

6013

U. S. COAST & GEODETIC SURVEY
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U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: New York.

DESCRIPTIVE REPORT

Topographic

~~Hydrographic~~

Sheet No. D 6013

LOCALITY

Great South Bay L.I.

Nicoll Point to Conklin Point

and Fire Island Beach.

1933

CHIEF OF PARTY

Raymond P. Eymann

U. S. GOVERNMENT PRINTING OFFICE: 1928

6013

NOTE TO ACCOMPANY TOPOGRAPHIC SHEET "D"
PROJECT HT-132, LONG ISLAND, NEW YORK
- - - - -

The 1:10,000 scale inset executed on this sheet, was done on that area of the sheet where signals on the Fire Islands in Great South Bay had been previously located on the 1:20,000 scale projection.

As a consequence, shoreline and signals on the 1:10,000 scale inset are superimposed among signals which should appear on the original 1:20,000 projection of the sheet. To avoid hopeless confusion among the topographic signals, those belonging to the 1:10,000 inset appear encircled with red according to standard practice, while those belonging to the original 1:20,000 projection of the sheet appear encircled with green.

The names of all the signals, on both the 1:10,000 and 1:20,000 projections, appear in red. *Green is used for names as well as circles noted in foregoing paragraph.*

J. C. Tison, Jr.
J. C. Tison, Jr.,

Approved:

Raymond P. Eymann
Raymond P. Eymann,
Chief of Party.

DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET "D" PROJECT HT 132
SEASON - 1933

AUTHORITY:

Instructions dated February 25, 1933.

"A".

Section of Sheet "D" executed by Topographic Party under
J.C. Tison Jr., Aid, U. S. C. & G. Survey.

(a) GENERAL DESCRIPTION OF COAST LINE:

1. From Nicoll Point northeastward to Connequot River entrance, Great South Bay.

The Shore is flat and marshy for a considerable distance back from the High Water Line, with a narrow sandbeach in most places between the edge of the marsh or High Water Line and the Low Water Line. In the Vicinity of Triangulation Station HECKSHER, considerable areas of marsh have been filled in and trees planted by the Long Island State Park Commission. A long, low bathhouse faces to the east on the Bay in this vicinity, and a wide sand artificial bathing beach has been constructed in front of the bathhouse. On Timber Point a private Golf Course has been constructed by filling on the marsh. That part of the point immediately to the south of the entrance to Connetquot River remains marshy and is characterized by dredged cuts and low marshy islands.

2. Connetquot River, Great South Bay.

Proceeding up the river from its entrance, the right hand shore is marshy and flat for some distance back from the shoreline. From signal "SALE" on up the river, filling has been done along the bank for a distance of several hundred feet inshore, and a road built which parallels the river up to a point near signal "OR". Scattered houses and trees characterize this filled area.

From signal "OR" on up the river to the Long Island Railroad Bridge, the right bank is heavily wooded down to the water's edge, with a fringe of marsh in places between the low water and high water line. Private homes are situated on the shore at regular intervals, and in the vicinity of signal "LION", a wooden bulkhead forms the highwater-line, along a considerable cleared area, forming the lawn around the old Vanderbilt Mansion.

2. Connetquot River, Great South Bay (Continued)

The left hand bank is low and marshy as far up the river as Signal "SLY". From this point upward to a point about midway between Signals "TIN" and "FA", the shore is heavily wooded and rises rapidly from the high-water-line to an elevation of about 20 feet some 200 feet inland. The river is lined with private homes in this area. Northward of this section to the creek which runs inland above Signal "FA", lies a considerable marsh area between the river and the tree line. From this marsh area up the river to the Long Island Railroad Bridge, the shoreline is heavily wooded and all of the land forms a private park; much of the bank consists of a wooden bulkhead in this area.

3. Fire Island - Inside Beach.

From Cherry Grove westward to Point of Woods, the shore is low and sandy, with a dense growth of small trees and bushes for some distance inland. The beach shows signs of considerable erosion, and dead bushes and stumps extend out into the bay in places. There are no houses along this shore besides the one forming Signal "SPEC", which is of no value as a landmark.

see D.I. T 5086
The flagpole at Cherry Grove Hotel can be seen for a considerable distance over the Bay, and should be charted as a landmark. It is about 40 feet high, painted white, and consists of a slender wooden spar. The black steel water-tank at Point of Woods, and the steel framed Coast Guard flag-tower, are also prominent landmarks.

From Point of Woods to the western limit of the sheet, no shore-line was located on the inside beach of Fire Island, but a considerable number of signals were located by intersection cuts. The shore is low and sandy throughout this section, and westward to Fire Island Lighthouse is thickly settled with summer colonists. There are no trees, and coarse grass covers the sand areas. From the Lighthouse westward, the island is unsettled with the exception of an occasional shack, and consists of low sand dunes covered with grass. The following objects on Fire Island are easily distinguishable from Great South Bay, and make good landmarks:

The windmill and water-tank combined, at Ocean Beach, painted slate gray and about 70 feet high, located by triangulation.

