

5074

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

Topographic
Hydrographic

16-12-2
Sheet No. T5074

LOCALITY

Eastern End of Long Island

Gardiner's Island

19 34

CHIEF OF PARTY

Roswell C. Bolstad, Jr. H. & G. E.

U. S. GOVERNMENT PRINTING OFFICE: 1931

5074

Applied to Lht. 298 Aug. 24, 1934

R. Reynolds

Applied to chart 1211 S.M.A. Jan. 30, 1937

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5074

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. 24

REGISTER NO. T5074

State New York

General locality Eastern End of Long Island

Locality Gardiner's Island

Scale 1:10,000 Photographs
Date of survey May 5, 1933
Date of Compilation Feb. 16, 1934

Vessel Air-photo Compilation Party No. 12

Reviewed and recommended for approval

Chief of party Roswell C. Bolstad, Jr. H. & G. E.

Surveyed by (see data sheet enclosed in Descriptive Report for this sheet)

Inked by W. Barasch

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

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

Instructions dated November 15, 1932

Remarks: Actual scale of celluloid sheet is 1:11,735. Compilation of five lens aerial photographs Nos. M115-M129 (880-14). Final sheet to be enlarged to 1:10,000 scale and printed by photo-lithographic process.

- NOTES ON COMPILATION -

SHEET NO. 24

PHOTOS, NO. M115 (880-14) TO NO. M129 (880-14)

DATE OF PHOTOGRAPHS May 5, 1933 TIME 11.25 A.M.

	BY	DATE
ROUGH RADIAL PLOT	<u>E.W. Fickenscher</u>	<u>11/17/33</u>
SCALE FACTOR (0.850)	<u>E.W. Fickenscher</u>	<u>11/17/33</u>
SCALE FACTOR CHECKED	<u>P. O'Donnell</u>	<u>11/23/33</u>
PROJECTION	<u>R.A. Philleo</u>	<u>12/15/33</u>
PROJECTION CHECKED	<u>P. O'Donnell</u>	<u>12/15/33</u>
CONTROL PLOTTED	<u>R.A. Philleo</u>	<u>12/16/33</u>
CONTROL CHECKED	<u>P. O'Donnell</u>	<u>12/16/33</u>
TOPOGRAPHY TRANSFERRED	<u>R.A. Philleo</u>	<u>12/27/33</u>
TOPOGRAPHY CHECKED	<u>R.C. Bolstad</u>	<u>12/28/33</u>
SMOOTH RADIAL LINE PLOT	<u>R.A. Philleo</u>	<u>12/26/33</u>
RADIAL LINE PLOT CHECKED	<u>R.C. Bolstad</u>	<u>12/26/33</u>
DETAIL INKED	<u>W. Barasch</u>	<u>1/29/34-2/16/34</u>

AREA OF DETAIL INKED 5.5 sq. Statute Miles (Land Area)

AREA OF DETAIL INKED 0.5 sq. Statute Miles (Shoals in Water Area)

LENGTH OF SHORELINE (more than 200 m. from nearest opposite shore)
16.1 Statute Miles

LENGTH OF SHORELINE (rivers and sloughs less than 200 m. wide)
9.3 Statute Miles

GENERAL LOCATION Eastern End of Long Island

LOCATION Gardiner's Island

DATUM North American 1927

Latitude 41°- 06'- 05.069" (156.4 m.)

STATION Gardiner's Island
1837-1932

Longitude 72°- 06'- 22.480" (524.6 m.)

COMPILER'S REPORT

for

AIR PHOTO TOPOGRAPHIC SHEET FIELD NO. 24

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 NOTES ON COMPILATION details all data in connection with the compilation of this sheet.

At the time the photographs for this sheet were taken the tide, according to predicted tide tables, was practically at low water and its affect on the interpretation of high water was neglected.

This sheet was compiled from 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 numbers M115 (880-14) to M129 (880-14) inclusive.

CONTROL.

(A) Sources.

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

- (a) Triangulation by Lieut. L. C. Wilder in 1933, field positions, unadjusted.
- (b) Triangulation by Lieut. C. D. Meaney in 1932, from office computations.
- (c) Triangulation by Lieut. C. K. Green in 1928, from office computations.
- (d) Triangulation in 1911, name of Chief of Party not available.

