

5641

AIR
PHOTO

DESCRIPTIVE REPORT

FIELD 8

Topographic
~~Hydrographic~~

Sheet No REG. 5641

State NEW JERSEY

LOCALITY

~~ATLANTIC COUNTY~~

GREAT EGG RIVER

~~JOB POINT TO GIBSON LANDING~~

Middle River

1936 2

CHIEF OF PARTY

E. H. Kirsch

U. S. GOVERNMENT PRINTING OFFICE: 1934

1216-#2

Applied to drawing of Chart 1217 - May 5, 1938 - JFW
 Supplemental " " " " June 16, " JFW
 " " compilation of new numbers 827 July 6, 1939 B.

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. 8

REGISTER NO. 5641 **T5641**

State NEW JERSEY

General locality GREAT EGG RIVER

Locality JOB POINT TO GIBSON LANDING *Middle River*

Scale 1:10 000 Date of survey Photographs 4-22-32
Compilation April 19 36

Vessel Air Photo Party No. 21.

Chief of party E. H. Kirsch

Surveyed by See data sheet in descriptive report

Inked by W. W. King

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

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

Instructions dated May 16th, 1935, 19

Remarks: NONE

SHEET NO. 8

REG. NO. 5641

PHOTO NOS.

DATES

66-52	4 to 6	7-30-32
66-13	73 to 76	4-22-32
66-13	77 to 80	4-22-32
66-14	19A to 21	4-22-32
66-8	18 to 19	4-18-32

PROJECTION MADE BY L. C. RIPLEY 4-29-35

PROJECTION CHECKED BY T. B. NUTTING 4-29-35

CONTROL PLOTTED BY J. C. SAMMONS JAN. 1936

CONTROL CHECKED BY W. W. KING Apr. 1936

CONTROL ON PHOTOS BY J. C. SAMMONS FEB. 1936

CONTROL CHECKED ON PHOTOS BY W. W. KING APR. 1936

SMOOTH RADIAL PLOT BY J. C. SAMMONS MAR. 1936

SMOOTH RADIAL PLOT CHECKED BY *E. H. Kirsch* MAR. 1936

DETAIL INKED BY W. W. KING MAR. & APR. 1936

*All of the above men have been
discharged or transferred.*

E. H. K.

DETAIL INKED: 26 square statute miles⁺

LENGTH OF COAST LINE: none

LENGTH OF SHORE LINE: 17.5 statute miles⁺ (more than 200 meters wide)

LENGTH OF STREAMS: 40 statute miles⁺ (Less than 200 meters wide)

Ref. Sta. Jeff, 1935 39° 19' 02.922 (90.1 m)

~~39°~~ 39' 05.470 (131.0 m)
74°

N.J. Grid

x = 2,004,285.64 ft.
y = 176,331.67 ft.

DESCRIPTIVE REPORT FOR SHEET FIELD NO. 8

REGISTER NO. T5641

GENERAL INFORMATION

STATISTICS:

This sheet covers a land area of 26 square statute miles. There are 17.5 statute miles of shore line more than 200 meters wide, and 40 statute miles of streams less than 200 meters in width. There is no coast line on this sheet.

GENERAL REPORT:

This sheet includes the lower portion of the Great Egg River from Job Point to Gibson Landing. The River is bounded on both sides by large areas of low marsh land, (locally called meadows) drained by numerous small ditches dug by the N. J. mosquito and Pest control. The marsh, (partly salt and partly fresh) grows very profusely in these areas and sometimes reaches a height of 5 or 6 feet. These low areas are interspersed with many small streams winding their way to the larger ones. The vegetation appears to have been burned over and there now is a dense growth of brush, scrub oak and pine. It was learned from field inspection that in the vicinity of triangulation station GIBSON the land contains a rich deposit of charcoal as a result of this burning.

