

6219a
6219b

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

FEB 21 1936

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Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic } Sheet No. F & FF
~~Hydrographic~~

State New Jersey

LOCALITY

RARITAN RIVER

~~Perth Amboy to New Brunswick~~

a. Sayreville to Perth Amboy

b. New Brunswick to Sayreville

193 4

CHIEF OF PARTY

E. R. McCarthy

U. S. GOVERNMENT PRINTING OFFICE: 1934

6219a
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DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

U.S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

FEB 28 1935

REG. NO.

Acc. No.

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. E&FF

REGISTER NO.

6219a
6219b

State New Jersey

General locality Raritan River

Locality Ed. Sayreville to Perth Amboy
Ed. New Brunswick to Sayreville

Scale 1:10,000 Date of survey October, 1934

Vessel Field Party No. 14

Chief of party E. R. McCarthy

Surveyed by A. E. Durie

Inked by A. E. Durie and S. M. Green Jr.

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

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

Instructions dated May 10, 1934

Remarks:.....

DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEETS NO. E&F.

AUTHORITY:

Instructions of the Director dated May 10, 1934.

LIMITS:

The Raritan River from Pennsylvania Railroad Bridge to New Brunswick. Includes South River to Sayerville and Washington Canal.

CONTROL:

Ample triangulation control well distributed over the sheet from 1932 scheme, which was part of Greater New York triangulation.

METHODS: All points and objects were located by plane table triangulation.

DESCRIPTION OF COAST:

GENERAL:

The Raritan River shoreline from the Raritan River Bridge (Pennsylvania Railroad) at Perth Amboy is marshy on both banks up to its junction with the South River. Beyond this point the banks are high and steep.

The lower section below the route 35 highway bridge has been improved in numerous places (principally on the north bank) by the construction of bulkheads and the filling in of marsh land and there are a number of plants located on this improved area, mainly brick, chemical and nitrate industries. Practically all industries are operating on reduced schedules. The area along the river is becoming more important commercially. There are a few pleasure boats in the district.

DETAILS:

The north bank of the river is highly industrialized, and built up solidly from the railroad bridge to the plants of the Carburundum Company at Keasbey. The Raritan Arsenal is located at Dixon and the Nixon Nitrate Works (this company no longer maintains its piers) and Metropolitan Cement Plant between here and the highway bridge.

DESCRIPTION OF COAST:DETAILS (CON'T)

The south bank has fewer industries and more waste land. The plants of the Titanium Pigmentation Company (now building), the Crossman Company, The New Jersey Central Power and Light Company, and the Sayer and Fisher Bricks Works at Sayerville are the largest and most important companies. The marsh west of the Victory Bridge has been filled in with spoil from the Cut-off Channel.

The banks of South River and Washington Canal are marsh or fill and have little importance. The area between them is all marsh. There are a few abandoned brick yards located on the east bank of the Canal.

CITIES AND BOROS:

New Brunswick is the largest city within the limits of the sheet. It is the most important commercial and educational center on the Raritan. There are a number of industries located here (none of which are operating on full shhedule) as are also Rutgers College and the New Jersey State College for Women. The city is built entirely on the south bank of the river and is connected with the north bank by a highway and a railroad bridge. The city itself is old and -apparently- not very prosperous. *

Sayerville is at the junction of the Raritan River and Washington Canal. It is a company town and is the site of the Sayer and Fisher Brick Works which are doing very little business. A sub-station and power plant of the New Jersey Central Power and Light Company has been built within recent years on the point northeast of the brick works.

South River is a larger place than Sayerville and is a combination of factory town and residential section. The workers in the factories located on the South River live on the river banks and in the older part of the town while a new and more prosperous residential section has been built on the hills above the river.