Signal "LAG" a large red brick chimney about 35 feet high in colony of Ocean Beach; located by topography.

Signal "AIR" a steel framed windmill on dunes in colony of Lonelyville, about 30 feet high; located by topography.

Signal "CAN", a dark wooden water tank in colony of Ocean Beach, about 30 feet high; located by topography.

3. Fire Island - Inside Beach. (Continued):-

Signal "PED", a dark-shingled tower in shape of the frustrum of a four-sided pyramid about 50 feet high; located by topography.

Signal "PUMP", a steel-framed windmill near colony of Saltaire, about 30 feet high and near a water-tank; located by topography.

Signal "NAT", a squat wooden water-tank about 30 feet high and near above windmill; located by topography.

"Saltaire Tank", a large black steel water-tank in colony of Saltaire about 70 feet high; located by triangulation.

Signal "LAR", a square red brick chimney in colony of Saltaire, about 25 feet high; located by topography.

Signal "OLD", a square wooden tower with peaked roof on front of large green frame house near the shore on Great South Bay. About 30 feet high and located by topography.

Signal "BIG", a white masonry tower, in shape of the frustrum of a four sided pyramid and located on the dunes near the outside beach. About 30 feet high; located by topography.

Signal "OUT", the lookout cupola atop the main building at old Fire Island Coast Guard Station, now abandoned. About 25 feet high, and located by topography.

"Fire Island Lighthouse", located by triangulation, is the most prominent object along this strip of beach. The light tower is circular and banded with alternate black and white stripes of considerable width.

Signal "RAD", a dark wooden water-tank mounted on a steel frame and about 30 feet high. Situated near Fire Island Lighthouse, and located by topography.

4. Fire Island - Outside Beach.

The Ocean Front on Fire Island covered by Sheet "D" consists of a gently sloping yellow sand beach, on an average about 100 meters wide, surmounted by a ridge of low sand dunes covered with coarse grass. There are no trees anywhere near this beach. The high water line along this section is not clearly defined, but the dune line in all cases is very clear and consists of a sand cliff or bluff several feet in height, rising vertically from the inshore edge of the beach. This dune line shows evidence of considerable washing by storms.

✓
DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET "D",
PROJECT HT-132, GREAT SOUTH BAY, LONG ISLAND, NEW YORK, (Continued).
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4. Fire Island - Outside Beach (Continued):-

The same notes pertaining to the inside beach of Fire Island apply also to the Ocean Beach as concerns summer settlements.

The landmarks visible from the sea and worthy of charting are as follows, and have been described in the preceding paragraph of this report:

"Cherry Grove Hotel Flagpole" ✓	"Point of Woods Water-tank" ✓
"Point of Woods Coast Guard" ✓	Signal "CAN"
Flag-tower.	Signal "PED"
Signal "AIR"	"Ocean Beach Windmill and Tank" ✓
"Saltaire Water-tank"	Signal "NAT"
Signal "PUMP"	Signal "BIG"
Signal "RAD"	and "Fire Island Light-House." ✓

5. East Fire Island - Great South Bay.

Only signals were located on this island. It is low and marshy except for a narrow sand beach along it's south side surmounted by a narrow strip of low dunes. There are no permanent buildings on the island and no trees.

6. West Fire Island - Great South Bay.

Only signals were located on the island. It is low and sandy, with every evidence that the sand has been pumped in over an original marsh area. There are a number of small summer houses on the island, and a large white flagpole, about 40 feet high, near its western end is the most prominent landmark in this area.

7. Sexton Island - Great South Bay.

Only signals were located on this island. It is low and sandy on the south side and marshy on the north. The entire island is covered with bushes and grass, and has no buildings on it of any value as landmarks.

(b) CONTROL, OF SURVEY:

Second and third order triangulation stations furnished the control for the execution of the entire sheet.

(c) ERRORS IN TRAVERSE RUN:

A 2-mile traverse run from triangulation station "NICHOLS" to the eastern extremity of Timber Point and thence across the mouth of the Connet-quot River to triangulation station "LASALLE TOWER", checked exactly in azimuth, but was 10 meters long in distance. The traverse was adjusted by standard methods to correct for this error.

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DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET "D"
PROJECT HT-132, GREAT SOUTH BAY, LONG ISLAND, NEW YORK (Continued)
- - - - -

(c) ERRORS IN TRAVERSE RUN (Continued):

A 3-mile traverse was run up the Connetquot River, from the extremity of Timber Point to Signal "SEN", along the west bank of the River. This traverse was run from a previous plane table set-up and was not closed at the head of the River, due to absence of triangulation control. Set-ups were frequent due to the character of the countryside, and it is possible that locations on the upper reaches of the River are in error several meters.

A 2-mile traverse run from triangulation station "POI", eastward along the shoreline of Fire Island Beach on Great South Bay was closed on triangulation station "FLAGPOLE CHERRY GROVE". The traverse was 2 meters out in azimuth and 11 meters long in distance. The error was corrected for, according to standard practice.

