# 5640

Form 504
Rev. Dec. 1933

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

# DESCRIPTIVE REPORT

Topographic Sheet No. Reg. 5640

State NEW JERSEY

LOCALITY

ATLANTIC COUNTY

GREAT EGG RIVER
VICINITY OF MAYS LANDING

2. 193 %

CHIEF OF PARTY

E. H. Kironk

D.S. GOVERNMENT PRINTING OFFICE: 193

applied to new chart compilation 827 - S. P. July 1939

• ,

1

1

# 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 No7
register no. 5640 $T5649$
StateNew.Jersey
General locality Great Egg River Vicinity of
Locality Sculla Landing to Sity Mays Landing
Scale 1 . 10 000 Date of survey April , 1936
Vessel Air Photo Party No. 21.
Chief of party E. H. Kirsch
Surveyed by See data sheet in descriptive report
Inked by F. H. MoBeth
Heights in feet aboveto ground to tops of trees
Contour, Approximate contour, Form line intervalfeet
Instructions dated May 16th, 1935 , 19
Remarks: None.

# Sheet No. 7 Reg. No. 5640

PHOTOS NOS.

DATE

66-13-82 to 88 66-14-13 to 18

April 22nd, 1932 April 22nd, 1932

PROJECTION BY

L. C. Ripley

Projection Checked By

P. W. Hund

Control Plotted By

Control checked By

Control Plotted on Photos By

J. F. Richardson

Control checked on Photos By

Smooth Radial Plot By

March, 19356

Smooth Radial Plot Checked

F. H. McBeth

Detail Inked by

F. H. McBeth

April 1935 6

DETAIL INKED: 30.0 Square statue miles (land area)

LENGTH OF COAST LINE: None

LENGTH OF SHORE LINE: 14.5 statue miles (more than 200 meters wide)

LENGTH OF STREAMS: 34.0 statue miles (less than 200 meters wide)

Ref. Sta .: German , 1935

74 43 01.218 (29.1)

N. J. Grid. Coord. x = 1,985, 776.88 g = 210, 860.05

#### GENERAL INFORMATION

#### Statistics:

The total land area covered by this sheet is approximately 30 square miles. There are 14.5 miles of shore line more than 200 meters from the opposite shore. This figure includes shore line of navigable water to the bridges at Mays Landing. There are approximately 34 miles of stream compilation of less than 200 meters in width. The numerous drainage ditches are not included in these figures.

There is no coast line in the area covered.

#### General Report:

The sheet completes the compilation of the Great Egg River to Mays Landing, which is the limit of navigation on that stream. The tidal marshes are small and in places there are none. There are small areas under cultivation mostly on the west side of the River and some poultry farms. The remainder of the sheet is composed of wooded and brush areas.

#### Photographs:

Pictures from two flights were used in this compilation. The flights include pictures 66-13-82 to 66-13-88 along the dast edge of the sheet, and 66-14-13 to 66-14-18 along the western edge. They were taken on the 22nd of April, 1932. The time of the flights is not recorded. The pictures are single lens, and were taken by the Aero Service Corporation of Philadelphia.

#### CONTROL:

#### Sources:

The control for this sheet is the second order triangulation executed by John Bowie Jr. in 1935 and first order traverse by the state of New Jersey in 1935 and 1936. All control was computed on N. A. 1927 datum. Several N. J. Geod. S. Stations were tabbed on the north end of the sheet, when the radial plot was made.

#### Errors:

No errors or descrepancies were found in the plotting of control or in the radial plot.

#### COMPILATION

#### Method:

The standard radial line method was used as described in the U. S. C. & G. S. notes on the compilation of planmetric line maps

from Aerial Photographs.

No adjustment of the plot was found necessary. There is a long run of pictures on the eastern edge of the sheet with no control stations on the eastern edge of the pictures. The pictures run well and the plot should be accurate.

#### Interpertation:

The interpretation of this area is accompained by some difficulties. Due to the time of the photographs not being recorded the stage of the tide is unknown and in places there appear several different water marks along the stream banks.

The wooded areas are largely brush and small trees, not sufficiently high to cast a shadow. There are but small areas of valuable timber on the entire sheet and the growth seems to vary in density and height. Particularly is this true to the south and east of the town of Belcoville.

Lying in the brush and trees to the east of N. J. highway No. 50 are the abandoned proving grounds of the U. S. Army. The buildings have been demolished but their concrete bases have been indicated and the system of railroads formerly used is now abandonded and the rails removed.

Only the larger buildings in the towns of Mays Landing and Belcoville have been shown.

#### Information from other sources:

This area has not been covered by a U. S. C. & G. Survey chart. Probably the most complete map of the area has been published by the New Jersey Department of conservation and development. Although this map is not as detailed as the present compilation no descrepancies have been noticable. It has been used as an authority for names appearing on this sheet.