PHOTOGRAPHS:

This sheet is compiled from parts of five flights of single lens 1:10 000 scale, aerial photographs, taken by the Aero Service Corp. of Philadelphia, Penn. The flights of these photographs run approximately north and south. The time of the day at which they were taken is not available.

The Photographs used for the compilation of this sheet and their dates are as follows:

PHOTOGRAPHS NUMBERS	DATES
66-52- 4 to 6	7-30-32
66-13- 73 to 76	4-22-32
66-13- 77 to 80	4-22-32
66-14- 19A to 21	4-22-32
66-8- 18 to 19	4-18-32

Most of these photographs are clear as to detail, but some have excessive distortion. This will be further discussed in the paragraph on radial plot.

CONTROL

SOURCES:

Triangulation by Lieut. Benjamin H. Rigg, 1935. Triangulation

by Lieut. John Bowie Jr. 1935. N. J. Geod. S. Nos. 1863, 1864, 1867 and 1868, by The N. J. Geod Control Survey. All control is on N. A. 1927 datum. No graphic control sheets have been started in this area, and none will be started in the 1936 season. An eleven mile traverse was run by the photo party. The computations are submitted with this report. The only marked station located by this traverse is N. J. Geod S. No. 1896. Stations 1897, 1898 and 1899 were located by pictures controlled by the traverse.

ERRORS:

No plottable errors were found in the control. The closing error of the traverse was 1.5 meters. No adjustment was made.

COMPILATION

METHOD:

The usual radial line method as described in "Notes on the compilation of planimetric line maps from 5 lens aerial photographs" was used in compiling this sheet.

ADJUSTMENTS OF THE PLOT:

The plot on this sheet was quite troublesome. Part of the trouble is due to many short flights, and partly because the plot was done in the winter months with a very low office humidity. It was after this trouble was encountered that the traverse was run. The traverse and existing triangulation gave rigid control over the entire sheet. We then attempted to raise the humidity in the office and still had trouble. Templates were then made for all pictures on the sheet, and the best possible adjustment was made with the templates. We were still troubled with two sets of outs, from two flights, on the same point. The maximum difference between any two sets of outs was 7 to 8 meters. A mean of all outs was accepted for the position of the radial point, so the plot should be accurate to within 4 or 5 meters.

INTERPRETATION:

There was no difficulty in interpreting the photos. All photos were quite clear.

INFORMATION FROM OTHER SOURCES:

Control stations 1863, 1864, 1867 and 1868 from N. J. Geod Control Survey. Names from a map published by the N. J. Dept. of Conservation and Development.

CONFLICTING NAMES:

All names used were taken from U. S. C. & G. S. Chart No. 1217 and from the N. J. map referred to above. The N. J. Map by the Dept. of Conservation and Development, *calls the principle river on the sheet, GREAT EGG HARBOR RIVER. The GREAT EGG RIVER has been used on the overlay which is in accordance with chart 1217.

*Jeffries Landing - Chart 8 overlay — Jeffers Landing N.J. Map.
* Sheet 36 on file in Geog. Names.*

COMPARISON WITH OTHER SURVEYS

JUNCTIONS:

Satisfactory junctions have been made with sheet 5640 on the north, with sheet 5639 on the east, and 5642 and 5643 on the south. The western edge of this sheet is the limit of compilations.

LANDMARKS:

A list of recoverable stations, form 524, is submitted with this report. Landmarks for charts will be submitted as a separate report for the project at the end of the season.

BRIDGES:

NONE.

RECOMMENDATIONS FOR FURTHER SURVEYS:

This compilation is believed to have a probable error of not more than .7 MM in position of any detail. The sheet is complete in all detail of importance for charting. In case of a discrepancy between the position of shore line on this sheet and any future graphic control sheet or hydrographic sheet, this sheet should give way for reasons discussed in the paragraph "ADJUSTMENTS OF PLOT".

Submitted by E. H. Kirsch.