A 2-mile traverse run from triangulation station "POINT OF WOODS TANK" eastward along the ocean beach of Fire Island, and closed on triangulation station "FLAGPOLE - CHERRY GROVE", was in error 5 meters in distance and 4 meters in azimuth. The error was corrected for, according to standard practice.

(d) SURVEYING METHODS USED:

With the exception of the above mentioned traverses run, each plane table set-up was either checked by means of the three point problem, or made over some triangulation station. Most of the signal locations were made by three or more intersection cuts, and those located by rod readings were checked by at least one cut from a different table set-up.

(e) LIST OF NEW NAMES:

The point of land containing the Golf Course and situated to the south of the entrance to Connetquot River is known locally as "TIMBER POINT" and is so lettered on the Topographic Sheet in penciled letters. The name is well established locally.

(f) CHARACTER OF MARSHES:

All of the marsh areas shown on the sheet consist of grass meadows. In general the grass is short and the ground stable enough to walk upon. The marsh areas are not normally covered by high tides, but in case of extraordinarily high waters due to a storm, may be covered by a few inches of water; the grass would always show above the water in such cases.

Respectfully submitted:

James C. Tison, Jr.
James C. Tison, Jr.
Aid, U.S. C & G.S.

Forwarded:

Raymond P. Eymann
Raymond P. Eymann
Chief of Party.

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DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET "D",
PROJECT HT-132, GREAT SOUTH BAY, LONG ISLAND, NEW YORK
- - - - -

"B" Section of Sheet "D" executed by Wm. D. Ayers,
Topographer, U. S. C. & G. Survey.

From CONKLIN to NICOLL POINT

(a) GENERAL DESCRIPTION OF COAST LINE:

From "CONKLIN" to "BRIGHT", the shore-line is marshy.
From "BRIGHT" to "BER" the shore-line for the most part
has been developed, several sections being bulkheaded and
filled with sand fill. Watchogue, Pentaquit, Awixa, Crowoc,
and Champlin Creeks were done on a 10,000 scale.

(b) CONTROL OF SURVEY:

Triangulation control was used.

(c) ERRORS IN TRAVERSE RUN:

The traverse from "CONKLIN" to "BRIGHT" (all rodding)
checked within 3 meters for distance (short) and correct
for alignment (distance about 2-miles). From "BRIGHT" a
traverse was run to traverse station "BAY" on the Maple
Avenue dock at Bay Shore, where a two-point fix was taken
and the position checked and corrected. This position was
then plotted on the 10,000 sub-plan for the above mentioned
Creeks. Running from this point to the Presbyterian Church at
Islip (1-3/4 miles) the traverse checked exactly for both
alignment and distance. (Rods used entirely). The main part
of this traverse also checked into triangulation station BER
within a few meters for both alignment and distance. The
traverse from "BER" 1933 to "NICHOLS 1909" checked correct
for alignment but the distance was 22 meters short. Part of
this was due to the transferring of the traverse point east
of Champlin Creek to the 20,000 scale and also because of
poor visibility, account of fog, etc., which made it impossible
to get a good 3-point fix as a check. Part of the traverse
was re-run, and hydrographic station "GAR" was relocated.
Hydrographic station "BAG" is probably correct within a few
meters.

(d) SURVEYING METHODS USED:

Standard plane-table methods were used.

Respectfully submitted:

Forwarded:

Raymond P. Eymann
Raymond P. Eymann
Chief of Party

Wm. D. Ayers,
Topographer..

Object	and description.	Latitude	Meters	Longitude	Meters
DIN	Peak of old building; between CONKLIN & BRIGHT.	40° - 41'	1693 (157.8)	73° - 15'	1262 (146.6)
HOP	Flagpole; SW cor. Brightwaters canal; private home	40° - 42'	(1464.3) 386.5	73° - 15'	(1397.0) 11.5
FIR	Flagpole; On E side of Lawrence Creek.	40° - 42'	(327.0) 327 1523.8	73° - 15'	(1281.7) 126.7
RIP	Boathouse, ditto	40° - 42'	(413.8) 1437	73° - 15'	(1323.0) 85.5
COD	<i>? see review T5056 copy attached at back</i> E. Chimney, stone house Mouth of Lawrence Creek	40° - 42'	(892) 958.8	73° - 14'	(226.4) 1182
	Flag pole (Cross) Near end of dock.	40° - 42'	(485.7) 1365.1	73° - 14'	(731.5) 677.0
DOLL	Flagpole, e. side of small Is. near mo. of Watchogue Creek	40° - 42'	(255.8) 1595.0	73° - 14'	(724.4) 684.1
REE	Flagpole, private lawn west side Watchogue Creek.	40° - 42'	(156.4) 1694.4	73° - 14'	(553.5) 855.0
NAL	Flagpole, E side Watchogue crk. $\frac{1}{2}$ way up creek.	40° - 42'	(71.0) 1779.8	73° - 14'	(583.3) 825.0
UP	Flagpole, ditto near end of creek.	40° - 43'	(1547.4) 303.4	73° - 14'	(149.3) 1259.0
POL	Flagpole, east side of Penataquit creek, near point.	40° - 42'	(291.8) 1557.9	73° - 14'	(1094.0) 314.3
SEP	Flagpole, ditto, opp. dock at end of Maple Ave.	40° - 42'	(200.7) 1050.8 1650.8	73° - 14'	(1019.7) 388.6
SAG	Flagpole, ditto, near small island.	40° - 43'	(1527.5) 323.3	73° - 14'	(785.7) 622.5
BOG	Flagpole, west side of Penataquit creek, opp. "Sag".	40° - 43'	(1586.6) 264.0	73° - 14'	(716.6) 691.6
MAY	Flagpole, west side of Awixa Crk.	40° - 43'	(1555.8) 295	73° - 14'	(1388.2) 20
	Flag (Sta) NW cor. small island.	40° - 43'	(1603.5) 247.3	73° - 13'	(40) 1368.2
EX	Flagpole; east side Awixa Crk.	40° - 43'	(1283.2) 567.6	73° - 13'	(85) 1323.2
JOB	Flagpole,	40° - 43'	(1427.8) 423.0	73° - 15'	(649.5) 760.5

