Long Beach (N.J.)~~ Atlantic Coast

Locality ~~City~~ ~~Surf to south of Barnegat City.~~ Upper Long Beach

Scale 1:10,000 Date of photographs April 4, 1932.
Date of ~~survey~~ April 15, 1932.
Date of compilation May 5, 1935.

~~Kassack~~ Air Photo Compilation Party, No. 12, New York City.

Chief of party Roswell C. Bolstad.

Surveyed by See data sheet in Descriptive Report for this sheet.

Inked by F. M. Overby.

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

Contour, Approximate contour, Form line interval -- feet

Instructions dated November 15, 1932.

Remarks: Compiled on scale of 1:10,000 and printed by Photo Lithography.

-STATISTICS-

on

SHEET, FIELD NO. 49. REG. NO. T-5099.

PHOTOS, NOS. 66-4-86 to 66-4-87, Incl. DATE April 4, 1932.

PHOTOS, NOS. 66-6-92 to 66-6-98, Incl. DATE April 15, 1932.

PHOTOS, NOS. 871-14-M45 to 871-14-M61, Incl. DATE Jan. 23, 1933 at 12:12 P.M.

The scale factor of this sheet is 1.000

PROJECTION	H. L. Hawkins (H.L. Hawkins)	10/22/34
PROJECTION CHECKED	J. P. O'Donnell (J. P. O'Donnell)	10/22/34
CONTROL PLOTTED	J. B. Moreland (J.B. Moreland) / F. M. Overby (F.M. Overby)	10/23/34 / 3/ 1/35
CONTROL CHECKED	Wm. E. Brown (Wm. E. Brown)	11/6/34 & 3/20/35
TOPOGRAPHY TRANSFERRED	(None)	---
TOPOGRAPHY CHECKED	(None)	---
SMOOTH RADIAL LINE PLOT	F. M. Overby (F.M. Overby)	3/4/35 - 3/19/35 (Incl. R.R.Trav. plot)
RADIAL LINE PLOT CHECKED	J. P. O'Donnell (J. P. O'Donnell)	3/20/35
DETAIL INKED	F. M. Overby (F.M. Overby)	3/20/35 - 5/4/35 (minus 4 weeks.)
PRELIMINARY REVIEW	D.B. Bogart (D. B. Bogart)	5/28/35 & 5/29/35

AREA OF DETAIL INKED 2.9 Sq. Statute Miles (Land area)

AREA OF DETAIL INKED --- Sq. Statute Miles (Shoals in water area)

LENGTH OF SHORELINE (more than 200 meters from nearest opposite shore) 35.8 Statute Miles.

LENGTH OF SHORELINE (rivers and sloughs less than 200 meters wide) 20.0 Statute Miles.

LENGTH OF ROADS, STREETS, TRAILS, RAILROADS, Etc. 35.2 Statute Miles.

GENERAL LOCATION Upper Long Beach (N.J.)

LOCATION Surf City to south of Barnegat City.

DATUM North American, 1927.

STATION Harvey Cedars, 1932. Lat. 39°-41'-25.381" (782.8 m) (adjusted)

Long. 74°-08'-36.224" (863.1 m.)

COMPILER'S REPORT

for

AIR PHOTO TOPOGRAPHIC SHEET FIELD NO. 49

GENERAL INFORMATION

The 1934 Air Photo Field Inspection Report for the east coast of New Jersey (Metedeconk River to Townsend Inlet) attached to the descriptive report for Air Photo Topographic Sheet, Reg. No. T-5286, furnished the necessary field data for the compilation of this sheet. Additional information was obtained from Mr. R.L. Fisher and Mr. G. Crowther, both of this party, who made the field inspection of this area.

The accompanying STATISTICS SHEET details all the data in connection with the compilation of this sheet.