All of the above triangulation stations are on the North American 1927 Datum.

In addition to the above control two topographic sheets, Reg. Nos. 4425 and 1574a, were used for supplementary control.

(B) Errors.

No errors in the control stations were discovered in the compilation of this sheet.

The control, on this sheet, is strong and the radial plot, in general, gave good intersections. The necessary adjustments are given under COMPILATION

(B) Adjustments of Plot.

(C) Discrepancies.

No other control stations established by other organizations were used in this compilation.

COMPILATION.

(A) Method.

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

(B) Adjustments of Plot.

The photographs of this strip appear to be free from excessive tilt and scale fluctuation with the exception of photo No. 115 as explained in the following paragraph.

Radial points intersected very well in general but some difficulty was encountered with the points on the north east shoulder of the island where there is considerable elevation. The radials on photo No. 118 would not check the intersections for this area. A new set of radial points was selected on No. 118 for this vicinity, one group along the beach at sea level and another group along the top of the bluff. These points were plotted from photo No. 118 and also from the remainder of the photos. The new points checked except for photo No. 115 on which the radials fell in error about the same as the original points on No. 118. After inspection it was decided that this was probably due to tilt in No. 115; a new center was selected by inspection (west of the marked center) and the radials drawn from this point gave satisfactory intersections.

Triangulation station, Gar 1916, was not recovered in the field by the inspection party. However, the remains of an old tripod was found and indications were that the signal had toppled over in an eastward direction; some of the guy wires still attached to the center pole also indicated the above. The station mark however was not recovered. Using an approximate position spotted on the photos by Lieut. (j.g.) R.C. Bolstad who was on the inspection party at the time, the radial line plot shows that the spotted position on the photos falls about 8 meters to far eastward (from the true location). Inasmuch as the position spotted on the photos was the position of the top of the signal or cross banner as it was found on the ground and the height of the signal as estimated from the remaining debris was about 7 meters, it therefore appears that the radial plot can not be in error by any appreciable amount even though difficulty was encountered as stated in the previous paragraph. The above radial line plot for triangulation station Gar 1916 was made independently after the completion of the smooth plot to serve as a check on this area.

No other difficulties were encountered in the adjustment of plot.

(C) Interpretation.

Only the usual graphic symbols were used as approved by the Board of Surveys and Maps (1932) and no great difficulty was experienced in interpreting the photographic detail.

* The location of detail at A Ruin, 1933
in the N.W. corner of the sheet was
made from the photographs without
sufficient field inspection and can
be considered as approximate only.
This area will be covered by
surveys of Lieut. W.D. Patterson in 1934.

B.G. Jones

The double broken line was used to indicate roads of lesser importance and private driveways. 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 shore line was traced from general inspection of the photographs and from the notes on the field prints. In general, the high water line was drawn about one third the distance from the water line to the line of vegetation. At the southern end of the island, and also at the northern end near triangulation station Bostwick the high water line was put in in accordance with the field inspection notes. The high water line in the vicinity of triangulation station Ruin was drawn in from a stereoscopic inspection of the photos and is only approximate. No field data was available for this vicinity. Due to the lack of photos covering this area at the time the initial field inspection was made, the inspection and spotting of triangulation station Ruin had to be completed at a later date by personnel inexperienced with such work. ?

No notes were made on the fieldprints in regard to what appears, under the stereoscope, to be a portion of the old fort walls or breakwater extending southward and appearing to be partly submerged. This is shown on the sheet by the broken dash (below water) and the small full line portion appearing to be above high water (labeled sunken fort walls). It is realized that this interpretation may be in error but is believed to approximate the actual conditions as near as this party can determine. However, as this falls well within the boundaries of the shoal area it may be of little value as far as navigation is concerned. * See opposite page.

All boundaries of shoal water areas on this sheet (shown by single broken line) were so indicated because of appearance on the photographs and they may be expected to have departure from actual conditions.

(D) Information from Other Sources.