E. H. Kirsch

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 27
Ed. April, 1929

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

FIRST ANGLE OF TRIANGLE									
2 Jeff		to 3 Azimuth mark		182		39		24.1	
2d L		+		182		39		24.1	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
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2d L		+		180		00		00.0	
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2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
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2		to 1		182		39		24.1	
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2		to 1		182		39		24.1	
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2d L		+		180		00		00.0	
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2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
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2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
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2		to 2 Jeff		2		39		24.6	
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2		to 1		182		39		24.1	
2d L		+		180		00		00.0	
2		to 2 Jeff		2		39		24.6	
2d L		+		180		00		00.0	
2		to 1		182		39		24.1	
2d L		+		180		00			

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

11-0362 U. S. GOVERNMENT PRINTING OFFICE: 1919

11-0383 U. S. GOVERNMENT PRINTING OFFICE: 1919

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

11-0362 U. S. GOVERNMENT PRINTING OFFICE: 1970

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

11-9382 U. S. GOVERNMENT PRINTING OFFICE: 1959

11-0362 D. A. GOVERNMENT PRINTING OFFICE: 1979

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

FIRST ANGLE OF TRIANGLE									
2		1		2		1		2	
T.P. 11		T.P. 10		T.P. 11		T.P. 10		T.P. 11	
to 3		to 3		to 3		to 3		to 3	
to 3		to 3		to 3		to 3		to 3	
α	2	39	21	33.090	2	39	21	37.643	3
β	2	39	21	33.090	2	39	21	37.643	3
γ	2	39	21	33.090	2	39	21	37.643	3
Δα	2	39	21	33.090	2	39	21	37.643	3
Δβ	2	39	21	33.090	2	39	21	37.643	3
Δγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔΔΔα	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔΔΔβ	2	39	21	33.090	2	39	21	37.643	3
ΔΔΔΔΔΔΔΔΔΔΔΔγ	2	39	21	33.090	2	39	21	37.643	3

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

α	2	Apple	to 3	A2 Mark	22.4	56	42.7	α	3	T.P.1	to 2	Apple	11	00	46.4
$2^d L$		Apple	&	A2 Mark	+22.6	04	01.7	$3^d L$			&		+213	14	57.5
α	2	Apple	to 1	T.P.1	191	00	44.7	α	3	T.P.1	to 1	T.P.2	224	15	43.9
$\Delta\alpha$					55.1	+	1.7	$\Delta\alpha$						+	15.3
					180	00	00.0						180	00	00.0
α'	1	T.P.1	to 2	Apple	11	00	46.4	α'	1	T.P.2	to 3	T.P.1	44	15	59.2

FIRST ANGLE OF TRIANGLE

ϕ	39	20	55.529	2	Apple	74	42	03.267	ϕ	39	21	06.055	3	T.P.1	74	42	00.629
$\Delta\phi$		+	10.526	✓	330.70		-	2.638	$\Delta\phi$		+	19.216	✓	829.423		-	24.179
ϕ'	39	21	06.055	1	T.P.1	74	42	00.629	ϕ'	39	21	25.345	1	T.P.2	74	41	36.450

Logarithms		Values in seconds		Logarithms		Values in seconds		Logarithms		Values in seconds		Logarithms		Values in seconds	
s	2.5194342	186.7		$\frac{1}{2}(\phi+\phi')$	39-21-00.79	780.70		s	4.9184760	- (1069.69)		$\frac{1}{2}(\phi+\phi')$	39-21-15.66		
$\cos\alpha$	9.9919282	(163.6)		$\cos\alpha$	9.8570061			$\cos\alpha$	9.8570061			$\cos\alpha$	9.8438199	872.71	
B	8.5109011			B	8.5109018			B	8.5109018			B	8.5091348	(563.87)	
h	10.222635			h	1.2836832			h	1.2836832			h	1.3834336	24.1787	
s^2	5.03887			s^2	5.83755			s^2	5.83755			s^2	0.1117027		
$\sin^2\alpha$	8.56216			$\sin^2\alpha$	9.689764			$\sin^2\alpha$	9.689764			$\sin^2\alpha$	1.3834336		
C	1.31835			C	1.31836			C	1.31836			C	1.3834336		
	4.91938														
h^2	2.04														
D	2.3838														

