

5634

40

Applied to drawing of Chart 1216- Aug 17, 1937 - J. T. Walker
" " " " 1217 Apr. 11, 1938 J. T. Walker
Applied to chart 826 May 1938 H.C.

SHEET NO. 1
Reg. No. T-5634

PHOTOS NO.	DATE
66-11 96 to 100	4-20-32
66-12 32 to 37	4-20-32
66-12 53 to 56	4-20-32

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

AREA DETAIL INKED: 20 square statute miles.

LENGTH OF COASTLINE: None

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

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

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. $74^{\circ} 24'$
Photos 66-12 32 to 37 along Long. $74^{\circ} 26'$
Photos 66-12 53 to 56 along Long. $74^{\circ} 28'$

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. Holstad - 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. 6401b, and "T" Reg. No. T6501a, 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

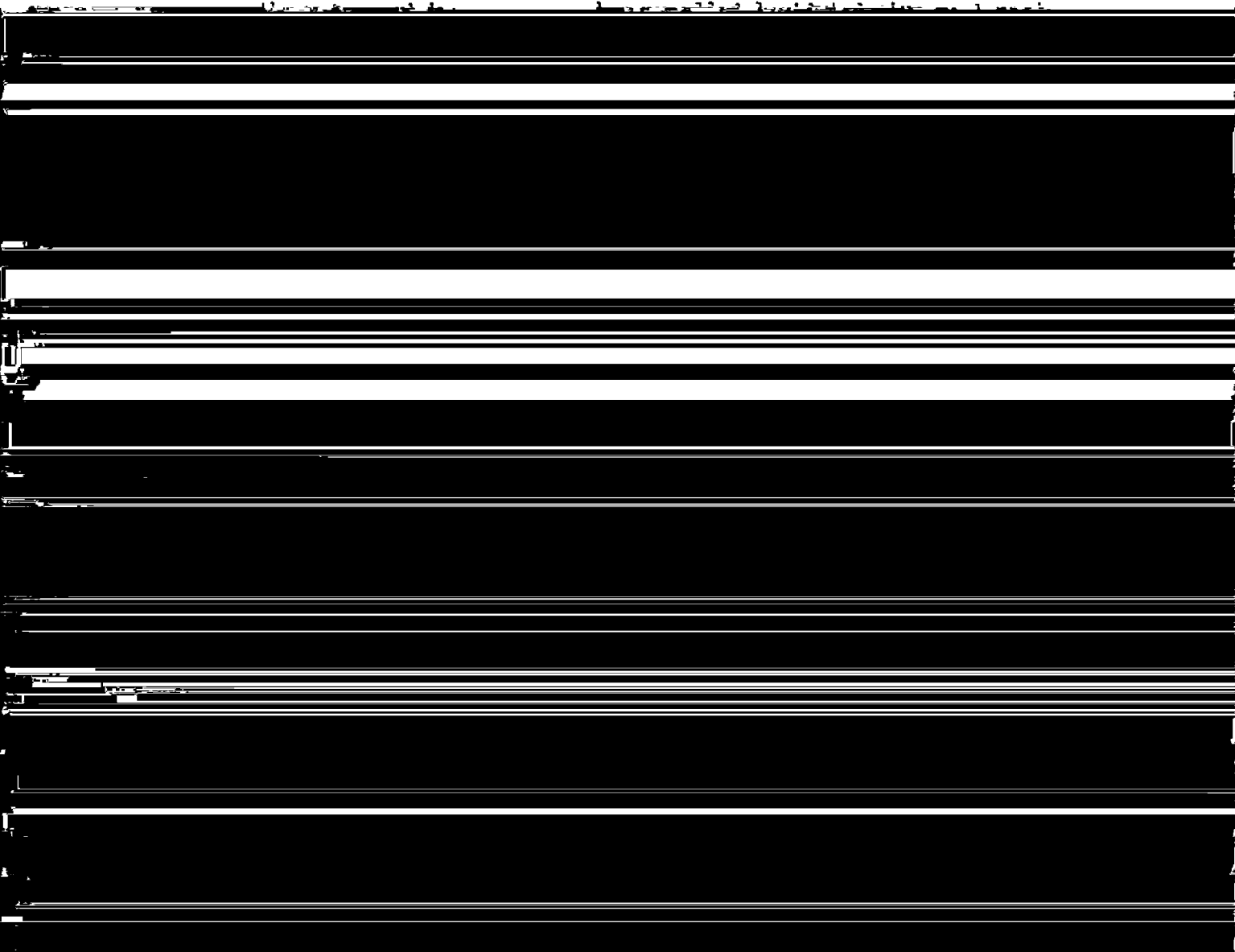
compilation of planimetric Line maps from five lens Aerial Photos was used in compiling this sheet.

