Form 504 Rev. Dec. 1933 DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR DESCRIPTIVE REPORT Topographic | Field 1

Hydrographic | Sheet No. - Reg. No. - 5631 Air A STORED & CEONWING SURREY L'ERRAY AND ARCHIVER JUN 15 1936 State New Jersey LOCALITY GREAT HAMMOCK COVE VINEWITY VICINITY AND **193** 5 CHIEF OF PARTY E. H. Kirsch

1217.2

applied to drawing & Chart 1216- ang 17, 1937 - Stalkery Coffeed to clear 826 May 1938 #12.

SHEET NO. 1 Reg. No. T-5634

PHO TO S	NO.		DA TE
66-11 66-12 66-12	32 to	37	4-20-32 4-20-32 4-20-32

P _{ROJECTION} BY	Discharged. L. C. Ripley	4-18-35
PROJECTION CHECKED BY	E. H. Kirsch	4-18-35
CONTROL PLOTTED BY	On leave E. J. Anderson	
CONTROL CHECKED BY	P. W. Hund	
CONTROL PLOTTED ON PHOTOS BY	J. F. Richardson	
CONTROL CHECKED ON PHOTOS BY	Unleave. E. J. Anderson	
RADIAL PLOT BY	P. W. Hund	
RADIAL PLOT CHECKED BY	V. W. Johnson Jr.	
TOPOGRAPHY TRANSFERRED BY	V. W. Johnson, Jr.	
TOPOGRAPHY CHECKED BY	R. G. Hickson	
DETAIL INKED BY	Discharged.	

AREA DETAIL INKED: 20 square statute miles.

LENGTH OF COASTLINE: None

LENGTH OF SHORELINE: 12 statute miles (more than 200 meters wide).

W. Johnson, Jr.

LENGTH OF SHORELINE: 45 statute miles (less than 200 meters wide).

DEPARTMENT OF COMMERCE U, S. COAST AND GEODETIC SURVEY

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. 1

REGISTER NO. 5634	
State New Jersey	
General locality Hew Jersey Coast GREAT BAY	
Locality Reed Bay to Great Bay HAMMOCK COVE AND VICINITY Photography - 4-20-32.	۲
Scale 1:10,000 Date of survey , 19 Compiletion - 8-27-35	
Vessel Air Photo Compilation Party No. 21.	
Chief of party E. H. Kirsch	
Surveyed by Seedata sheet in descriptive report.	
Inked by W. W. Johnson	
Heights in feet above to ground to tops of trees	
Contour, Approximate contour, Form line intervalfeet	
Instructions dated May 16, 1935.	
Remarks: None	

Ref. Sta: Knoll 1931 adjusted

1 at. 39° 28' 33.600 (1036.2 meters) adjusted

long. 74 26 20,671 (494.1 ...)

GENERAL INFORMATION

Statistics:

This sheet covers a land area of 20 square statute miles. There are 12 statute miles of shoreline as measured along streams and bays more than 200 meters wide, and 45 statute miles of streams less than 200 meters wide. There is no coastline.

General Report:

About 5 square statute miles of the land area of this sheet is high ground which is fairly thickly settled and has numerous roads and trails running through it. The rest of the land area is salt marsh, most of it drained by ditches dug by the N.J. Mosquito and Pest Control.

Photographs:

This sheet was compiled from parts of three flights of single lens 1:10,000 scale aerial photographs taken by the Aero Service Corporation of Philadelphia, Pa., on April 20, 1932. The time at which the photos were taken is not available. The flights run approximately north and south.

Photos 66-11 96 to 100 along Long. 74° 24' Photos 66-12 32 to 37 along Long. 74° 26' Photos 66-12 53 to 56 along Long. 74° 28'

The photos were in fair scale and free of excessive tilt.

CONTROL

Sources:

Triangulation by C. D. Meaney 1931-32, B. H. Rigg - 1935. Fourth Order triangulation by R. C. Bolstad - 1935 which has been shown on compilation by black circles such as are used to indicate topographic stations.

Graphic control sheets "X" Reg. No. T6402 , "R" Reg. No. 640/6 , and "T" Reg. No. 7680/a , Lt. B. H. Rigg, Chief of Party 1925.