This sheet was compiled from single lens photographs taken by the Aero Service Corporation, 1612 Chancellor St., Philadelphia, Pa. The photographs are 1:10,000 scale enlargements from the original negatives which are on an approximate scale of 1:21,800. There are two separate sets on this sheet and each was taken at a different date. No record was made of the hour at which these photographs were taken, therefore the stage of the tide was not known. The dates of the two flights are on the STATISTICS SHEET, page 2 of this report. Accurate measurements were taken at intervals by the field party to determine the high water line and the distance was noted on the photos. However, a supplementary flight (photo numbers given below) was used in checking the high water line and from this flight the tide also was determined as being approximately 0.1' above low water on the outer coast and 0.6' above low water on the inner coast at the time said photos were taken which was on Jan. 23, 1933, at 12:12 P.M. The tide was computed from the U.S.Coast and Geodetic Survey's "Predicted Time Tables". The numbers of the latter photos mentioned are 871-14-M45 to 871-14-M61, inclusive. They are somewhat under scale and were used only to supplement the regular photos. When any detailing was taken directly off of them, it was proportioned while working only over a very small area.

CONTROL

(A) Sources

The following sources of control were used in the compilation of this sheet.

(a) Triangulation by Lieut. C.D. Meaney in 1932, field positions adjusted to the North American Datum of 1927.

(b) Theodolite-observed recoverable topographic stations. (See item 4 on page 5 of the field inspection report of this area attached to report for sheet Reg. No. T-5286.) These stations are shown by the regulation $2\frac{1}{2}$ millimeter black circle on this compilation sheet. There are five of these stations which occur

on this sheet and all are described on Form 524 by this party. The names, as described, are as follows:

S. Gab. Yel. Bungalow. (CAMP WHEELER / CUPOLA) YD)
Island. Hotel Cupola.
Blind. Pile.

(c) Track traverse by the Pennsylvania R.R. The traverse checked accurately with the radial line plot. Although the railroad is not shown on the sheet, it was, never-the-less, used as control. See paragraph on page 5 under COMPILATION, (C) Interpretation.

(B) Errors

There are no apparent errors in the control positions for this sheet. The control along this strip is, in general, strong. In a few cases the radial line plot allowed only two flat cuts. These points were carefully proportioned and they fell directly along the azimuth. Otherwise, all radial lines gave good intersections.

(C) Discrepancies

No other control stations established by other organizations were used in the compilation of this sheet.

Triangulation station "Surf City, water tank. 1932" was blown down in the spring of 1934. The footings still remain.

COMPILATION

(A) Method

The usual radial line method of plotting was used in the compilation of this sheet.

(B) Adjustments of Plot

The photographs of this area appear to have little scale fluctuation or tilt. No unusual adjustments were found necessa ry.

(C) Interpretation

The usual graphic symbols were used as approved by The Board of Surveys & Maps, 1932, and no great difficulty was experienced in interpreting the photographic detail.

A double full line was used to indicate first order roads and streets, a double broken line for private driveways and roads of lesser importance, etc. A single broken line was used to indicate exceedingly poor roads, trails and paths. There are numerous trails on this sheet leading from the main highway to the outer coast and they are shown by the single broken line. In many cases these trails were indistinct on the photos, but the smaller "M" photos proved of great value in determining the exactness to which these trails are shown on the compilation sheet.

Additional Note:-

(C) Interpretation: Railroad Fill

The railroad fill, upon which the tracks of the now abandoned Pennsylvania Railroad line were originally laid, still remains, exoept for a few sections that run through the built up part of towns. Though most of the fill is now covered over with small weeds and brush, yet it can still be picked up on the photographs. If it is deemed advisable, the Washington Office can show the lateral limits of this fill by means of the customary Boundary Line symbol.

Additional Note:-

(E) Conflicting Names: Surf City

The town shown as Surf City on the overlay sheet, is named Surf on U.S. Coast and Geodetic Chart No. 3243. This latter name appears to be in error, for the town is shown as Surf City on both the 1934 Road Map of New Jersey, published by the New Jersey State Highway Commission, and also on the "Department of Conservation and Development" map, atlas sheet number 33, edition of 1929. Road signs in the vicinity of this town bear the name Surf City.

Where there was any difference in shoreline, bulkheads, docks, piers, etc. between the regular photos and the "M" photos, the latter were accepted because of their later date.