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 too numerous, small, and close together to compile. These houses extend



Information from Other Sources:

Reg. No.	Graphic control sheets "X" Reg. No.	, "R"
	, and "T" Reg. No.	, Lt. B. H. Rigg, Chief

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
E. H. Kirsch,
Chief of Party.

Submitted by,

Discharged.
W. W. Johnson, Jr.

Bridges

Macate Creek Bridge

on coversheet

Vertical clearance submitted as 6.6' at M.H.W.

No statement as to source of information.

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

~~5.0 ft. 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 topo-
graphic 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,

E. H. Kirsch
Lieut. E. H. Kirsch,

Chief of Party.

Submitted by,

C. J. Harryman
C. J. Harryman

*all of this detail added to
T 5634 before the sheet was printed
and was intended
B. G. Jones*

GEOGRAPHIC NAMES

Survey No. T 5634

GEOGRAPHIC NAMES											
Survey No. T 5634											
Name on Survey	3243 On Chart No. 1216 1217 Tombstone Survey No. T 142 On U. S. quadrangle Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List N. J. MAP Atlas Sh. # 36 T 5634										
	A	B	C	D	E	F	G	H	K		
Great Bay	✓	*	✓	✓			✓			1	
Nacote Creek		*	✓	✓						2	
Mott Creek	✓	*		✓						3	
Oyster Creek	✓	*	✓	✓						4	
Oyster Creek		✓	✓	✓					*	5	
Leeds Point	✓	*	✓	✓		✓	✓			6	
Hammock Cove	✓	*	✓	✓						7	
Doughty Creek	✓	*	✓	✓						8	
Perch Cove	✓	*	✓	✓						9	
Shad Island	✓	*	✓	✓						10	
Reed Bay	✓	*	✓		Does not appear in this Compilation L. C. R.					11	
Smithville										12	
Smithville			✓			✓	✓		✓	13	
Higbeeville			✓						✓	14	
										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

Names underlined in red approved
by C. A. J. on 7/23/36

Names underlined in red approved

by C. A. K. on 7/23/36

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	Remarks	Decisions
1		
2		
3		
4	stream	
5	fishing villogs	
6	town	
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
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19		
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21		
22		
23		
24		
25		
26		
27		

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 RE Ask

Grid inked on machine by RE Ask

Intersections inked by Frank R. Toller

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 250,000

x
y

x 2,070,000
y 230,000

x
y

x 2,070,000
y 240,000

x
y

Triangulation stations used for checking grid:

$x=2,064,247.48$ $y=234,151.13$ ft

1. Knoll 1931 (ref. sta.) 5. _____
2. Leeds Point 1867 6. _____
3. _____ 7. _____
4. _____ 8. _____

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GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	<u>2,055,000.00</u>	$\log S_0$	<u>4.74036222</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>+55,000.00</u>	$\log (1/R)$	<u>1086</u>
$x'^3/(6\rho_0^2)$	<u>1.06</u>	$\log S_m$	<u>5.22438491</u>
S_0	<u>+54,999.94</u>	cor. arc to sine	<u>50</u>
		$\log S_1$	<u>4.22438491</u>
$3 \log x'$	<u>4.22108807</u>	$\log A$	<u>4.50913058</u>
$\log 1/(6\rho_0^2)$	<u>4.5810213</u>	$\log \sec \phi$	<u>0.11271628</u>
$\log x'^3/(6\rho_0^2)$	<u>4.8021094</u>	$\log \Delta\lambda_1$	<u>2.84623527</u>
		cor. sine to arc	<u>+ 84</u>
$\log S_m^2$	<u>6.44877782</u>	$\log \Delta\lambda$	<u>2.84623611</u>
$\log C$	<u>9.320472</u>	$\Delta\lambda$	<u>701.4368"</u>
$\log \Delta\phi$	<u>9.769750</u>		
y	<u>(250,000.00)</u>		
ϕ' (by interpolation)	<u>39 31 71.0461</u>	λ (central mer.)	<u>74 40 00.0000</u>
$\Delta\phi$	<u>0.5886</u>	$\Delta\lambda$	<u>11 41.8368</u>
ϕ	<u>(39 31 10.4576)</u>	λ	<u>74 28 18.1632</u>