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

FIRST ANGLE OF TRIANGLE													
°		'		"		°		'		"		°	
α	2	T.P. 2		to 3		T.P. 1		44		15		59.2	
2Δ				&				+184		53		01.5	
α	2	T.P. 2		to 1		T.P. 3		229		09		00.7	
$\Delta\alpha$										+		71	
								180		00		00.0	
α'	1	T.P. 3		to 2		T.P. 2		49		09		07.8	
ϕ	39	21	25.315	2	T.P. 2	74	41	36.450					
$\Delta\phi$		+		7.560				356.452					
ϕ'	39	21	25.875	1	T.P. 3	74	41	45.188					
VALUES IN SECONDS													
1 logarithms		Values in seconds		Logarithms		Values in seconds		Logarithms		Values in seconds		Logarithms	
s	2.5520010	1013.85		39-21-2909		602.98		2.4833855		1241.98		39-21-36.57	
$\cos\alpha$	9.8156298	(836.52)				- (833.51)		9.8747817		- (608.40)		Values in seconds	
B	85109005							2.5520010				804.47	
h	0.8785313	7.56017						9.8787669		7.3972		+ (621.90)	
s^2	5.10400							8.5091346					
$\sin^2\alpha$	9.75753							0.1117160					
C	1.31847							1.0516185					
	6.18000							9.8022022					
h^2	1.757							0.8538201					
D	2.3838												
	4.0												
		2d term		+ .00015				9.8022022		+ 7.3972			
		3d term		+ -									

11-9363 U. S. GOVERNMENT PRINTING OFFICE: 1953

40

47

Remarks

Decisions

1		
2		
3		
4		Omit S
5		
6		
7		Omit S
8	* 'landing' (Initial letter, lower case) because landing is not a part of Geog. Name, it being a landing for Village English Creek	
9		
10		Approved by U.S.G.B. Sixth Report.
11		
12		
13		
14		not Jeffries
15		
16		
17		
18		
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27		

GEOGRAPHIC NAMES
Survey No. T-5641

Name on Survey	A On Chart No. 1217	B On previous survey No. T-146 & T-2054	C On U. S. quadrangle Maps	D From local information (in Archives)	E From local information State of F.W.D. Dept. of Cons & Devel. No. 36	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K U.S.G.B. Sixth Report
<u>Oakville</u> ✓			✓	✓	✓				1
<u>Gibson Landing</u> ✓			✓	Gibson's Ldg.	Gibson's Ldg.				2
<u>Gibson Creek</u> ✓			Gibson's Cr.	✓	Gibson's Ldg. Cr.				3
<u>Scull Landing</u> ✓			Scull Ldg.	✓	✓				4
<u>Powell Creek</u> ✓			Powell's Cr.	✓	Powell's Creek				5
<u>English Creek</u> ✓			✓	✓	✓				6
<u>Nell's Run</u> ✓			Nell Run	✓	✓				7
<u>English Creek Landing</u> ✓			✓	✓	✓				8
<u>Scullville</u> ✓			Jeffers	✓	✓	✓	✓		9
<u>Great Egg River</u> ✓	✓	Great Egg Harbour River	Great Egg Harbour R.	✓	Great Egg Harbour R.	✓	Great Egg Harbour R.	✓	10
<u>Lakes Creek</u> ✓			Lake's Cr.	✓	✓				11
<u>Sedge Creek</u> ✓			✓		✓				12
<u>Middle River</u> ✓	✓	✓	✓	✓	✓				13
<u>Jeffers Landing</u> ✓	✓	✓	✓	Jeffers Ldg.	Jeffers Ldg.				14
<u>Job Point</u> ✓	✓	Job's Point	✓	Job's pt.	Job's Point				15
									16
<u>English Creek</u> (the settlement) ✓			✓		✓		✓		17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