Object and description.	Latitude	Meters D.M.	Longitude	Meters D.P.
- OROWOG CREEK -				
Flagpole, cor. bulkhead, canal w. side of Orowoc Creek.	40° 43'	(1257.0) 593.8	73° 13'	(696.9) ✓ 711.3
FAG Flagpole, small, cor. bulkhead of canal.	40° 43'	(1011.1) 839.7	73° 13'	(749.5) ✓ 658.7
LEY Chimney, Bailey's Lmbr Co., large.	40° 43'	(815.5) 1035.3	73° 13'	(726.5) ✓ 681.6
BUR Red cloth sig. on Lghtpole, end dock, e. side Orowoc Cr.	40° 43'	(1353.6) 497.2	73° 13'	(798.2) ✓ 610.0
NOR Flagpole, priv. ho. edge cove, e. side Orowoc Crk.	40° 43'	(1535.0) 315.8	73° 13'	(845.4) 562.8
SO Flagpole, ditto	40° 43'	(1603.2) 247.6	73° 13'	(849.1) ✓ 559.1
GAP Flagpole, e. side Great Cove, N. of Bayberry Point.	40° 42'	(63) 1787.8	73° 13'	(813.1) ✓ 595.1
COL Chimney, center of creamcolored ho. near end of Bayberry Pt.	40° 42'	(777.5) 1073.3	73° 13'	(901.5) ✓ 507.
PAV Large pavilion on Islip bathing beach.	40° 42'	(1176.8) 674	73° 12'	(123) ✓ 1285.5
- CHAMPLIN CREEK -				
NUB Red banner on pt. on entrance to Champlin's Creek.	40° 42'	(600.4) 1250.4	73° 12'	(964.6) ✓ 443.8
LOFT Windmill on e. side Champlin Creek, about 20' high.	40° 42'	(328) 1522.8	73° 12'	(1142.8) 1142.8 265.7
BUN Red banner on pt west side Champlin Crk.	40° 42'	(166) 1684.8	73° 12'	(990.9) ✓ 417.6
TIN Flagpole, private, west side Champlin Crk.	40° 43'	(1674.8) 176	73° 12'	(1033.6) ✓ 374.7
OLD Oldflagpole near bulkhead west side Champlin Creek.	40° 43'	(1208.8) 642	73° 12'	(1027.6) ✓ 380.6
GOLD Flagpole near summerho. on Percy Williams Home	40° 43'	(1344.6) 506.2	73° 12'	(1168.0) ✓ 240.3
FAG Hydro. sig. on pt about 200 meters e. of East Islip Bathing Bch.	40° 42'	(1344.6) 506.2	73° 11'	(1168.0) ✓ 240.3