32.25 mm

43.39 mm

Explanation of form:

$$x' = x - K$$

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

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

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>2,070,000.00</u>	$\log S_0$	<u>4.84509723</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>+70,000.00</u>	$\log (1/R)$	<u>1.086</u>
$x'^2/(6\rho_0^2)$	<u>0.13</u>	$\log S_m$	<u>4.32912392</u>
S_0	<u>+69,999.87</u>	cor. arc to sine	<u>81</u>
$3 \log x'$	<u>4.53529412</u>	$\log S_1$	<u>4.32912311</u>
$\log 1/(6\rho_0^2)$	<u>4.5810213</u>	$\log A$	<u>8.50913054</u>
$\log x'^2/(6\rho_0^2)$	<u>0.1123154</u>	$\log \sec \phi$	<u>0.11271564</u>
		$\log \Delta$	<u>2.45001933</u>

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GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	2,070,000.00	$\log S_e$	4.845 09723
K	2,000,000.00	$\log (1200/3937)$	9.484 01583
$x' (=x-K)$	+70,000.00	$\log (1/R)$	10.86
$x'^2/(6\rho_o^2)_e$	0.13	$\log S_m$	4.32912392
S_e	+69,999.87	cor. arc to sine	81
		$\log S_1$	4.32912311
$3 \log x'$	4.53529412	$\log A$	8.50913197
$\log 1/(6\rho_o^2)_e$	4.5810213	$\log \sec \phi$	0.11237265
$\log x'^3/(6\rho_o^2)_e$	9.1163154	$\log \Delta\lambda_1$	2.95062773
		cor. sine to arc	+136
$\log S_m^2$	8.65824784	$\log \Delta\lambda$	2.95062909
$\log C$	1.320129	$\Delta\lambda$	892.5429
$\log \Delta\phi$	9.478377		
y	230,000.00		
ϕ' (by interpolation)	39 27 53.3734	λ (central mer.)	74 40 00.0000
$\Delta\phi$	0.9514	$\Delta\lambda$	14 52.5429
ϕ	39 27 52.4220	λ	74 25 07.4571
	161.67 mm		17.83 mm

Explanation of form:

$$x' = x - K$$

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

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

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

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

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GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x _____	<u>2,070,000.00</u>	$\log S_0$ _____	<u>4.84509723</u>
K _____	<u>2,000,000.00</u>	$\log (1200/3937)$ _____	<u>9.48401583</u>
$x' (=x-K)$ _____	<u>+ 70,000.00</u>	$\log (1/R)$ _____	<u>1.046</u>
$x'^3/(6\rho_0^2)$ _____	<u>0.13</u>	$\log S_m$ _____	<u>4.32912392</u>
S_0 _____	<u>+ 69,999.87</u>	cor. arc to sine _____	<u>81</u>
$3 \log x'$ _____	<u>4.53529412</u>	$\log S_1$ _____	<u>4.32912311</u>
$\log 1/(6\rho_0^2)$ _____	<u>4.5810213</u>	$\log A$ _____	<u>8.50913128</u>
$\log x'^3/(6\rho_0^2)$ _____	<u>9.1163154</u>	$\log \sec \phi$ _____	<u>0.11254407</u>
$\log S_m^2$ _____	<u>8.65824784</u>	$\log \Delta\lambda_1$ _____	<u>2.95079846</u>
$\log C$ _____	<u>1.320550</u>	cor. sine to arc _____	<u>+ 136</u>
$\log \Delta\phi$ _____	<u>9.978798</u>	$\log \Delta\lambda$ _____	<u>2.95079982</u>
y _____	<u>240,000.00</u>	$\Delta\lambda$ _____	<u>892.8938</u>
ϕ' (by interpolation) _____	<u>39 29 32.2100</u>	λ (central mer.) _____	<u>74 40 00.0000</u>
$\Delta\phi$ _____	<u>9524</u>	$\Delta\lambda$ _____	<u>14 52.8938</u>
ϕ _____	<u>39 29 31.2576</u>	λ _____	<u>74 25 07.1062</u>
	<u>96.40 mm.</u>		<u>16.99 mm</u>

Explanation of form:

$$x' = x - K$$

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

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

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 T-5634
Scale 1:10,000

Data Record

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

W. B. Jones

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.

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)
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* *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:

✓18. Examined and approved;

E. H. Kirsch
Chief of Party

19. Remarks after review in office:

Reviewed in office by: L. C. Lande *6/30/22*

Examined and approved: JBR

K. T. Adams
Asst Chief, Section of Field Records
L. O. Colburn
Chief, Division of Charts

Fred. L. Pearson
Chief, Section of Field Work
G. L. de
Chief, Division of Hydrography
and Topography.