The island at Lat. 39°-41.6' and Long. 74°-08.9' was detailed from the "M" photos. It was plotted on this compilation by finding the scale factor of the "M" photo. The building on this island has burned down and is therefore dotted in.

The marsh areas along the inner coast have numerous drainage ditches, which are apparent on the photographs, but no attempt has been made to show them as it would cause confusion with the marsh symbol. In a few cases, where a ditch appears large or when numerous other smaller ones empty into it, it has been shown on the compilation sheet. Where ditches have been shown, they are indicated by a full line and are noted on the cover sheet.

The blue line (drawn on the back of the sheet) extending the full length of the outer strip of land indicates where the Pennsylvania R.R. formerly had a single track branch which is now abandoned. The tracks have been removed and therefore are not shown on this compilation in the usual manner. In several places it will be noticed that buildings are now standing on the old right-of-way. The track traverse was furnished by the Pennsylvania R.R. and was plotted because it was of valuable aid in helping to control azimuth where radial line cuts were flat. This railroad is noted on the cover sheet.

There are no bridges of importance to navigation which occur on this compilation.

All buildings are shown on this sheet, none having been intentionally left off.

Sand dunes on the outer coast line were determined mainly from the "M" photos and are shown accordingly. From the dunes back to the road is brush and grass, and in some cases the division is very indistinct, the dunes often reaching far into the brush.

(D) Information From Other Sources

No information was available from other sources.

(E) Conflicting Names

The title of the town named "Highpoint" is shown on the cover sheet approximately 700 meters north of where it is shown on the U.S.C.& G. S. chart number 1216. This new position of the name seemed more accurate because the streets and buildings occur in that area. Also, the new position on the cover sheet agrees with the position as shown on the "Department of Conservation and Development" map, atlas sheet number 33, edition of 1929.

"Marsh Elder Id." is not labeled on the U.S.C.& G.S. chart, but is shown on the "Department of Conservation & Development" map. Since all of the other islands agree in name on both of said maps, "Marsh Elder Id." was shown on the cover sheet.

Otherwise, there are no names conflicting with names shown on the present U.S.C.& G.S. charts of this area.

COMPARISON WITH OTHER SURVEYS

This sheet joins with sheet Reg. No. T-5097 on the north and sheet Reg. Nos. T-5098 and T-5443 on the east, and sheet Reg. No. T-5444 on the south.

	Remarks	Decisions
1		
2	*Shown as LoveladiesLL.S.Station. Area shown as Lovelady on the N.J.State Hwy. map.	
3	Also shown on Road maps, etc. Well established.	
4	* Rails and ties have been removed; no longer any R.R. here. Remove name from chart.	
5	* Difficulty in obtaining check on name from local men; some call by many different names. Sloop Sedge prob. best widely established. ok.	
6		
7		
8		
9		
10	* Signs, road maps, N.J. Board Commerce & Navigation, etc.	
11	* " " " " " " " "	
12		
13	* Overlooked checking by field inspection party.	
14	* Spelled "Petit Island" on Geol. chart. Local men appear to use "Pettit Island".	
15	* Correctly known as "Surf City"; verified by road maps, signs, Coast Guard men, etc. P.O. GUIDE SURF CITY.	
16	* On Geol. chart shown as L.S.Station Harvey Cedars. Harvey Cedars C.G.Sta. is now correct; signs, mail addressed, local men.	
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27		

M 234

GEOGRAPHIC NAMES

Survey No. T- 5099.

Air Photo Compilation

Name on Survey	On Chart No. 1216, 3243 A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Vol Sedge ✓	x		x	3 men x						1
Loveladye Island C. G. Sta.	x		*	3 men x*						2
Long Beach ✓	x		x	6 men x	x					3
P. P. P. (Pier)										4

[redacted]

ADDITIONAL NOTE.

After completion of this compilation the 1935 Aluminum Control Sheets of Lieut. ~~B. H.~~ Rigg were furnished this party for comparison. The outer shoreline as shown on the compilation was revised where necessary in order to agree with the A. C. Sheets, as they were executed at a latter date than the field inspection of the 1932 photographs.