Object and description.	Latitude	Meters D.M.	Longitude	Meters D.P.
-- Cupola, w. bldg. old bathing beach, Heckscher State Park. 40°-42'		(2) 1848.8	73°-10'	(886.9) 521.4
KIN Cupola, e. bldg. ditto 40°-41'		(50.8) 1800	73°-10'	(1015) 393.5
GAR Hydro sig. east E'ly bldg old bathing bch H.S.Prk. 40°-41'		(118.8) 1732	73°-10'	(1102.0) 306.5
- Station NICHOLLS up CONNEQUOT RIVER -				
TUT Wh. ban. no. Heckscher Park bathhouse. 10' high. 40°-42'		708.8 (1142.0)	73°-08'	1125.4 (283.0)
BATH W. end bathho, facing beach 10' 40°-42'		1379.8 (471.0)	73°-08'	885.3 (523.1)
MOB E. end bathho. ditto 40°-42'		1421.8 (429.0)	73°-08'	825.0 (573.4)
YO wh. ban. marshy pt. east Timber Pt Golf Club; 8' 40°-43'		79.0 (1771.8)	73°-08'	164.0 (1244.3)
ME wh. ban. marshy pt. lft s. bank ent. Connequot River. 40°-43'		529.6 (1321.2)	73°-07'	1262.0 (146.2)
CAD wh. ban. east bank cr, running inland w. LaSalle Mil. Academy; 8' 40°-43'		1178.6 (672.2)	73°-07'	648.0 (760.0)
DEM wh. ban. on cor. wooden bulkhead, so. LaSalle Mil. Academy, 3' Tie-in for sheet 4 and 5 ("D" and "E") 40°-43'		1117.6 (734.0)	73°-07'	461.0 (947.0)
HALL S.E. Chim. main ho. of Pepperidge hall estate 50' 40°-43'		1497.6 353.2	73°-07'	1302.0 106.0
RIV wh. ban. no. shore Connequot riv. near mouth. 10' 40°-43'		1102.2 (748.6)	73°-08'	319.2 (1088.8)
SALE For Sale, front center yel. structure Casino, no. bank, Connequot River. 10' 40°-43'		1216.6 (634.2)	73°-08'	608.0 (800.0)
RED E. Chim. red brick ho. on High W. Line, north shore Connequot River. 25' 40°-43'		1099.2 (751.6)	73°-08'	767.5 (640.5)
BIG wh. ban. south bank Connequot Riv. 8' 40°-43'		644.0 1206.8	73°-08'	743.0 (665.0)
SLY wh. ban. on dock, south shore, Connequot River. 40°-43'		712.0 (1138.8)	73°-08'	1140.0 (268.0)

Object and description.	Latitude	Meters D.M.	Longitude	Meters D.P.
CLUB Wh.flagpole nr 1st ho., on so.bank of river. 25'	40°-43'	679.0 (1171.8)	73°-08'	1180.0 (228.0) ✓
BEN wh.ban.no.shore Connetquot Rivbet.2 bridges over canal 10'	40°-43'	1066.0 (784.8)	73°-08'	1275.0 (133.0) ✓
WAD S.E.cor.wh.stucco Restaurant no.shore Connetquot River.15'	40°-43'	1123.0 (727.8)	73°-08'	1374.0 (34.0) ✓
WAX Center of sq.grn.summerho. conical rf.so.shore river.15'	40°-43'	775.0 (1075.8)	73°-09'	146.0 (1262.0) ✓
GUS Sm.summer,ho. 10'	40°-43'	863.0 (987.8)	73°-09'	354.0 (1054.0) ✓
TIN wh.cloth on rf small bath ho.so.bank river,12'	40°-43'	1021.2 (829.6)	73°-09'	604.0 (804.0) ✓
CHY Chy on 1st ho.around band in river on east shore.30'	40°-43'	1353.8 (497.0)	73°-09'	511.0 (897.0) ✓
YEL n.w.cor.yelo ho.grn trim, east bank river. 25'	40°-43'	1695.8 (155.0)	73°-09'	516.0 (892.0) ✓
FA wh.ban.marsh pt w.shore river. 8'	40°-43'	1668.8 (182.0)	73°-09'	793.0 (615.0) ✓
OR Low tower,yelo.stucco ho, e.riv.bank, 25'	40°-44'	18.0 (1832.8)	73°-09'	584.6 (823.4) ✓
RAY s.frnt cor.small boatho. on Cutting Est. 10'	40°-44'	181.0 (1669.8)	73°-09'	900.0 (508.0) ✓
NET n.e.porch cor.lrg ho.on pt east river bank. 15'	40°-44'	209.0 (1641.8)	73°-09'	686.0 (722.0) ✓
LAG flgpole on e.riverbank, nr canal ent.to old Vanderbilt estate, 15'	40°-44'	442.0 (1408.8)	73°-09'	592.8 (815.0) ✓
DO wh.ban.w.riv.bank 10'	40°-44'	442.0 (1408.8)	73°-09'	851.0 (556.8) ✓
BUN wh.ban.w.riv.bank,10'	40°-44'	785.0 (1065.8)	73°-09'	625.8 (782.0) ✓
ED End of small wh.dock on east river bank.	40°-44'	706.6 (1144.2)	73°-09'	480.2 (927.6) ✓
RID wh.ban.on rustic bridge	40°-44'	1027.8 (823.0)	73°-09'	535.6 (872.2) ✓

