

5077

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: New York

DESCRIPTIVE REPORT

Photo
Topographic
~~Hydrographic~~

Sheet No. T 5077

LOCALITY

Eastern Long Island

East Hampton to Promised Land

1934

CHIEF OF PARTY

R. C. Bolstad, Jr. H. & G. Eng.

U. S. GOVERNMENT PRINTING OFFICE: 1931

5077

Applied to chart 298 J.M.A. Mar. 25, 1936
" " " 1212 J.M.A. Apr. 1936
" " " 1211 J.M.A. Feb. 1937

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 for-
warded to the Office.

Field No. 27

REGISTER NO. T 5077

State New York

General locality Eastern Long Island

Locality Easthampton to Promised Land

Photographs

- STATISTICS -

on

SHEET, FIELD NO. 27 , REG. NO. T5077

PHOTOS, NO. M150 (881-14) TO NO. M166 (881-14)

DATE OF PHOTOGRAPHS May 5, 1933 TIME 11:33 A.M.

	BY	DATE FROM TO
ROUGH RADIAL PLOT	W.E. Hackett W.E. Hackett	11/22 - 11/22/33
SCALE FACTOR (0.860)	W.E. Hackett W.E. Hackett	11/22 - 11/22/33
SCALE FACTOR CHECKED	J.P. O'Donnell J.P. O'Donnell	11/22 - 11/22/33
	W.H. Burwell W.H. Burwell	

COMPILER'S REPORT

for

AIR PHOTO TOPOGRAPHIC SHEET FIELD NO. 27

GENERAL INFORMATION

The AIR PHOTO FIELD INSPECTION REPORT, 1933, of Lieut L.C. Wilder for Eastern Long Island, N.Y. furnished the necessary field data for the compilation of this sheet. Additional information was obtained from the field prints and, in questionable areas, from Lieut. (j.g.) R.C. Bolstad who is familiar with the topography of this area.

The accompanying STATISTICS SHEET details all data in connection with the compilation of this sheet.

At the time the photographs, for this area, were taken, May 5, 1933 at 11:33 A.M., the tide along the Atlantic Coast was practically at low water, and the tide in Gardiners Bay was also practically at low water, as determined from the Predicted Tide Tables of the U.S. Coast and Geodetic Survey.

This sheet was compiled from five lens photographs taken by 2nd Lieut. James F. Olive, Jr. of the U. S. Army Air Corps with their five lens camera, Model T-3A, No. 31-78, photograph Nos. M150-M166 (881-14) inclusive.

Out

T-6097

~~The insert, shown on this sheet, of Cartwright Island,~~
Lat. $41^{\circ} - 02'$, Long. $72^{\circ} - 06'$, was taken from the aluminum ~~control~~
control sheet of this area, 1:20,000 scale, made by Lieut. Comdr. W.D. Patterson in 1934.

CONTROL

(A) Sources

The following sources of control were used in the compilation of this sheet.

- (a) Triangulation by Lieut. A.P. Ratti, in 1933, field positions unadjusted.
- (b) Triangulation by Lieut. C.K. Green, in 1928.
- (c) Triangulation by Lieut. C.D. Meaney, in 1932.
- (d) Triangulation, 1921
- (e) Triangulation, 1911
- (f) 1933 Aluminum Control Sheets (Lieut. A.P. Ratti, ~~unadjusted~~, scale 1:20,000)
Reg. No. 4766 and 4767 ✓
- (g) 1928 ~~Aluminum~~ ^{Topographic} Control Sheet (Lieut. C.K. Green, scale 1:10,000, on North American Datum, corrected to N.A. 1927 Datum).
See paragraph (C) Discrepancies following.
Reg. No. T-4425 ✓
- (h) 1934 Aluminum Control Sheet (Lieut. Comdr. W.D. Patterson, scale 1:20,000)
Reg. No. T-6097

All control is on the North American 1927 Datum.
The difference between the unadjusted and the final

adjusted positions would be unplotable at the scale of this compilation (1:11,628). *Topographic*

The 1928 ~~aluminum~~ control sheet (Lieut. C.K. Green), (g) above, was used for assistance in obtaining the shore line.

The above triangulation and topography (showing control signals and high water line) forms the basis for the control in this area.