Errors:

No errors in the control were found.

Discrepancies:

No control established by other organizations was used.

COMPILATION

Method:

The radial line method as described in Notes on the

compilation of planimetric Line maps from five lens Aerial Photos was used in compiling this sheet.

Adjustments of Plot:

No unusual adjustments of the plot were necessary.

Interpretation:

No difficulty was experienced in interpreting and tracing any of the detail except the high water line in a few cases. In two or three places the shoreline of Great Bay was especially indefinite. All houses that could be seen on the photos were put on the sheet except those that make up the fishing village on Oyster Creek. These are to numerous, small, and close together to compile. These houses extend over the water and in many cases have small delapidated piers and marine railways beside them.

Information from Other Sources:

Reg. No. , and "T" Reg. No. , Lt. B. H. Rigg, Chief of Party 1935. Field inspection by Lt. R. C. Bolstad, and the compiler.

Conflicting Names:

No conflicting names were recorded by the field inspection party.

COMPARISON WITH OTHER SURVEYS

Junctions:

Satisfactory junctions were made with sheet No. 2 on the southeast, with sheet No. 3, Reg. No. 5636 on the southwest, and with sheet No. 77 Reg. No. T 5447, Lt. R. C. Bolstad.

Satisfactory comparison S were made with the graphic control sheets covering this area.

Landmarks:

A list of landmarks and recoverable topographic stations will be submitted by Lt. B. H. Rigg with G.C. Sheet "X" Reg. No.
"T" Reg. No. "R" Reg. No.

RECOMMENDATIONS FOR FURTHER SURVEYS

This compilation is believed to have a probable error of not more than .3mm in position of well defined detail of importance for charting and of .6 mm for other data.

To the best of my knowledge this sheet is complete in all detail of importance for charting, within the accuracy stated above, and no further surveys of this area are necessary.

Assisted by,

E. H. Kirsch,

Chief of Party.

Submitted by,

Discharged.

W. W. Johnson, Jr.

Bridges

Macote Creek Bridge on coversheet

Macote Creek Bridge on coversheet

Nertical clearance submitted, as 6.6' at M. H. W.

No statement as to source of information.

No statement as to source of information.

U.S.E. bridge book gives 5.0 ft. at H. M.

Soft shown the latter clearance was shown
on finished compilation. T.M. Price '37

T 5634

Additional information to be added to the descriptive report for air photo topographic sheet No. T 5634.

CONTROL

Sources

Triangulation by R. W. Woodworth 1931.

Landmarks.

Lieutenant J. A. Bond, Chief of Party 1936, will also submit additional landmarks for charts and marked topographic stations, with the exception of N. J. Geod. S. Nos. 1849, 1850, 4808 and 4809 which will be submitted with this report.

Information from other sources.

The additional information that has been added to the compilation since the press plate was made has been shown in red ink on a copy of the advance print. These changes include the 1936 location of the lights and beacons and minor changes in the shoreline for agreement with the hydrographic sheets. The changes were in areas where the image was very indistinct on the photographs and in these cases a new location of the shoreline was obtained with the planetable.

Assisted by, Lieut. E. H. Kirsch,

Chief of Party.

Submitted by,

Harryman

GEOGRAPHIC NAMES Survey No. 7 5 6		4 /s /s/s			\$/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	D To The State of	Se La Constantina de la Constantina del Constantina de la Constantina del Constantina de la Constantin	dride Mag	O. Carde of	Mod Merch	Lis Jan	18 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Name on Survey	//	<u> </u>	<u> </u>	B	/c	/ D	<u></u>	F	G	/н	/ K '	XIII (60
Great Bay	/	4/2	V	•	V				ا			
Wacote Creek			*		1	-						美 ₂
MoH Creek			*)						₩ ₃
Dyster Creek	7	*	~									4
· Oyster Creek		#	1XX									* 5
Leeds Point		*		-		~		_	ست ا			6
Hammock Cove	~ ~	1			1							7
Doughty Creek	\dashv	+		~	-		·					8
Perch Cove	1.	- *		/								9
Shad Island	<i>-</i>	- #		-	2						<u> </u>	10
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	Remarks	Decisions
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	stream	<u> </u>
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5	ficking village town	
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M 234		