Object and description	Latitude	Meters D.M.	Longitude	Meters D.P.
RAT White banner on west river bank. 10' high	40°-44'	975.0 (875.8)	73°-09'	354.4 (1053.4)
VAN NE cor boathouse on e. river bank.	40°-44'	949.8 (9010)	73°-09'	148.0 (1259.8)
LION N marb. LION on steps old VANDERBILT mansion 6'	40°-44'	1045.2 (805.6)	73°-08'	1363.8 (44.0)
POST N gatepost, wh. conc. end of str. Realest. devlpmt. 8'	40°-44'	1152.2 (698.6)	73°-08'	1256.6 (151.0)
SEN Cen. of small porch on so. side ho. on island.	40°-44'	1277.0 (573.8)	73°-08'	1260.6 (147.0)
- West Fire Island -				
GIN ban. sig. so. shore is. 6'	40°-39'	523.7 (1327.1)	73°-12'	97.0 (1312.5)
HAS flagpole near s. tip (20' of island.	40°-39'	380.6 (1470.2)	73°-11'	1351.0 (58.5)
PUNK n.e. cor. ^{at} stucco ho. (yel) 15'	40°-39'	414.6 (1436.2)	73°-11'	1112.5 (297.0)
MAR ban. sig. 6'	40°-39'	477.0 (1373.8)	73°-11'	967.5 (442.0)
VEX so. gable sm. grn. ho. 15'	40°-39'	619.0 (1231.8)	73°-11'	902.0 (507.5)
STEW chy, small grn ho. 20'	40°-39'	683.0 (1167.8)	73°-11'	994.0 (415.5)
VIM ban. sig. 6'	40°-39'	784.0 (1066.8)	73°-11'	1134.5 (275.0)
GRAY chy grey ho. 20'	40°-39'	828.0 (1022.8)	73°-11'	1319.5 (90.0)
PROM f.p. in center of cupola of small ho. 20'	40°-39'	1083.8 (767.0)	73°-12'	329.5 (1080.0)
- EAST FIRE ISLAND -				
NIG ban. sig. 8'	40°-39'	965.4 (885.4)	73°-11'	707.5 (702.0)
RAM ban. sig 6'	40°-39'	958.8 (892.0)	73°-11'	241.5 (1168.0)
SID ba. sig. 6'	40°-39'	999.4 (851.4)	73°-10'	1356.5 (53.0)

Object and description.		Latitude	Meters D.M.	Longitude	Meters D.P.
LIS	Banner signal 6' high	40° 39'	1028.0 (822.8)	73°-10'	1065.5 (344.0) ✓
DAN	ban.on sml.Island E of E. Fire Isl. 6'	40°-39'	840.0 (1010.8)	73°-10'	653.5 (756.0)
- SEXTON ISLAND -					
HIT	Ban.sig. 8'	40°-39'	23.0 (1827.8)	73°-14'	133.0 (1276.7)
FISH	smokestack on fisherman shack n'ly of 2 shacks, w side Isl. 12 foot high.	40°-39'	100.0 (1750.8)	73°-14'	68.0 (1341.7) ✓
PINK	ban.sig. small marsh isl. n.w. sexton isl. 10'	40°-39'	497.4 (1353.4)	73°-13'	1201.7 (208.0) ✓
NAB	bansig on n shore Sexton isl. 5'	40°-39'	132.0 (1718.8)	73°-13'	960.7 (449.0)
SOP	bansig small isl. N.E Sexton Isl. 7'	40°-39'	336.8 (1514.0)	73°-13'	645.7 (764.0)
TOOL	small wooden shack 10'	40°-38'	1777.8 (73.0)	73°-13'	705.3 (704.4)
TREE	Single Cedar Tree on S.E. cor Island.	40°-38'	1674.8 (176.0)	73°-13'	797.0 (612.7)
RUIN	Old brick chy burned ho. 15'	40°-38'	1667.8 (183.0)	73°-13'	827.7 (582.0) ✓
TAG	N.gable small rf cottage so. side Island. 15'	40°-38'	1739.8 (111.0)	73°-13'	1064.7 (345.0)
- OUTSIDE BEACH -					
OUT	Lookout Tower, Old Fire Island C.G.Sta. (now abnded)	40°-37'	1645.7 (205.0)	73°-13'	558.4 (851.6)
SAW	Steel frame, f.p.tower ditto	40°-38'	1638.7 (212.0)	73°-13'	574.2 (835.8) ✓
RAD	med.sized wooden watertank, brn color, steel support, Fire Isl. Naval Rad.Sta.	40°-37'	1694.3 (156.4)	73°-12'	1355.8 (54.2) ✓
BIG	wh.masonry tower, shaped like frustrum of four-sided pyramid on ocean beach F.I.State Pk Res.	40°-37'	1548.0 (302.7)	73°-12'	1063.8 (346.2)