In addition to the triangulation, and high water line, obtained from the aluminum control sheets, the following topographic signals (shown on the aluminum control sheets) were spotted on the photos and were used in controlling this sheet:-

<i>Black Circles</i>	(No Name) Water tank ✓	} <i>From aluminum planetable sheets.</i>
—	(No Name) Church Spire ✓	
" "	Boy ✓	
" "	Tank ✓	

These signals have been shown on the celluloid topographic sheet by a double blue circle (⊙) together with the name, given on the aluminum control sheet, also in blue. As the blue ink will not photograph during the photo-lithographic process, no record of these topographic control signals (banners and flags) will appear on the finished sheet.

If it is the desire of the Chart Section to have these shown, they may be indicated in red ink with the usual circle and topographic name; this may best be done by draftsmen in the Washington Office as they will have all the data at hand.

In the compilation of this sheet not all of the control stations shown on the aluminum control sheets were used as control since the field inspection took place before the aluminum control sheets had been finished by the field party and the field party had not established all of the control in this area. However, many natural objects used as control on the aluminum control sheets could be definitely spotted in the office with the aid of the stereoscope and these were used as supplementary control.

The Long Island Railroad track traverse data was used for supplementary control. The traverse was tied in at intervals by means of the radial plot in various localities where the control was strong and was found to agree except as noted in the paragraph (C) Discrepancies, following.

All aluminum control stations used in the supplementary control of this sheet have been plotted from positions obtained from the reports of the field parties operating in this area or directly from the aluminum control sheets by scaling.

(B) Errors

In making the radial plot for this sheet the following relocations of spotted aluminum control signals resulted:

⊙ (No Name) Church Spire - Lat. 40°- 58.6', Long. 72°- 08.3' - new position as determined by the radial

plot lies 9 meters distant on azimuth 37° (from north) from the position as given on the aluminum control sheet. This signal was easily picked up on the photographs and verified under the stereoscope. Also the control in the immediate vicinity is strong and, therefore, the signal is believed to be in error as stated. -T4766

© (No Name) Water Tank - The position of this station is given on aluminum control sheet, Reg. No. 4766 as Lat. $40^{\circ}-58'$ - 1374 m., Long. $72^{\circ}-08'$ - 573 m. and on aluminum control sheet, Reg. No. 4767 as Lat. $40^{\circ}-58'$ - 1366 m., Long. $72^{\circ}-08'$ - 569 m. The radial plot agrees with the position as given by Control Sheet, Reg. No. 4767 and, since the control is strong in this area and the tank easily spotted on the photographs, it is believed that this is the correct position.

The control, on this sheet, is, in general, strong and the radial plot gave good intersections so that it is believed the stations mentioned above are in error as stated. It is to be noted that the aluminum control sheets were executed on a scale of 1:20,000 and 1:10,000 whereas this sheet is on a scale of 1:11,628.

(C) Discrepancies

The Long Island Railroad track traverse data, as listed by them, was found to be in error. The true azimuth is about $7^{\circ}-36'$ (counter-clockwise) of the azimuth determined by them. On the eastern half of the sheet it was necessary to lengthen the distances as given by the traverse data about 15 meters and in the vicinity of triangulation station Liberty Pole about 5 meters on the curve in order to obtain agreement with the radial plot. It appears that the railroad traverse azimuth may have been based on a poor magnetic azimuth determined years ago.

The topography on Lieut. C.K. Green's ^{Tops} aluminum control sheet east of Long. $72^{\circ}-06'$ is in error and consequently this ~~control~~ ^{T-4425} sheet has been used for suggestions only. (See Director's letter dated Dec. 26, 1933, Reference 26-AHH 1990) ^{See review} *Hand T. files.*

No other control established by other organizations was used in this compilation.

(D) ADDITIONAL NOTE

The following triangulation stations were not spotted on the field prints by the field inspection party and could not be identified under the stereoscope. There was, however, sufficient control in the nearby territory so that these stations were not needed for the radial plot.

Amagansett House	B	Chimney	✓
"	"	C	✓
"	"	D	✓

COMPILATION

(A) Method

The usual radial line method of plotting was used in the compilation of this sheet.

projection lines incorrectly inked - C.K.G.

(B) Adjustments of Plot

The photographs of this strip appear to have only a small amount of tilt except Nos. 154, 157 and 163. There is a slight scale fluctuation, the airplane having flown higher at the ends of the strip and lower in the center than the average height, which made it necessary to do a small amount of adjusting and proportioning between radial points.

However, by holding to all the available control for this sheet excessive adjustment, to the extent of causing an appreciable error, was not necessary.