U. S. ENGINEERS SURVEYS:

The U. S. Engineers (Harbor Line Board) control consisted of a scheme of triangulation which extended from a measured base between stations RnR 1 - RnR 2 on the railroad bridge at South Amboy to a measured base between the two stations located on the highway bridge at New Brunswick. The U. S. Engineers (2nd New York District) also had some control points or sounding stations - located by traverse- on the river but has abandoned its stations in favor of the Harbor Line shheme.

U.S. ENGINEERS SURVEYS (CON'T)

In 1932 several line and point connections were made with the Engineers (Harbor Line) triangulation and in 1934 all the positions were computed ~~as~~^{on} the Coast Survey Datum and Geographic positions determined. The Harbor line stations were well marked and are all easily recoverable.

The co-ordinate system of the Engineers was plotted on the sheet by assuming that the co-ordinates of RnR 13 as given were correct and from this point drawing the five thousand foot lines perpendicular and parallel to the latitudes (RnR 13 was taken as origin for both sheets). The following differences were noted:

RnR 2	plots	13 meters north and 3 meters west of true station.
RnR 7a	plots	10 meters north and 11 meters west of true station.
RnR 8	plots	6 meters north and 5.5 meters west of true station.
RnR 13	plots	Origin
RnR 16	plots	6.5 meters south and 4 meters east of true station.
RnR 15A	plots	10 meters south of true station.
*Wall	plots	23 meters south and 2.5 meters west of true station.

* Station of 2nd District - not in triangulation Scheme.

The above discrepancies are probably due to a poor starting azimuth.

As all the stations have been computed on the Raritan River triangulation executed by the Survey in 1932 the discrepancies are important only to show the accuracy of the Engineers work.

LANDMARKS:

List of landmarks is attached.

NAMES:

Geographic names were obtained by the air photo topographic party of R. C. Bolstad. Names shown in pencil on the sheet are local names in local use.

MISCELLANEOUS:

The Delaware and Raritan Canal is no longer in use and the locks and equipment are in poor condition.

Computations of the Harbor Line Board triangulation have been previously filed.

Respectfully submitted,

Albert E. Durie

Albert E. Durie,
Topographer, C. & G. Survey,

Approved and Forwarded:

E. R. McCarthy

E. R. McCarthy, Chief of Party,
U. S. Coast and Geodetic Survey.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS:

AIDS TO NAVIGATION

Miami, Florida

February 14 1935

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

E. R. McCarthy

Chief of Party.

[illegible]

A list of objects carefully selected because of their value as landmarks as determined from seaward together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a *standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc.* Assign numerals to landmarks to indicate: (1) offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Miami, Florida

February 14, 1935

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

E. H. McCarthy

Chief of Party.

DESCRIPTION	POSITION					H.A. DATUM 1927	METHOD OF DETER- MINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE					
	°	D. M. METERS	°	D. P. METERS				
TWIN N.E. Chimney (O NE Chy. S. Rv. Bk. Co.)	40 27	414	74 22	1211	"	Topo	375	
CHYS. SW chimney (SW chy. S. Rv. Brick Co.)	40 27	412	74 22	1213	"	Topo	375	
SPIRE, wh. Womens Col. (Tri. Spire (Womens Col))	40 29	533.5	74 26	241.	"	Trian	375	
STACK, yol. HJ Rub. Shoe (Topo. Gil) Co.	40 29	1441.	74 26	513	"	Topo.	375	
TANK (ELEV) (Tri. Tank (J&J Co.))	40 30	424.1	74 26	127.9	"	Trian.	575	
GAS TANK (Tri. Gas Holder (PS))	40 29	1090.7	74 23	1189.3	"	Trian.	375	
STACK, concrete (Tri. Chy. Let. Cement Co)	40 29	698.4	74 23	503.8	"	Trian.	375	
STACK, brick red (Tri. Chy. Antimony Prod.)	40 29	748.0	74 23	180.6	"	Trian.	375	
TANK (ELEV) (Tall tank, JC Power)	40 28	1165.3	74 21	458.9	"	Trian.	375	
STACK, brick red (Chy. (Incinerator))	40 30	1754.4	74 17	473.2	"	Trian.	375	
LOADING TOWER (Topo. Ape)	40 29	451.0	74 19	550.	"	Topo	375	
STACK, sq. red brick (Tri. sq. Chy (S&F Co.))	40 28	437.1	74 22	82.5	"	Trian	375	
TWIN N. Cup. SH Ch. (Tri. N. cup S. Hrt Ch)	40 28	1505.3	74 17	604.0	"	Trian	375	
CUPOLAS S. cup. SH. Ch. (Tri. S. Cup S. Heart Ch.)	40 28	1497.4	74 17	616.1	"	Trian	375	
LANDMARKS ALREADY ON SHEET NOT REPORTED.								
STATIONS WERE INSPECTED FROM WATER AND POSITION VERIFIED ON CHART IN								