Object and description.	Latitude	Meters D.M.	Longitude	Meters D.P.
OLD Sq. wooden Tower with Peaked rf. front large grn. frame ho. on bayside Fire Island. 1st large ho. E of F.I. Light Ho. 40°-38'		324.7 (1526.0)	73°-12'	611.0 (799.0)
LAR Lrge brick chy, western edge SALTAIRE Beach Colony 40°-38'		345.1 (1505.6)	73°-12'	473.2 (936.8)
EAGLE Tall wooden f.p. brasseagle on top Bayshore at SALTAIRE 40°-38'		662.9 (1188.9)	73°-12'	108.4 (1301.4)
HIGH Tall f.p. on beach on the Bayshore at SALTAIRE 40°-38'		785.4 (1065.4)	73°-11'	1348.5 (61.3)
EAST f.p. on e. cupola, club ho. SALTAIRE - on Bayshore. 40°-38'		816.3 (1034.5)	73°-11'	1281.8 (128.0)
SHIN East gable large shingle Ho Bayshore at SALTAIRE 40°-38'		941.5 (909.3)	73°-11'	1111.4 (298.4)
BOAT f.p. n. gable lng low ho on bch e clampond on spit framing south shore for same 40°-38'		991.3 (859.5)	73°-11'	1040.2 (369.6)
NAT low water tank, xx wxxx ocean bch, w side SALTAIRE Colony 40°-38'		93.6 (1757.2)	73°-12'	349.8 (1060.0)
PUMP Windmill, near above tank 40°-38'		91.0 (1759.8)	73°-12'	337.0 (1073.0)
BLUE Chy, small blu ho. 1st shingle ho. along bayshore e frm SALT AIRE watertank. 40°-38'		627.3 (1223.5)	73°-11'	398.2 (1011.8)
LONE N. gable grn ho. nr bayshore west edge of Lonelyville 40°-38'		727.5 (1123.3)	73°-11'	343.8 (1066.0)
WAVE f.p. on bch Bayshore at Lonelyville. 40°-38'		806.5 (1044.3)	73°-11'	225.0 (1184.8)
VANE slndr f.p. weathervane on top, on bch at bayshore at lonelyville. 40°-38'		785.0 (1085.8)	73°-11'	36.8 (1373.0)
PED drk shingle, 50' tower built in shape of frustrum of 4-sided pyramid edge of ocean bch at Lonelyville 40°-38'		646.5 (1204.3)	73°-10'	950.2 (459.6)
AIR Windmill near ocean beach at Lonelyville. 40°-38'		703.2 (1147.6)	73°-10'	868.7 (541.1)

Object and description.	Latitude	Meters D.M.	Longitude	Meters D.P.
CRAP Tall chy so.gable w'ly shingle ho.of 4 identical ho.s on bayshore E of Lonelyville.	40°-38'	946.8 (904.0)	73°-10'	872.0 (537.8)
BARE Sm.chy on lng lo grn ho on Ocean Bch bet.Lonelyville & Ocean Beach;Ho is on dunes in sparsely settled area.	40°-38'	831.3 (1019.5)	73°-10'	342.4 (1067.4)
WIN Chy w.gable ho with windows in rf.on Bayshore w side town of Ocean Beach.	40°-38'	1249.8 (601.0)	73°-09'	1337.2 (72.6)
AZZ E.Chy on wh.ho.on ocean beach w.side town Ocean Bch.ho is on dune.	40°-38'	973.0 (877.8)	73°-09'	1192.0 (217.8)
RAKE fp.on beach,on bay shore at town Ocean Beach	40°-38'	1642.8 (208.0)	73°-09'	22 919.0 (490.8)
BUNK fp.with brass ball on top. on bay shore at town Ocean Beach.	40°-38'	1716.0 (134.8)	73°-09'	771.8 (638.0)
SPIRE Sm.Church spire on drk.shingle church center of town Ocean Beach	40°-38'	1434.8 (416.0)	73°-09'	721.4 (688.4)
CAN Lo wooden water tank nr Ocean Beach at town of Ocean Beach	40°-38'	1197.0 (653.8)	73°-09'	550.4 (859.4)
LAG Lo brick chy on bayshore nr eastern edge of town of Ocean Beach	40°-38'	1719.6 (131.2)	73°-09'	442.1 (967.7)
EVE Sm.fp.on ocean beach on edge of dune, just W Pt of Woods CGSta	40°-38'	1588.3 (262.5)	73°-08'	377.2 (1032.5)
TRI fp/wh.wooden tripod nr bayshore bulkhead on bayshore at Pt of Woods,e of Pt of Woods dock	40°-39'	257.4 (1593.4)	73°-08'	191.0 (1218.8)
CUT sm.fp.on ocean beach,e edge of town of Ptofloods, on edge of dune	40°-39'	30.0 (1821.8)	73°-07'	849.2 (560.5)
DUMP wh.ban.nr garbage dump on bayshore e of PtofWoods	6' 40°-39'	491.5 (1359.3)	73°-07'	712.8 (696.8)
SPEC N.gable tall drk ho.on bayshore E of Pt.ofWoods.	40°-39'	597.6 (1253.2)	73°-07'	356.2 (1053.4)
BET cloth ban.marshy spot,6'	40°-39'	738.2 (1112.6)	73°-07'	05.4 (1404.2)