Names underlined in red approved
by JHE on 12/14/36

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 R. E. Ask

Positions checked by R. E. Ask

Grid inked on machine by R. E. Ask

Intersections inked by V. H. Schleiter

Points used for plotting grid:

x 1,990,000 ft
y 180,000

x 1,980,000
y 190,000

x 2,005,000
y 175,000

x
y

x 2,005,000
y 190,000

x
y

x 1,980,000
y 175,000

x
y

Triangulation stations used for checking grid:

$x = 2,004,185.64'$ $y = 176,331.67'$

- | | |
|---------------------------------|----------|
| 1. <u>Jeff 1935 (ref. sta.)</u> | 5. _____ |
| 2. <u>Apple 1935</u> | 6. _____ |
| 3. <u>Electric, W. 1935</u> | 7. _____ |
| 4. <u>Gibson 1935</u> | 8. _____ |

48
T-5641_w

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	<u>1,990,000.00</u>	$\log S_e$	<u>4. 00000000</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9. 48401583</u>
$x' (=x-K)$	<u>-10,000.00</u>	$\log (1/R)$	<u>10.86</u>
$x'^3/(6\rho_0^2)_e$	<u>+ .00</u>	$\log S_m$	<u>3.48402669</u>
S_e	<u>-10,000.00</u>	cor. arc to sine	<u>2</u>
		$\log S_1$	<u>3.48402667</u>
$3 \log x'$	<u>2.00000000</u>	$\log A$	<u>8.50913543</u>
$\log 1/(6\rho_0^2)_e$	<u>4.5810231</u>	$\log \sec \phi$	<u>0.11158968</u>
$\log x'^3/(6\rho_0^2)_e$	<u>6.5810231</u>	$\log \Delta\lambda_1$	<u>2.10464178</u>
		cor. sine to arc	<u>+ 3</u>
$\log S_m^2$	<u>6.96805338</u>	$\log \Delta\lambda$	<u>2.10468181</u>
$\log C$	<u>1.318021</u>	$\Delta\lambda$	<u>127.2570</u>
$\log \Delta\phi$	<u>8.286074</u>		
y	<u>180,000.00</u>		
ϕ' (by interpolation)	<u>39 19 39.1881</u>	λ (central mer.)	<u>74 40 00.0000</u>
$\Delta\phi$	<u>- .0193</u>	$\Delta\lambda$	<u>+ 2 07.2520</u>
ϕ	<u>39 19 39.1638</u>	λ	<u>74 42 07.2520</u>
	<u>120.77 mm</u>		<u>17.33 mm</u>

Explanation of form:

$$x' = x - K$$

$$S_e = x' - \frac{x'^3}{(6\rho_0^2)_e}$$

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

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

$$\lambda = \lambda (\text{central mer.}) - \Delta\lambda$$

Ch. 1827
2a.

T-5641_b

39

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	<u>2,005,000.00</u>	$\log S_0$	<u>3.69897000</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>+ 5,000.00</u>	$\log (1/R)$	<u>1086</u>
$x'^3/(6\rho_0^2)_0$	<u>— .00</u>	$\log S_m$	<u>3.18299669</u>
S_0	<u>+ 5,000.00</u>	cor. arc to sine	<u>0</u>
		$\log S_1$	<u>3.18299669</u>
$3 \log x'$	<u>1.09691000</u>	$\log A$	<u>4.50913577</u>
$\log 1/(6\rho_0^2)_0$	<u>4.5810231</u>	$\log \sec \phi$	<u>0.11143448</u>
$\log x'^3/(6\rho_0^2)_0$	<u>5.6779331</u>	$\log \Delta\lambda_1$	<u>1.40356694</u>
		cor. sine to arc	<u>+ P</u>
$\log S_m^2$	<u>6.36599338</u>	$\log \Delta\lambda$	<u>1.40356698</u>
$\log C$	<u>1.317810</u>	$\Delta\lambda$	<u>63.5161</u>
$\log \Delta\phi$	<u>7.683803</u>		
y	<u>175,000.00</u>		
ϕ' (by interpolation)	<u>39° 18' 49.7634"</u>	λ (central mer.)	<u>74° 40' 00.0000"</u>
$\Delta\phi$	<u>— .0048</u>	$\Delta\lambda$	<u>— 1 03.6161</u>
ϕ	<u>39° 18' 49.7586"</u>	λ	<u>74° 38' 56.3839"</u>
	<u>153.45^{mm}</u>		<u>135.11^{mm}</u>