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 Ask
Positions checked by	R.E. Ask
Grid inked on machine by	RE. Ask
Intersections inked by	Frank R. Tollon
Points used for plotting grid:	
x 2,055,000 ft y 250,000	x 2,080,000 y 230,000
x 2,070,000 y 250000	<u>x</u> <u>y</u>
x 2,070,000 y 230,000	<u>x</u>
x 2,070000 y 240,000	y y
Triangulation stations used for che X=1,064247.48 19=23415	ooking grid:
1. Knoll 1931 (ref sta)	5
2. Leeds Paint 1867	6
3.	7.
4.	8.
Triangulation stations used for the X=2.064.247.48 y=234.15 1. <u>Knoll 1931 (ref.sta.)</u> 2. <u>Leeds Point 1867</u> 3.	ocking grid: 1.13 ft 5. 6. 7.

State N. J.	· · · · · · · · · · · · · · · · · · ·	_ Station	
x	2,055,000.00	$\log S_{\sigma}$	4. 740 36 222
K	2,000,000.00	log (1200/3937)	9.48401583
x' (=x-K)	+ 55,000.00	log (1/R)	1086
$x'^3/(6\rho_o^2)_{\sigma}$,06	$\log S_m$	F.22438891
S _c	+ 54,999.94.	cor. arc to sine	
		$\log S_1$	4 .22 438841
3 log x'	4.22108807	log A	4.50913058
$\log 1/(6\rho_0^2)_g$	4.5810213	log sec φ	1,11271628
$\log x'^3/(6\rho_o^2)_g$	8.8021094	log Δλ ₁	2,84623527
<u> </u>		cor, sine to arc	+ 84
$\log S_m^2$	8,44877782	log Δλ	2 44 6 2 3 % 1 1
log C	9.320472	Δλ	701.4368
log Δφ	9.76 9750		
			·
y	(250,000,00)		9 1 1
ϕ' (by interpolation)	39 31 71.0461	λ (central mer.)	,
Δφ	- 0.5886	Δλ	11 41.8368
φ	39 31 10.4576	λ	74 24 14,1632
_		· . ·	•

32,15 Mm.

43.39mm

Explanation of form:

$$x'=x-K$$

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

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

R=scale reduction factor

 ϕ' is interpolated from table of y

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

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

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

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

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

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

State M. J.		Station	
x	2,070,000.00	log S ₀	4. 84509723
K	2,000,000.00	log (1200/3937)	9 . 4 8 4 0 1 5 8 3
x' (=x-K)	+ 70,000.00	log (1/R)	1686
$x'^3/(6{\rho_o}^2)_{\sigma}$		log S _m	4,32912392
S ₀	+ 69,999,87	cor. arc to sine	81
		$\log S_i$	4.32 9/2311
3 log x'	4.53529412	log A	8.50913054
$\log 1/(6\rho_o^2)_g$	4.5810213	log sec φ	0.11271564
$\log x'^3/(6\rho_0^2)_g$	9,1183154	log Δλ ₁	2,95096933
		cor. sine to arc	+
$\log S_m^2$	8.65824784	log Δλ	2,95097069
log C	1.320972	Δλ	493.2452
log Δφ	9,979220		
<i>y</i>	250,000,00		
φ' (by interpolation)		λ (central mer.)	74 40 80.000
Δφ	- 0,9533		14 53.245
φ	39 31 10,0928		74 25 06 754
	31.13 mm	or make many the description was striped to be a first	/6.14"

Explanation of form:

$$x'=x-K$$

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

$$S_{\scriptscriptstyle m} \!\!=\!\! \frac{1}{R} \! \left(\! \frac{1200}{3937} \! \right) S_{\scriptscriptstyle g}$$