The shore line of the southern tip of the island was traced in blue ink for supplementary control from a photostat of Topo Sheet Reg. No. 4425 (Lieut. C. K. Green). The plotting of stations and the projection of this topo sheet seems to be in considerable error. The latitude of stations Point Ban and Cartwright seems to check the corrected North American 1927 projection but the longitude corresponds more nearly to the original North American projection. The shore line was traced (in blue ink) by holding triangulation stations Point and Ban to the plotted position on the celluloid and disregarding the projection of the photostat except as an aid to orientation.

* Chart 1211, edition of 1930
shows this name as Tobacco Lot
whereas chart 298, edition of 1930
shows the name as Tobaccolot.

The hyphenated ^{word} ~~word~~ shown by the
Field Party has been changed and
is shown as Tobacco Lot. } Note: Decision
of Mr. Bacon that this name should be one word and
was accordingly changed on file copy. JOJ

* Rocks all the rocks
near the shore line of this island
are not shown and the sheet
is incomplete in that respect.
A planotable survey would
have been necessary to locate
all of these rocks. This area
will be covered by surveys of Capt.
W. D. Patterson in 1934.

B. G. Jones

Since topo sheet Reg. No. 1574a was executed in 1883 it served only to indicate large variations in the shore line and aided in spotting rocks by the use of the stereoscope.

With the exception of the five rocks shown off shore at Crow Head, which were spotted by Lieut. (J.G.) R.C. Bolstad while in the field party of Lieut. L.C. Wilder, only the rocks which could be picked up under the stereoscope are shown on this sheet. There are a number of rocks shown on Topo Sheet Reg. No. 1574a which could not be spotted under the stereoscope and consequently have not been shown on this sheet. X

(E) Conflicting Names.

There are no names on this sheet conflicting with names shown on the U. S. C. & G. S. Charts of this area.

Gardiner's Point was not shown on this sheet as *Carry Gardiners* there is no longer a point but simply a small sand *Point on sheet* island appearing on the photographs. *until such time*

There appears to be an inconsistency on the present U. S. C. & G. S. Charts in regard to the spelling of "Tobacco Lot". Some of the near-by residents believed the word to be two separate words but in other cases there was a conflict in opinions. It has been shown on this sheet as being hyphenated. * *as it is official-ly changed* *H. Bacon* *see opposite page*

COMPARISON WITH OTHER SURVEYS.

There are no junctions on this sheet as the sheet is complete in itself.

In comparing this sheet with the bromide print of Topo Sheet Reg. No. 1574a it was found that there are several variations in the shore line, the most notable of which are at the extreme north and extreme south ends of the island. At the north end of the island the long neck that extended out to triangulation station Ruin has disappeared leaving only a shoal area except at the triangulation station where a little of the neck remains and the point of the island has shifted considerably to the westward. At the south end of the island the point has shortened a little leaving a sand bar and shoal area in its place. There are other small variations in the shore line and also in the marsh lines but, since the date of the topo sheet is 1883, it is believed that these variations are the changes which have occurred on the island since that time.

Since the above mentioned topo sheet did not show any shoal areas, they were shown on this sheet as stated under COMPILATION (C) Interpretation. Where a marked contrast between deep and shoal water was not apparent on the photographs, the broken dashed line was ended. This gradual blending from the appearance of shoal to deep water is due to the gradual increase in depth of water. This sheet shows only the shoal areas apparent on the photographs.

LANDMARKS.

The list of chartable landmarks for this sheet includes two objects which are triangulation stations and have been

marked with the usual black triangle. These landmarks were submitted by Lieut. L. C. Wilder, November 4, 1933 and are as follows:

Old Dutch Type Windmill
Old Fort Ruins

For further information regarding these stations consult Lieut. L. C. Wilder's Reports.

~~objects~~ In addition to the above the enclosed list of Class (C) ~~landmarks~~ is submitted. These should not be charted except in this case where they are triangulation stations. However, they are of sufficient prominence at this scale (about 1:10,000) to be used to obtain hydrographic "fixes", and have been marked with the black triangle. ~~There are 1928 Triangulation stations.~~

All of the enclosed landmarks were spotted on the photographs by the field inspection party and used for control as stated under CONTROL (A) Sources.