There are now no discrepancies between the 1935 A.C. Sheets of Lieut. Rigg and this compilation. The 1935 hydrographic sheet (if there is any) has never been furnished to this party for comparison and it is therefore assumed that all shoreline not run in on the 1935 A.C. sheets, was accepted by the hydrographic party as furnished by this compilation.

The small island on the west side of this compilation has been slightly changed to agree with that as shown on Lieut. Rigg's sheet "J". The recovereable topo. station "Chy. U.S.E. (E. chy. on Ho.)" as shown on this compilation was taken from Lt. Rigg's topo. sheet "J". As there was no letter "d" after the name when the sheet "J" was furnished this party it is not known if a description was submitted for this station.

The following 1935 triangulation stations of Lieut. Rigg were established after the completion of this compilation and were therefore not used in controlling the radial plot. They have, however, been shown on this compilation.

Camp Whelan Cupola 1935 (Same as © Hotel Cupola by R.C.B.)
Harvey Cedars C. G. Cupola 1935
Loveladies C. G. Cupola 1935

Signals Equitable with Rigg not

The following recoverable topographic stations have been shown on this compilation by a small black circle:

Name	Lat.	Long.	Method of Determination
S. Gab. Yel. Bungalow (d)	39°-44.7'	74°-06.7'	T.O.C.S.
Chy.U.S.E.(E.Chy. on Ho.)	39°-44.5'	74°-06.9'	A.C.S."J".
Island (d)	39°-43.5'	74°-09.0'	T.O.C.S.
Blind (d)	39°-42.8'	74°-09.6'	T.O.C.S.
Pile (d)	39°-40.8'	74°-09.1'	T.O.C.S.
Peak of Pav. Roof	39°-39.6'	74°-09.9'	A.C.S."L".
W.Gab. new Shingle Ho.	39°-39.4'	74°-10.2'	A.C.S."L".

NOTE:- T.O.C.S. ---- Theodolite-Observed Control Station. (See field inspection report attached to Desc. Report T-5286.)
A.C.S. ------ Aluminum control sheet of Lieut. Rigg, 1935.

Roswell C. Bolstad

Roswell C. Bolstad, Jr.H.& G.E.,
Chief of Party No. 12.

	Remarks	Decisions
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GEOGRAPHIC NAMES

Survey No.

T-5099

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle 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	
Gulf Point										1
Vol Sedge										2
Sloop Sedge										3
Long Beach										4
Atlantic Ocean										5
Marsh Elder Island										6
Sandy Island										7
Highpoint										8
Harvey Sedges										9
Carvel Island										10
Harvey Cedars										11
Bear Islands										12
Pettit Island										13
Surf City										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

M-350

T-5099 *

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 _____

Positions checked by _____

Grid inked on machine by _____

Intersections inked by _____

Points used for plotting grid:

x _____ y _____	x _____ y _____
x _____ y _____	x _____ y _____
x _____ y _____	x _____ y _____
x _____ y _____	x _____ y _____

Triangulation stations used for checking grid:

1. _____	5. _____
2. _____	6. _____
3. _____	7. _____
4. _____	8. _____

* This grid was not plotted on celluloid because of poor projection. The attached computations may be used later. R. E. Ask