Explanation of form:

$$x' = x - K$$

$$S_0 = x' - \frac{x'^3}{(6\rho_0^2)_0}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_0$$

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

T-5641c

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J. STATION _____

x	<u>2,005,000.00</u>	$\log S_0$	<u>3.69897000</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>+5,000.00</u>	$\log (1/R)$	<u>1.086</u>
$x'^3/(6\rho_0^2)_0$	<u>— .00</u>	$\log S_m$	<u>3.18299669</u>
S_0	<u>+5,000.00</u>	cor. arc to sine	<u>— 0</u>
		$\log S_1$	<u>3.18299669</u>
$3 \log x'$	<u>1.09691000</u>	$\log A$	<u>8.50913473</u>
$\log 1/(6\rho_0^2)_0$	<u>4.5810231</u>	$\log \sec \phi$	<u>0.11169029</u>
$\log x'^3/(6\rho_0^2)_0$	<u>5.6779331</u>	$\log \Delta\lambda_1$	<u>1.80382171</u>
		cor. sine to arc	<u>+ 1</u>
$\log S_m^2$	<u>6.36599338</u>	$\log \Delta\lambda$	<u>1.80382172</u>
$\log C$	<u>1.318443</u>	$\Delta\lambda$	<u>63.6534</u>
$\log \Delta\phi$	<u>7.684436</u>		
y	<u>190,000.00</u>		
ϕ' (by interpolation)	<u>39 21 18.0221</u>	λ (central mer.)	<u>74 40 00.0000</u>
$\Delta\phi$	<u>— .0048</u>	$\Delta\lambda$	<u>— 1 03.6524</u>
ϕ	<u>39 21 18.0173</u>	λ	<u>74 38 56.3466</u>
	<u>55.56^m</u>		<u>134.92^m</u>

Explanation of form:

$$x' = x - K$$

$$S_0 = x' - \frac{x'^3}{(6\rho_0^2)_0}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_0$$

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	<u>1,980,000.00</u>	$\log S_e$	<u>4.30103003</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>-20,000.00</u>	$\log (1/R)$	<u>1.086</u>
$x'^3/(6\rho_o^2)_o$	<u>.00</u>	$\log S_m$	<u>3.78505672</u>
S_e	<u>-20,000.00</u>	cor. arc to sine	<u>7</u>
		$\log S_i$	<u>3.78505665</u>
$3 \log x'$	<u>2,90309000</u>	$\log A$	<u>8.50913577</u>
$\log 1/(6\rho_o^2)_o$	<u>4.5810231</u>	$\log \sec \phi$	<u>0.11143436</u>
$\log x'^3/(6\rho_o^2)_o$	<u>7.4841131</u>	$\log \Delta\lambda_1$	<u>2.40562678</u>
		cor. sine to arc	<u>+ 11</u>
$\log S_m^2$	<u>7.57011344</u>	$\log \Delta\lambda$	<u>2.40562689</u>
$\log C$	<u>1.317810</u>	$\Delta\lambda$	<u>254.4643</u>
$\log \Delta\phi$	<u>4.887923</u>		
y	<u>175,000.00</u>		
ϕ' (by interpolation)	<u>39 18 49.7634</u>	λ (central mer.)	<u>74 40 00.0000</u>
$\Delta\phi$	<u>.0773</u>	$\Delta\lambda$	<u>7 4 14.4643</u>
ϕ	<u>39 18 49.6861</u>	λ	<u>74 44 14.4643</u>
	<u>153.22^{mm}</u>		<u>34.66^{mm}</u>