(C) Interpretation

The usual graphic symbols were used as approved by the Board of Surveys and Maps (1932) with the exception of a symbol to show an abandoned railroad track mostly in ruins and detached from the main line at the point of switch. This occurs in Lat. $40^{\circ}-59'$, Long. $72^{\circ}-05'$ and is a spur running out to the fish factories at Promised Land which have also been abandoned. The symbol is a broken track line thus (+ + + +) and is labeled. ✓

Except for the northerly portion of the sheet, no great difficulty was experienced in interpreting the photographic detail. In the north portion, however, the wing prints were quite blurred and several houses may have been omitted.

The double full line was used to indicate first order roads and the double broken line for private driveways and roads of lesser importance. An exceedingly poor road or trail was shown as a single dashed line. In most cases, unless labeled on the field inspection prints, the classification had to be determined by the appearance under the stereoscope.

The marsh at Lat. $40^{\circ}-59.6'$, Long. $72^{\circ}-04.5'$ and at Lat. $40^{\circ}-59.4'$, Long. $72^{\circ}-06'$ is ditched for mosquito elimination. These ditches have not been shown as they are narrow and close together and would tend to confuse the detail; they are, however, labeled.

Triangulation station "Amagansett Radio Compass Station 1921" is the Naval Radio Compass Station, call letters "N.B.M."

The triangulation stations East and West Radio Masts, 1921 are masts for the Naval Radio Station. ^{shown}

The shoal areas shown on this sheet are ^{shown} only defined when it is obvious that there is a line of demarkation. When this line is not definite on the photographs there is no boundary for the shoal area shown. ✓

There are no bridges of importance to navigation on this sheet.

Cartwright Island: ~~Is not shown on this sheet.~~ The high water line was run in by Lieut. Comdr. W.D. Patterson in 1934 on a scale of 1:20,000 on an aluminum control sheet (T-6097) and transferred to this sheet. This was necessary because the island appeared on only one photograph and there was no possible way to make a radial plot of it. The shoreline, obtained from Lieut. Comdr. Patterson's aluminum control sheet, agreed very well with the one photograph of the island and the topography was inked within the

high water line from the photograph. The low water line at the north and south ends of the island was also shown on the aluminum control sheet.

The high tension line (steel towers) along the Railroad ends at Lat. $40^{\circ}-58.8'$, Long. $72^{\circ}-07.3'$ and could not be followed beyond this point since power is taken eastward over a pole line which could not be seen on the photographs.

On the easterly section of the sheet the area between the railroad and the Atlantic Ocean is covered with sand dunes. In the hollows between the dunes there are occasional small wet marshy patches which have been denoted by the symbol for grass with a line under it. The patches are not large enough to have more than one line of the marsh symbol shown.

(D) Information from Other Sources

The high water line was run in by the topographic party on the aluminum control sheet.

The high water line along the Atlantic Coast was transferred to the celluloid from Lieut. A.P. Ratti's aluminum control sheets Reg. Nos. 4766 and 4767. This line fell on the strip of sand along the shore and was used as the high water line except where it was very evident that it was in error, that is, where it fell into the surf shown on the photographs. In these areas, the high water line was inked close to the high water, as shown on the aluminum control sheet, because the high water line run by Lieut. Ratti was run in after the photographs were taken and the sand beach in this locality builds out slightly in the summer and is eroded during the winter season.

The Long Island Railroad track traverse data was used for supplementary control as stated under CONTROL (A) Sources and (C) Discrepancies.

The detail around the railroad stations, points of switch, sidings, etc. was taken from the track traverse data as the photographs did not show these details clearly.

Lieut. C.K. Green's ~~aluminum control sheet~~^{1928 topographic sheet} was used to get the approximate location of the shoreline around Gardiners Bay but as the control sheet was in error (see CONTROL (C) Discrepancies, page 5) the high water line could be used only for suggestions in questionable area.

(E) Conflicting Names

There are no names on this sheet conflicting with U.S.C. & G.S. Charts of this area and no new names have been added.

COMPARISON WITH OTHER SURVEYS

The junctions with all adjoining sheets are satisfactory.

There are several control stations (supplementary) used in controlling the radial plot of this sheet that fall outside the inked detail area. These will be listed in the descriptive reports of the adjoining sheets, namely Reg. Nos. T5068, on the north, T5076 on the west and T5078 on the east.