A list of objects carefully selected because of their value as landmarks as determined from seaward together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

Review of T-6219b - west of Tng. 74°23'
(see also Review of T-5104)

Positions
pg 308 et seq.
N.O. Positions.

The projection checks within 3 meters (0.3 m.m.)
Four stations indicated by triangulation symbols
and not carrying dates are shown on this sheet,
RnR21 (U.S.E.), RnR23 (U.S.E.), RnR26 (U.S.E.), and RnR27 (U.S.E.)
No information can be obtained on them from the
Division of Geodesy. Apparently these stations were
converted from the Engineer's coordinates to the N.A. 1927
datum and plotted, although no record of this can
be found. A 1932 Engineer's blue print (#25477) shows
these stations. RnR23 (U.S.E.) plots in the river MT-6219b.
According to the blueprint it falls on the shore some
360 meters east of the original position, the latitude
remaining the same. The longitudinal coordinate should
be approximately $74^{\circ}24' - 526(887)$ meters. Since it was
plotted at $74^{\circ}24' - 887(526)$ meters the error was probably
due to plotting. This new position is shown on the
plan table sheet in green ink, but it should be understood
that this position has been determined from scaling
from a blue print and not by converting from
coordinates.

Frank G. Erskine

May 22, 1935

REVIEW OF GRAPHIC CONTROL SURVEY T-62196 SCALE 1:10,000

Date of Review

1. This survey has been reviewed in connection with Air Photo Compilation Nos. T-5703 , , with particular attention to the following details:

- ✓(a) Projection has been checked in the Field.
- ✓(b) Accuracy of location of plane table control points.
- ✓(c) Discrepancies between detail on this survey and the air photo compilations listed above.
- ✓(d) Discrepancies found in descriptions submitted on Form 524 when compared with the air photo compilations listed above.

2. Refer to the reviews and descriptive reports of air photo compilations Nos. T-5703 , , for a more complete discussion of any errors or discrepancies found.

✓ Any material errors found on this survey are noted in subsequent paragraphs of this review, and these have been reported to the Field Records Section and the Cartographic Section.

✓ Notes and corrections resulting from the review are shown on this survey in green.

[Signature]
1-14-35
B.G. Jones

REVIEW OF GRAPHIC CONTROL SURVEY T-6719a, SCALE 1:10,000

Date of Review

1. This survey has been reviewed in connection with Air Photo Compilation Nos. T-5703 , , with particular attention to the following details:

- (a) Projection has been checked in the Field.
- (b) Accuracy of location of plane table control points.
- (c) Discrepancies between detail on this survey and the air photo compilations listed above.
- (d) Discrepancies found in descriptions submitted on Form 524 when compared with the air photo compilations listed above.

2. Refer to the reviews and descriptive reports of air photo compilations Nos. T-5703 , , for a more complete discussion of any errors or discrepancies found.

Any material errors found on this survey are noted in subsequent paragraphs of this review, and these have been reported to the Field Records Section and the Cartographic Section.

Notes and corrections resulting from the review are shown on this survey in green.

ShX
8-14-35
B.G. Jones