#### Conflicting names:

On the map covering the area and mentioned above, names appear with the apostrophied form as WILSON'S LANDING and MATTHEW'S RUN. The apostrophe has been omitted on the overlay sheet. The New Jersey State publication differs from the U. S. C. & G. Eurvey Chart No. 1217 in calling Great Egg River The Great Egg Harbor River. In this case the U. S. C. & G. Survey chart has been followed as an authority.

#### COMPARISONS WITH OTHER SURVEYS

#### Junctions:

A satisfactory junction with sheet No. T 5641 on the south has been made. There are no other compilation junctions to be made on this sheet.

#### LANDMARKS

There are no important landmarks for navigation. Running roughly east and west across the center of the sheet is a power transmission line, the towers of which are plainly visible from their four concrete bases and from their shadows. They have reported on form 524. The two stacks just east of Mays Landing are plainly visible and have been reported on form 524.

#### RECOMMENDATIONS FOR FURTHER SURVEYS

This compilation is believed to be accurate, thorough and complete for charting purposes and no additional surveys are necessary. A probable error of not more than .4 mm may be found in the detail of importance for charting purposes and not more than .7 MM for detail of lesser importance.

There is no navigation beyond the bridges at Mays Landing.

Submitted by

F. H. McBeth

Assisted by

E. H. Kirson Chief of Party.

The new Bulkhead and road near triangulation MAY was rodded in by planetable methods on Sept. 3rd, 1936.

Decisions Remarks 1 3 6 7 Omit 5 10 \_11 12 correct spelling P.O.Map Estelville \_\_13 omit 5 14 15 omit 5 16 \_17 \_18 \_19\_ 20 omit s 21 22 23 24 25 26 27 M 234

P.O. Guide of Man B 4 4 4 4 COLULE OF THE PLANE GEOGRAPHIC NAMES FIGH POTENTIAL E Longit of the last Survey No. 7-5640 Name on Survey Lake Lenape May's May's Landing Babcock Creek 3 Belcoville Great Egg River / Clarkstown South River 7 Wilson Wilson's Landing Ldg. 8 Gravelly Run 9 Thompsontown 10 Cedar Branch 11 Miry Run 12 Estellville Estel-Estelsee F 1 ville 13 steel-man Ldg. Steel-man Ldg Steelman Landing 14 Perch Cove Run 15 Matthen Matthew & Run Run 16 17 Watering Rose Branch Watering Watering Watering Race Branch Race Branch Race Branch 18 19 20 21 22 23 24 25 led in rel approve 26 27 M 234

Pr.

# 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	RE Hsk
Positions checked by	RE Ask
Grid inked on machine b	R.E. Ask
Intersections inked by	H. A. Schleiter
Points used for plotting grid:	
x 1,980,000 y 125000	x 1,990,000 y 210,000
x 2 000,000 y 225 000	<u>x</u> <u>y</u>
x 1,980,000 V 195,000	<u>x</u>
x 2,000,000 y 195,000	<u>x</u>
Triangulation stations used for o	hecking grid:
X=1,985,776.88' y=210,860.05 1. German 1935 (ref.sta)	
2. May 1975	6. Spoil 1935
8. Water 1935	
4- W T 1975	. <b>R</b> .

STATE N. J.	,	Station	
xK	1,940,000.00	· ·	9.48401583
x' (=x-K)	-20,000.00	$\log (1/R)$ $\log S_m$ cor. arc to sine	_
3 log x'	2.90309000 4.5414213	$\log S_1$ $\log A$ $\log \sec \phi$	3.78505665 8.509/3261 0.11228852
$\log 1/(6\rho_0^2)_g$	7.4 4 4 1 1 1 3	log Δλ <sub>1</sub> cor, sine to arc	2,4064 <b>7</b> 77 <b>4</b> + //
$\log S_m^2$ $\log C$ $\log \Delta \phi$	7.570//344	log Δλ	2,40647789
y	225,800.80 39 27 03,9549	λ (central mer.)	74 40 00.0000
$\phi$			+ 4 14.4634 74 44 14.9634 35.78 mm

#### Explanation of form:

$$x'=x-K$$

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

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

R=scale reduction factor

 $\phi'$  is interpolated from table of y

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

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

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

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

 $\log \Delta \lambda \!\!=\!\! \log \Delta \lambda_1 \!\!+\!\! \cot$  are to sine

STATE N. J.		_ STATION	
x	2,000,000.001	$\log S_{\sigma}$	7 00000000
K			9,48401583
x' (=x-K)	+ 0.001	log (1/R)	1086
$x'^3/(6\rho_o^2)_g$		$\log S_m$	1086
S <sub>e</sub>	+ 0.001		
		$\log S_1$	6,48402669
3 log x'	7.00000000	log A	8.50913231
$\log 1/(6\rho_o^2)_g$	4. 5810 213	log sec φ	0.11224465
$\log x'^3/(6\rho_o^2)_g$	5,5810213	log Δλ <sub>1</sub>	<u>5.10544765</u>
		cor. sine to arc	+
$\log S_m^2$	12, 96805338	log Δλ	3.10544765
log C	1.319918	Δλ	
log Δφ	70.247971		
<i>y</i>	225,000.00		
-	39 27 03.9549	λ (central mer.)	74 40 10,000
			0.
φ	34 27 03.9549	•	74 40 00,0000
,	12.20 mm.		