R=scale reduction factor

 ϕ' is interpolated from table of y

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

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

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

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

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

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

State N. J.	<u> </u>	STATION	
x	2,070,000.00	$\log S_{\sigma}$	4, 848 09723
K	2,000,000.00	log (1200/3937)	9.48401583
x' (=x-K)	+ 70,000.00	log (1/R)	1086
$x'^3/(6\rho_o^2)_{\mathfrak{g}}$	0,13	$\log S_m$	4.32912392
S _e	+ 69,999.87	cor. arc to sine	
	. ,	$\log S_1$	
3 log x'	4.53529412	log A	4.50913197
$\log 1/(6\rho_o^2)_g$	4.5810213	log sec φ	0. 1/237 265
$\log x'^3/(6\rho_0^2)_g$	91163154	log Δλ ₁	2.95062773
		cor. sine to arc	+ /3 (
$\log S_m^2$	8,65824784	log Δλ	2.95062909
log C	1.320129	Δλ	892.5429
log Δφ	9978377		, .
<i>y</i>	230,000,00		
ϕ' (by interpolation)	, , , , , , , , , , , , , , , , , , ,	λ (central mer.)	74 40 00.000
	0.9514		14 52,5424
φ	39 27 52.4220		74 25 07 4571
,	/61.67 mm		17.83 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

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

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

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

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

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

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

STATE N. J.		Station	
x	2,070,000.00	log S ₀	4.84564723
K	2,000,000,00	log (1200/3937)	9.48401583
x' (=x-K)	+ 70,000.00	log (1/R)	1646
$x'^3/(6{\rho_0}^2)_{\rho}$		$\log S_m$	45.32912392
S _e	+ 69,999.87	cor. arc to sine	·
		$\log S_1$	4.32912311
3 log x'	4.5352 9412	log A	8.50913128
$\log 1/(6\rho_o^2)_g$	4.5810213	log sec φ	0.11254467
$\log x'^3/(6\rho_o^2)_\sigma$	9,1163154	log Δλ ₁	2.95079846
		cor. sine to arc	+
$\log S_m^2$	8,65824784	log Δλ	2,95079982
log C	1. 32 0 550	Δλ	892.8938
log Δφ	9,978798		
	240 040 00		
y φ' (by interpolation).	39 29 32,2160	λ (central mer.)	74 40 00.000
Δφ	9524		14 52.8438
φ	39 29 3/,2576	λ	74 25 07,1062
	96.40 mm.		16.99 27

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

 ϕ' is interpolated from table of y

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

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

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

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

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

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

REVIEW OF AIR PHOTO COMPILATION T-5634 Scale 1:10,000

Data Record

T.

Triangulation to 1935 Photographs to 1932 Planetable surveys to 1936 Hydrography to 1936 Field inspection to 1935

The detail on this compilation is that of the date of the photographs except for changes along the shoreline as determined by field inspection and 1935 and 1936 planetable surveys

Comparison with Contemporary Graphic Control Surveys

T-6401b (1935 and 1936), 1:10,000 T-6402 (1935), T-6501a (1935 and 1936),

The above graphic control surveys are in agreement with the compilation.

All detail and information shown on the above graphic control surveys is shown on the compilation except temporary topographic signals and magnetic meridian.

Comparison with Contemporary Hydrographic Surveys

H-5893 (1935), 1:10,000 H-6144 (1936),

The shoreline for the portions of the above hydrographic surveys covered by this compilation was taken from the compilation and is in agreement with the soundings.

Comparison with Former Topographic Surveys

T-142 (1841), 1:20,000 T-1166 (1870),

A visual comparison shows very little change in shoreline between the above topographic surveys and the compilation. The compilation is complete and adequate to supersede those portions of the above surveys which it covers.

Comparison with Charts 1216 and 3243

A visual comparison with the compilation shows only minor differences. The compilation is more complete in detail.

July 7, 1937.

L. C. Lande By gones

REVIEW OF AIR PHOTO COMPILATION NO. 5634

Chief of Party: E. H. Kirsch

Compiled by: W.W.Johnson

Project: HT 205

Instructions dated: May 16, 1935.

- 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 1; 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)
- 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)
- 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 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:
 - 21. 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)

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

E. 7-1 Dusch.
Chief of Party

19. Remarks after review in office:

Reviewed in office by: L.C. Landy My Journ

Examained and approved: JBC

Asat Chief, Section of Field Records-

Chief, Division of Charts

Chief, Section of Field Work

Chief, Division of Hydrography and Topography.