Explanation of form:

$$x' = x - K$$

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

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

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

T-5641e

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	<u>1,980,000.00</u>	$\log S_0$	<u>4.30103003</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>-20,000.00</u>	$\log (1/R)$	<u>10.86</u>
$x'^3/(6\rho_0^2)_0$	<u>-.00</u>	$\log S_m$	<u>3.78505672</u>
S_0	<u>-20,000.00</u>	cor. arc to sine	<u>7</u>
		$\log S_1$	<u>3.78505665</u>
$3 \log x'$	<u>2.90309000</u>	$\log A$	<u>8.50978473</u>
$\log 1/(6\rho_0^2)_0$	<u>4.5810213</u>	$\log \sec \phi$	<u>0.11169016</u>
$\log x'^3/(6\rho_0^2)_0$	<u>7.4841113</u>	$\log \Delta\lambda_1$	<u>2.40548154</u>
		cor. sine to arc	<u>+ 11</u>
$\log S_m^2$	<u>7.57011344</u>	$\log \Delta\lambda$	<u>2.40588165</u>
$\log C$	<u>1.318443</u>	$\Delta\lambda$	<u>2546136</u>
$\log \Delta\phi$	<u>8.888556</u>		
y	<u>190,000.00</u>		
ϕ' (by interpolation)	<u>39 21 18.0221</u>	λ (central mer.)	<u>74 40 00.0000</u>
$\Delta\phi$	<u>-.0774</u>	$\Delta\lambda$	<u>+ 4 14.6136</u>
ϕ	<u>39 21 17.9447</u>	λ	<u>74 44 14.6136</u>
	<u>55.34^m</u>		<u>34.99^{mm}</u>

Explanation of form:

$$x' = x - K$$

$$S_0 = x' - \frac{x'^3}{(6\rho_0^2)_0}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_0$$

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: E. H. Kirsch

Compiled by: W. W. King

Project: H. T. 205

Instructions dated: May 16th, 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)
- ✓ 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."

- ✓ 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)
- ✓ 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 Great Egg River near lat. 39° 19' 40" long 74° 40' 50". The two supporting towers are about 150 feet high with a cable clearance of about 100 feet.
- ✓ 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* and the reference station is correctly noted. *unadjusted*
- ✓ 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.

T-2054 (1891) 1:20,000, which covers the southeastern portion of T-5641 is the only previous survey in this area. The general agreement of shoreline is good, however there have been several changes in detail. T-5641 is adequate to supersede T-2054 over the common area.

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: *None*
High water line is of the date of the photographs, April 22, 1932 on the field inspection showed no appreciable change.

✓ 18. Examined and approved;

E. H. Kirsch
 Chief of Party

19. Remarks after review in office: *Hydrographic & Topographic surveys are contemplated for this area in 1937. Corrections and additions to T-5641 as a result of these surveys will be made when this work is completed.*

Reviewed in office by: *R. E. Ask*
Frank G. Enclime

Examined and approved:

E. H. Green
 Chief, Section of Field Records

L. J. Robert
 Chief, Division of Charts

Ind. L. Peacock
 Chief, Section of Field Work

G. H. Hude
 Chief, Division of Hydrography and Topography.

Report for T 5641 Supplemental.

Corrections in red applied 5/24/38 by
Whitman checked by E.W. Frederick.

a. Planotable survey of July 1937 (Field No 1312)
Office No 5119 M. All details within the area
of T 5641 Supplemental applied to the supplemental
except:

1. Temporary Planotable Stations
2. Magnetic Meridian
3. Two Form 524 descriptions not put
in the regular files as they were not
needed for recovery of the stations.