# Explanation of form:

$$x' = x - K$$

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

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

R=scale reduction factor

 $\phi'$  is interpolated from table of y

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

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

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

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

 $\log \Delta \lambda = \log \Delta \lambda_1 + \text{cor.}$  are to sine

STATE		Station	
x	1,440,000.00	$\log S_{s-}$	4 30 103003
K	2,000,000.00	log (1200/3937)	9.48401583
x' (=x-K)	-20,000.00	log (1/R)	1046
$x'^3/(6\rho_o^2)_e$	00	$\log S_m$	3,78505672
S <sub>s</sub>	-20,000.00	cor. arc to sine	
		$\log S_1$	3.78505665
3 log x'	2.9030 9000	log A	8.50913439
$\log 1/(6\rho_{\sigma}^2)_{\sigma}$	4.5410213	log sec φ	0.11177552
$\log x'^3/(6\rho_o^2)_g$	7.4841113	log Δλ <sub>1</sub>	2,40596656
		cor, sine to arc	+
$\log S_m^2$	7,57011344	log Δλ	2.40596667
log C	1. 318652	Δλ	254.6634
log Δφ	4,444765		
y	195,000.00		
φ' (by interpolation)_	39 22 07,44/4	λ (central mer.)	74 40 60.0000
Δφ	.0774	Δλ	+ 4 14.6635
φ	39 22 07.3640	λ	74 44 14.6635
	22.71 mm.		35.10

# 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

 $\phi'$  is interpolated from table of y

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

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

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

 $\log S_1 = \log S_m - \text{cor.}$  are to sine

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

STATE // J	Τ	Station	
3 log x'	7,000,000,00 + 0.001 - ,00 + 0.001 7,00000000 4.5810213	log (1200/3937) log (1/R) log S <sub>m</sub>	3,10493674
log Δφ	195,000.00	λ (central mer.) Δλ λ	5 / "

# Explanation of form:

$$x' = x - K$$

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

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

R=scale reduction factor

 $\phi'$  is interpolated from table of y

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

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

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

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

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

State N.	J.	STATION	
xK	1,990,000,00	_	9.48401583
x' (=x-K)			3 48402669
$S_{\varepsilon}$	-10,000.00	_	3.44402667
3 log x'	2,00000000	log A	8.50913335
$\log 1/(6\rho_o^2)_g - \log x'^3/(6\rho_o^2)_g - \log x'^3/(6\rho_o^2)_g$	4.54/02/3 6.54/02/3	log sec φ log Δλ <sub>1</sub>	2.105/9/96
$\log S_{m^2}$	6 9 6 8 0 5 3 3 8	cor, sine to arc log Δλ	2,10519199
log Clog Δφ	1. 3 1 9 2 8 6 8.2 8 7 3 3 9	Δλ	/27,4066
y	210,000.00		
$\phi'$ (by interpolation	) 24 24 35.6986		74 40 00.0000
φ	39 24 35.6792		74 42 07 40 CG

# Explanation of form:

$$x' = x - K$$

$$S_{\theta} = x' - \frac{x'^3}{(6\rho_{\theta}^2)_{\theta}}$$

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

R=scale reduction factor

 $\phi'$  is interpolated from table of y

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

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

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

 $\log S_1 \approx \log S_m - \text{cor. are to sine}$ 

 $\log \Delta \lambda = \log \Delta \lambda_1 + \text{cor.}$  are to sine

# REVIEW OF AIR PHOTO COMPILATION NO. 5640

Chief of Party: E. H. Kirsch Compiled by: F. H. McBeth

Project: H. T. 205 Instructions dated: May 16, 1935

- 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)
- 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)
- 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."

- 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 587 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60) No landmarks
- 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)

  Overhead Cable Crossing. Crosses Ireat Egg River near lat 39 25 30 long 14° 41' 50" The two supporting tollers are about 150 feet high with a cable clearance of about 100 feet.
- 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 NA 1927 and the reference station is correctly noted.
- ✓14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)
- 15. The drafting is satisfactory and particular attention has been given the following:
  - 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.
- 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)

- No additional surveying is recommended at this time.
  - Remarks: 17.

Hore. Hegh water line is of the date of photographs, byrel 22, 1932 as the feeled imputions should no appealed change.

18. Examined and approved;

Chief of Party

ROMarks after review in office: There are no previous surveys covering the wea Hydrographic + Topographic surveys are contemplated for this area in 1937. Corrections + additions to T-5640 as a result of these surveys will be made when this work is completed.

Reviewed in office by: R. E. ask. Frank G. Erskine

Examained and approved:

Chief, Division of Hydrography

and Topography.