It was found in connection with the Long Island Railroad track traverse data that the azimuth obtained from their data was in error

as explained under CONTROL (C). Discrepancies, page 5.

LANDMARKS

The list of landmarks for this area, including those to be expunged, has been previously submitted, November 3, 1933, by Lieut. A.P. Ratti.

There is a tank shown at Lat. $41^{\circ} - 00'$ - 541.7 m., Long. $72^{\circ} - 04'$ - 999.1 m., at Promised Land, as a landmark on Chart No. 298. This tank has not been mentioned either by Lieut. Ratti or by Lieut. Wilder in their submitted lists of landmarks or expunged lists. It was located in 1928 by Lieut. C.K. Green and used on this sheet as control. Since it can be readily seen on the photographs and exhibits a fair degree of prominency it is believed that it should be retained as a landmark and has, therefore, been shown by a small black circle on this sheet. *This tank, ordered expunged in letter 345-1934 (last item of letter). J.M.A. 3/25/36*

There are many other objects (such as houses, ends of docks, etc.) which are located within the accuracy specified under the following heading RECOMMENDATIONS FOR FURTHER SURVEYS and may be used to obtain hydrographic "fixes". Care should be taken in using the houses to use the center as the size shown on this sheet may be expanded somewhat.

RECOMMENDATIONS FOR FURTHER SURVEYS

The compilation of this sheet is believed to have a probable error of not over 2 meters in well defined detail of importance for charting and of 4 meters for other data. It is understood that the widths of roads and similar objects may be slightly expanded in order to keep the detail clear and to keep it from photographing as a solid area in the photo-lithographic process.

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

Submitted by

H. L. Hawkins

H. L. Hawkins

Draftsman

Assisted by

A. K. Spalding
A. K. Spalding

Surveyor

J. G. Albert
J. G. Albert

Draftsman

LIST OF RECOVERABLE TOPOGRAPHIC STATIONS

(Includes all recoverable objects, sufficiently prominent for use as hydrographic fixes, shown as topographic stations with small black circle on this sheet and not described on Form 524 by this party.)

<u>Description</u>	<u>Latitude</u>		<u>Longitude</u>		<u>Height</u>	<u>Method of Determination</u>	
	°	'	D.M. Meters	°	'	D.P. Meters	
High Coal							
/ Loading Frame-work	40	59	(13.9) 1837.0	72	04	(18.2) 1384.4	1934 A.P.T.
/ Chimney - at			(1136.5)			(356.4)	1934
/ Promised Land	41	00	714.4	72	04	1045.9	A.P.T.
/ (Boy) Center of House	40	59.7		72	06.5		A.C.S. Reg. No. 4425

Note: A.C.S. denotes aluminum control sheet.
A.P.T. denotes air photo topography.
Name in parenthesis preceding the description is the topographic station name as given on the aluminum control sheet.

REVIEW OF PHOTO TOPOGRAPHIC SURVEY NO. T5077

Title (Par. 56) (See enclosed Title Sheet)

Chief of Party Roswell C. Bolstad Compiled by See page 2, Desc. Report

Project New York Air Photo Compilation Instructions dated November 15, 1932
Party No. 12

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 8; and 16, a, b, c, d, e, g and i.) Paragraph 8 not applicable to this party.
2. The character and scope of the compilation satisfy the instructions and the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs".
3. The control and adjustment of the radial plot were adequate. (Par. 12, 29.) See Descriptive Report, COMPILATION (B) page 4.
4. There is sufficient control on maps from other sources that were transmitted by the field party for their application to the charts. (Par. 28.)
5. High water line on marshy ~~and mangrove coast~~ is clear and adequate for chart compilation. (Par. 16a, 43, 44.)
6. The representation of low water lines, ~~reefs, rocks, reefs and rocks,~~ and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.)
7. Important details shown on previous surveys and on the chart have been compared with this sheet and a statement has been entered in the report regarding the removal from the chart or change in position of important detail such as rocks, lights, beacons, prominent objects, bridges, docks, and structures along the water front. Only such changes as noted in the enclosed COMPILER'S REPORT, CONTROL (B); COMPILATION (C), (D); and LANDMARKS have been made on this sheet.
8. ~~The span, draw and clearance of bridges are shown.~~ (Par. 16c.)
There are no bridges of importance to navigation shown on this sheet.
9. The data furnished by the Field Inspection is adequate.