T-50990

Form No. 748
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Ed. May 1935

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J. STATION

x	2,145,000.00	$\log S_g$	5.161364 53
K	2	$\log (1200/3937)$	9.484015 83
x' $(=x-K)$	145,000.00	$\log (1/R)$	.1056
$x'^3/(6\rho_o^2)_g$	− 1.16	$\log S_m$	4.645391 27
S_g	144,998.84	cor. arc to sine	− .347
		$\log S_1$	4.645387 75
3 log x'	15.484104 00	$\log A$	4.504125 06
$\log 1/(6\rho_o^2)_g$	4.561021 3	$\log \sec \phi$	0.114084 875
$\log x'^3/(6\rho_o^2)_g$	0.065125 3	$\log \Delta\lambda_1$	3.268660 156
		cor. sine to arc	+ .586
$\log S_m^2$	9.290782 54	$\log \Delta\lambda$	3.268607 42
$\log C$	1.224339	$\Delta\lambda$	1856.1259
$\log \Delta\phi$	0.615121		
y	330,000.00		
ϕ' (by interpolation)	39° 44′ 21.7184″	λ (central mer.)	74° 40′ 00″
$\Delta\phi$	− 4.1221	$\Delta\lambda$	30 56.1259
ϕ	39 44 17.5963	λ	74 09 03.8741
	54.27 mm		9.23 mm

Explanation of form:

$x'=x-K$

$S_g=x'-\frac{x'^3}{(6\rho_o^2)_g}$

$S_m=\frac{1}{R}\left(\frac{1200}{3937}\right)S_g$

R=scale reduction factor

ϕ' is interpolated from table of y

$\Delta\phi=C\,S_m^2$

$\phi=\phi'-\Delta\phi$

$\Delta\lambda_1=S_1 A \sec\phi$

$\log S_1=\log S_m-$cor. arc to sine

$\log \Delta\lambda=\log \Delta\lambda_1+$cor. arc to sine

$\lambda=\lambda$ (central mer.)$-\Delta\lambda$

U. S. GOVERNMENT PRINTING OFFICE 11—11521

Form No. 743
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Ed. May 1935

T-5099b

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J. STATION

x	2,145,000.00	$\log S_g$	5.161364 53
K	2,000,000.00	$\log (1200/3937)$	9.48401583
x' $(=x-K)$	+ 145,000.00	$\log (1/R)$	10 86
$x'^3/(6\rho_o^2)_g$	− 1.16	$\log S_m$	4.645391 22
S_g	144,998.84	cor. arc to sine	− 347
		$\log S_1$	4.645387 75
3 log x'	15.484104 00	$\log A$	8.509126 79
$\log 1/(6\rho_o^2)_g$	4.56102 13	$\log \sec \phi$	0.113656 81
$\log x'^3/(6\rho_o^2)_g$	0.065125 3	$\log \Delta\lambda_1$	3.268171 35
		cor. sine to arc	+ 585
$\log S_m^2$	9.290782 44	$\log \Delta\lambda$	3.268177 20
$\log C$	1.323287	$\Delta\lambda$	1854.2880
$\log \Delta\phi$	0.614069		
y	305,000.00		
ϕ' (by interpolation)	39 40 14.6366	λ (central mer.)	74 40
$\Delta\phi$	− 4.1122	$\Delta\lambda$	− 30 54.2880
ϕ	39 40 10.5243	λ	74 09 05.7120
	32.46 mm.		13.62 mm.

Explanation of form:

$x'=x-K$

$S_g=x'-\frac{x'^3}{(6\rho_o^2)_g}$

$S_m=\frac{1}{R}\left(\frac{1200}{3937}\right)^k S_g$

R=scale reduction factor

ϕ' is interpolated from table of y

$\Delta\phi=C\,S_m^2$

$\phi=\phi'-\Delta\phi$

$\Delta\lambda_1=S_1 A \sec\phi$

$\log S_1=\log S_m-$cor. arc to sine

$\log \Delta\lambda=\log \Delta\lambda_1+$cor. arc to sine

$\lambda=\lambda$ (central mer.)$-\Delta\lambda$

U. S. GOVERNMENT PRINTING OFFICE 11-11621

T-5099c

Form No. 743
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Ed. May 1935

GEODETIC POSITIONS FROM TRIANGULATION

[redacted]

x	2,150,000.00	$\log S_o$	5.1760753
K	2,000,000.00	$\log (1200/3937)$	9.4840158 3
x' (=$x-K$)	+ 150,000.00	$\log (1/R)$	1086
$x'^3/(6\rho_o^2)_o$	1.29	$\log S_m$	4.6607142 8
S	[illegible]		[illegible]