Classification (C) Landmarks of minor prominence - these are recoverable objects which can be identified at close range (about 1 to 2 miles) and may be used by the Light House Service - these should not be charted except on exceptionally large scale charts or where the hydrography is to be done on the regular air-photo topographic sheet.

There are ² ~~several~~ houses near Great Pond which are located within the accuracy specified in the following chapter, RECOMMENDATIONS FOR FURTHER SURVEYS, and may be used to obtain hydrographic "fixes". ~~See also Descriptive Report for Sheet, Reg. No. 75059, REPORT ON REVIEW OF SHEET, ADDITIONAL NOTES.~~

(1) Landmarks.

The landmarks shown on this sheet and included in this report cover all landmarks (those previously submitted, those to be retained and any new landmarks) for the area covered by this sheet.

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

W. Barasch
W. Barasch

Draftsman

Assisted by

A. K. Spalding
A. K. Spalding
Accountant

LIST OF RECOVERABLE STATIONS

CLASS (C) LANDMARKS

Description	Position						Method of deter- mination	
	Latitude			Longitude				Datum
	°	'	D.M. Meters	°	'	D.P. Meters		
Shed, S. W. Gable	(C) 41	03	(346.7) 1504.1	72	05	(1043.0) 358.2	N.A. 1927	Triang. 1928
Lone rock about 4 ft. above H. W.	(C) 41	03	(1278.8) 572.0	72	05	(140.5) 1261.5	"	"

Note: For classification (shown in parenthesis after description) see ~~paragraph Landmarks in Descriptive Report for Air-photo Topographic Sheet, Reg. No. T5074.~~ *Page 6, this report.*

REVIEW OF PHOTO TOPOGRAPHIC SURVEY NO. T5074

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

Chief of Party Roswell C. Bolstad Compiled by (see enclosed data sheet)

Project New York Air-photo Compilation Instructions dated Nov. 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.
(see paragraph CONTROL in COMPILER'S REPORT)
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 COMPILER'S REPORT enclosed, paragraph, Adjustments of Plot under COMPILATION (B)).
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.) *none*
5. High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) *none*
6. The representation of low water lines, ~~reefs, coral reefs~~ sand bars, shoal areas and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) ~~see COMPILER'S REPORT, paragraph, COMPILATION (C) and (D).~~ *4th Par. Page 4 this report.*
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, COMPILATION, (D); COMPARISON WITH OTHER SURVEYS and LANDMARKS have been made on this sheet.
8. ~~The spans, draws and clearances of bridges are shown.~~ (Par. 16c.)
There are no bridges on this sheet.
9. The data furnished by the Field Inspection is adequate. (see COMPILER'S REPORT, paragraph COMPILATION, (C) Interpretation)

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.) None for this sheet.

13. A list of landmarks for charts was furnished on Form 567 and scaling of positions checked. (Par. 16d, e, 60.) (previously submitted by Lieut. L. C. Wilder, November 4, 1933)

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)

15. Junctions with contemporary surveys are adequate. None

16. Geographic names are shown on the sheet and are covered by the Descriptive Report. (Par. 64, 66k.) *See U.S.G.S. Gardner Island, NY Quadrangle for additional names to be placed on the sheet. H. Bacon*

17. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46.) *fair*

18. No additional surveying is recommended.

19. Remarks: Any additional notes and requirements affecting this area are referred to Lieut. L. C. Wilder's Reports covering the topography executed in 1933 under his charge. *The topography of Wilder 1933 does not cover this sheet.*

20. Examined and approved:

Roswell C. Bolstad
Roswell C. Bolstad
Chief of Party

21. Remarks after review in office: *To make a complete survey to include location of all offlying rocks a supplemental planimetric survey would have been necessary. Planimetric work for location of Hydrus signals will be done by hand. Biggones Patterson in 1934 in this area.*

Examined and approved:

K. T. Adams
Chief, Section of Field Records

L. O. Lobnitz
Chief, Division of Charts

F. S. Gordon
Chief, Section of Field Work

G. W. Hinde
Chief, Division of Hydrography and Topography.