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

10. The descriptive report covers all details listed in the Manual, so far as they apply to this survey. (Par. 64, 65 and 66.)
11. The descriptive report also contains all additional information required in photo topography as prescribed in the instructions and in the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs".
12. The descriptions of recoverable stations and references to shore line were accomplished on Form 524, and scaling of positions checked. (Par. 29, 30 and 57.) (See Remarks below, also reports of control parties, see CONTROL (A) Sources, page 3)
13. A list of landmarks for charts was furnished on Form 567 and scaling of positions checked. (Par. 16d, e, 60.) (Previously submitted by 1933 Field Party under Lieut. A.P. Ratti)
14. The geographic datum of the sheet is North American 1927 and the reference station is correctly noted. (Par. 34.) (See paragraph CONTROL in COMPILER'S REPORT, page 3)
15. Junctions with contemporary surveys are adequate.
16. Geographic names are shown on the sheet and are covered by the Descriptive Report. (Par. 64, 66k.)
17. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46.)
18. No additional surveying is recommended.
19. Remarks: Any additional notes and requirements affecting this area are referred to Lieut. A.P. Ratti's Reports covering the topography executed in 1933 under his charge.

20. Examined and approved: Preliminary Review by J.G. Albert
Roswell C. Bolstad Draftsman
 Chief of Party

21. Remarks after review in office: See following page.

Reviewed in office by: J.A.³ B.G. Jones

Examined and approved: E.H. Green
 Chief, Section of Field Records
L.O. Polbuit
 Chief, Division of Charts

F.B. Borden
 Chief, Section of Field Work
G. Wade
 Chief, Division of
 Hydrography and Topography.

REVIEW OF PHOTO COMPILATION T-5077 (1934)

Comparison with other Surveys:

Comparison with T-1574a (1883) 1:10,000, shows considerable disagreement with respect to the shape of Cartwright Island (called Ram Island on the old survey) that shows an island 500 meters in length whereas the compilation shows an accretion to the southward of 1000 meters; the island appears on no two references with the same configuration. Its composition being of sand, it is evidently constantly changing its shape and position.

Comparison was made with T-2053 (1892) 1:10,000 and T-2052 (1891) 1:10,000. Both are in substantial agreement with the compilation, likewise T-4425 (1928) 1:10,000. There is some question as to the accuracy of the latter as a check of the projection lines indicates a shrinkage of about 15 meters per minute in both latitude and longitude and the reference to error in T-4425 given on page 5 of the preceding report concerns the error in the projection and the plotting of triangulation stations. Examination of T-4425 shows considerable distortion of the Whatman sheet. The fact that the plotting of triangulation stations does not check is probably due to the pencil projection lines having been partially obliterated during field work and later incorrectly inked due to paper distortion. In this case the relative positions of triangulation stations and detail would be correct but both could be out of position on the projection. Since the compilations are made on a practically non distortion celluloid and this compilation T-5077 and adjoining compilations T-5068 and T-5078 completely cover the area of T-4425 it is recommended that T-4425 be rejected for further use. The compilation is adequate to supersede the older surveys listed above.

Comparison with T-6097 (1934) 1: 10,000 shows Cartwright Island correctly transferred by the compiler.

Comparison with H-4893 (1928) 1:10,000 shows the position of several fish traps west of long. 72°-06'.4 on the north shore not shown on the compilation. The shoal lines shown on the compilation closely approximate the twelve (12) foot depth curve of the hydrographic sheet. The title of H-4893 spells the word GARDINERS in the singular.

Comparison with H-5325 (1933) 1:20,000 shows the shoreline in agreement with the compilation. Two wreck symbols are shown, one at lat. 40°-57'.9 long. 72°-07'.9 and another at lat. 40°-57'.2, long. 72°-09'.9 neither of which appear on the compilation.

Landmarks:

The position of the Church Spire as listed on Page 4 is accepted as shown on the compilation, scale 1:10,000, as T-4766 is on a scale of 1:20,000 and shows a triangle of error in the cuts locating this spire which accounts for at least a part of the difference of 9 meters.

Accuracy:

The accuracy of location of 2 to 4 meters given on Page 8 is high for work on this scale, a better estimate would be 2 to 4 meters for intersected points and 2 to 8 meters for other detail.

B.G. Jones

Survey No. T-5077

GEOGRAPHIC NAMES

Date. April 3, 1935

Chart No. _____

Diagram No. _____

Approved by the Division of Geographic Names, Department of Interior. *

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

[illegible]