Form No. 743
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Ed. May 1935

T-5099

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J. STATION

x	2,135,000.00	$\log S_g$	5.13033075
K	2,000,000.00	$\log (1200/3937)$	9.48401583
x' $(=x-K)$	+ 135,000.00	$\log (1/R)$	1086
$x'^3/(6\rho_o^2)_g$	− .94	$\log S_m$	4.61435744
S_g	+ 134,999.06	cor. arc to sine	− 300
		$\log S_1$	4.61435444
3 log x'	15,391001 31	$\log A$	8.50912678
$\log 1/(6\rho_o^2)_g$	4.5810213	$\log \sec \phi$	0.11365777
$\log x'^3/(6\rho_o^2)_g$	+ 9.9720226	$\log \Delta\lambda_1$	3.23713899
		cor. sine to arc	+ 507.
$\log S_m^2$	9,22871488	$\log \Delta\lambda$	3.23714406
$\log C$	1.323247	$\Delta\lambda$	1726.4105
$\log \Delta\phi$	0.5520002		
y	305,000.00		
ϕ' (by interpolation)	39° 40′ 14.6365	λ (central mer.)	74° 40′ ″
$\Delta\phi$	− 3.5645	$\Delta\lambda$	− 28′ 46.4105
ϕ	39 40 11.0720	λ	74 11 13.5895

Explanation of form:

$x'=x-K$

$S_g=x'-\frac{x'^3}{(6\rho_o^2)_g}$

$S_m=\frac{1}{R}\left(\frac{1200}{3937}\right)S_g$

R=scale reduction factor

ϕ' is interpolated from table of y

$\Delta\phi=C\,S_m^2$

$\phi=\phi'-\Delta\phi$

$\Delta\lambda_1=S_1 A \sec\phi$

$\log S_1=\log S_m-$cor. arc to sine

$\log \Delta\lambda=\log \Delta\lambda_1+$cor. arc to sine

$\lambda=\lambda$ (central mer.)$-\Delta\lambda$

U. S. GOVERNMENT PRINTING OFFICE 11-11521

T-5099

Form No. 743
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Ed. May 1935

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J. STATION

x	2,155,000.00	$\log S_g$	5.19032772
K	2,000,000.00	$\log (1200/3937)$	9.48401583
x' $(=x-K)$	+ 155,000.00	$\log (1/R)$	1086
$x'^3/(6\rho_o^2)_g$	− 1.42	$\log S_m$	4.67435441
S_g	154,998.58	cor. arc to sine	− 396
		$\log S_1$	4.67435045
3 log x'	15.57099510	$\log A$	8.50912506
$\log 1/(6\rho_o^2)_g$	4.5810213	$\log \sec \phi$	0.11408772
$\log x'^3/(6\rho_o^2)_g$	+0.1520164	$\log \Delta\lambda_1$	3.29756323
		cor. sine to arc	+ 670
$\log S_m^2$	9.34870882	$\log \Delta\lambda$	3.29756993
$\log C$	1.3243399	$\Delta\lambda$	1984.1291
$\log \Delta\phi$	0.6730498		
y	330,000.00		
ϕ' (by interpolation)	39° 44′ 21.7184″	λ (central mer.)	74° 40′ ″
$\Delta\phi$	− 4.7103	$\Delta\lambda$	33′ 04.1291″
ϕ	39 44 17.0081	λ	74 06 55.8709
	(524.5 m)		(1330.3 m.)

Explanation of form:

$x'=x-K$

$S_g=x'-\frac{x'^3}{(6\rho_o^2)_g}$

$S_m=\frac{1}{R}\left(\frac{1200}{3937}\right)S_g$

R=scale reduction factor

ϕ' is interpolated from table of y

$\Delta\phi=C\,S_m^2$

$\phi=\phi'-\Delta\phi$

$\Delta\lambda_1=S_1 A \sec\phi$

$\log S_1=\log S_m-$cor. arc to sine

$\log \Delta\lambda=\log \Delta\lambda_1+$cor. arc to sine

$\lambda=\lambda$ (central mer.)$-\Delta\lambda$

U. S. GOVERNMENT PRINTING OFFICE 11—11521

REVIEW OF AIR PHOTO COMPILATION T-5099

Comparison with Contemporary Graphic Control Surveys

T-6399a (1935 and 1936), 1:10,000
T-6499 (1935 and 1936), 1:10,000
T-6500 (1936), 1:10,000

T-6399a and T-6499 were surveyed in 1935 but some additional work for hydrographic control was done in 1936. At this time additional shoreline was rodded in but none of this was in the area of the compilation. Detail shown on the graphic control surveys, although it does not appear on the photos, has been added to the compilation as the graphic control surveys were made in 1935 and the photographs taken in 1932 and 1933. All information and detail shown on the above graphic control surveys is shown on this compilation except temporary topographic signals and magnetic meridians.

Comparison with Contemporary Hydrographic Surveys

H-6142 (1936), 1:10,000.

A dock at lat. 39° ~~39.0'~~ 43.9', long. 74° 07.4' has been added to the compilation from H-6142. This dock has been built since the photos were taken. The shoreline for H-6142 was taken from this compilation and is in agreement with the soundings.

Comparison with Former Topographic Surveys

T- 121 (1839), 1:20,000
T-1315b(1873), 1:20,000
T-2457 (1901), 1:20,000

There is considerable erosion in the vicinity of this compilation and an examination of the former surveys bears this out. The compilation is more complete in detail and is adequate to supersede the portions of the above surveys which it covers.

Comparison with Charts 1216 and 3243

The railroad shown on charts 1216 and 3243 in the vicinity of this compilation is now non-existent and should be removed from the present charts.

Refer to page 6 of the descriptive report, T-5099 regarding Landmarks.

General

Triangulation station Surf City Water Tank 1932 has been removed from this compilation as the tank has been destroyed. The footings are still in place.

L. C. Landy

Feb. 9, 1937.

W. Biggers

High Water Line

On this compilation the high water line is best considered as of the date of field inspection, November 1934-March 1935, and will be so noted on the printed compilation. Exact dates of field inspection have not been furnished for each compilation by the field party. See page 3, Field Inspection Report, filed as T-5286.

This field inspection was accomplished over two years after the photographs were taken. The high water line has been determined by measuring reference distances to prominent objects identified on the photographs. This method will give satisfactory delineation of large changes and is in general satisfactory so far as the charts are concerned. It does not give accurate delineation of small detail and for that reason is not recommended for general use. Where the field inspection is done considerably after the photographs are taken a plane table survey should be made if accurate delineation of all shoreline detail is to be accomplished.

On this compilation no considerable change from the conditions existing at the time of the photographs was found by the field inspection.

Short sections of high water line surveyed by plane table in June 1935 at the north and south limits of the compilation check closely with the 1934-1935 field inspection.

REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: Roswell C. Bolstad Compiled by: (see page 2 of Compiler's Report

Project: New York Air Photo Compilation Instructions dated: Nov. 15, 1932
Party No. 12

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 i; 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)

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)

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. 12b; 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." M-67

8. The representation of low water lines, ~~reefs, coral reefs and~~ rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)

9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)

10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)

Previously submitted, see paragraph on LANDMARKS, page 6.

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)

No bridges, of importance to navigation, occur on this sheet.

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 North American 1927 adjusted 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: Any additional notes and reports affecting this area may be found in the 1934 Air Photo Field Inspection Report attached to Air Photo Topographic Sheet, Reg. No. T-5286.

18. Examined and approved;

Preliminary review by:

D.B. Bogart
D.B. Bogart
Draftsman

J.J. Lanigan
J.J. Lanigan
Surveyor

Roswell C. Bolsted
Roswell C. Bolsted
Chief of Party

19. Remarks after review in office:

Reviewed in office by: L.C. Lundy, B.G. Jones

Examained and approved:

E. K. Green
Chief, Section of Field Records

Fred L. Peacock
Chief, Section of Field Work

L.O. Colbert
Chief, Division of Charts

Chief, Division of Hydrography and Topography.