Object and description		Latitude	Meters D.M.	Longitude	Meters D.P.
SAM	Cloth banner, marshy area 6'	40°-39'	761.6 (1089.2)	73°-06'	942.0 (467.6)
TOM	ditto 6'	40°-39'	774.8 (1076.0)	73°-06'	474.5 (952.6) 935.0
DICK	ditto 6'	¹ / ₂ 40°-39'	895.4 (955.4)	73°-06'	-- --
JACK	ditto 6'	40°-39'	1035.8 (815.0)	73°-05'	994.5 (415.0)
RYE	ditto 6'	40°-39'	<u>1323.8</u> (527.0)	73°-05'	241.5 (1168.0)

DESCRIPTIVE REPORT
OF
TRIANGULATION THROUGH GREAT SOUTH BAY
SOUTH SHORE, LONG ISLAND, N.Y.
SEASON - 1933
RAYMOND P. EYMAN - CHIEF OF PARTY

Field work on this project (H.T.-132) was commenced in March, 1933, in accordance with Instructions dated February 25, 1933. The intent of this work was to extend a network of Second Order Triangulation through this area to establish control for revision surveys and air photographs and to coordinate all recoverable stations into one network which, by being tied into the First Order Scheme of 1932, would result in all this area being referred directly to the North American datum of 1927.

The First Order Scheme of 1932 consisted of a coastal net which passed through Long Island Sound and had several spur branches that extended across the Island to points on or near the south shore; these latter points were, with one exception, old stations established originally in the earlier surveys.

In general, the previous triangulation throughout this area consisted of about five sections, not all of which were directly connected, as follows: 1833-37 and somewhat later throughout Moriches Bay; 1909 (E.B. Latham) from vicinity of Freeport eastward to Nicoll Point in Great South Bay; 1914 (H.C. Denson) from Nicoll Point eastward to Bellport Bay; 1926-27 (C.D. Meaney) from vicinity of Freeport westward to Jamaica Bay; and 1930 (W.H. Halsey) miscellaneous scattered points in Great South Bay, Bellport Bay, through Narrows, and Moriches Bay.

The First Order work of 1932, where it tied in previous work in this area, revealed the difference in data to be about -12½ meters for latitude and +5½ meters for longitude (both corrections to be applied with the given signs to the old geographic positions to bring them to their approximate position on the 1927 North American Datum.).

DESCRIPTIVE REPORT of TRIANGULATION through GREAT SOUTH BAY,
SOUTH SHORE, LONG ISLAND, NEW YORK, SEASON 1953, - Continued.

The base for the present scheme of triangulation was taken from two of the old stations (Heckscher 1932 and Flat 1914) near the middle of the area, the positions of both of which were obtained through the 1932 First Order work on North American Datum, 1927; the scheme was extended both directions from this base - eastward to a tie-in on Terry 1835 - Osborn 1833 (redetermined in 1932, First Order), which also formed a side of a common quadrilateral with Ratti's 1933 work; and westward to a tie-in with Meaney's 1926-27 work in the vicinity of Freepert on Team 1909 - Lights Club 1926 - Lock₂ 1926, positions as yet unadjusted to North American Datum, 1927. The various lines checked well in length and azimuth, but the positions showed some discrepancy indicating a somewhat enlarged series of figures in the present work as compared with the former.

TABLE OF LENGTH AND AZIMUTH COMPARISONS

Line	1953		1926 - 1932		Diff. 1953 - Former	
	Length	Azimuth	Length	Azimuth	Length	Azimuth
Terry - Osborn	5781.0	236° 29' 57.6"	5781.1	236° 29' 52.7"	-0.1 meter	+4.9"
Team - Lock ₂	6835.0	31° 05' 09.2"	6834.7	31° 05' 03.2"	+0.3	+6.0"
Team - Lights Club	4431.9	75° 03' 11.6"	4431.5	75° 03' 07.6"	+0.4	+4.0"
Lights Club Lock ₂	4770.2	350° 53' 11.0	4770.0	350° 53' 11.7"	+0.2	-0.7"

DESCRIPTIVE REPORT of TRIANGULATION through GREAT SOUTH BAY,
SOUTH SHORE, LONG ISLAND, NEW YORK, SEASON 1933. - Continued.

TABLE OF POSITION COMPARISONS

Station.	1933		1926 --- 1932		Diff. 1933 - Former.			
	Lat. & Long.		Lat. & Long.		Lat.		Long.	
	in Sec.	Meters	in Sec.	Meters	in Sec.	Meters	in Sec.	Meters
Osborn	48.472	1495.2	48.479	1495.4	-.007	-0.2		
	38.485	901.1	38.541	902.4			-.055	-1.3
Terry	05.085	156.9	05.086	156.9	.000	0.0		
	04.574	102.5	04.431	103.8			-.057	-1.3
Fire Island Light Ho.	56.416	1740.2	56.431	1740.7	-.015	-0.5		
	08.820	200.2	08.469	199.0			+.051	+1.2
Nichols	54.880	1753.9	57.268	1766.8	-.408	-12.6		
	54.180	1272.0	54.021	1268.3			+.159	+3.7
Team	37.028	1142.2	37.449	1155.2	-.421	-13.0		
	24.159	568.1	23.910	561.8			+.229	+5.3
Lights Club	29.950	1848.6	00.382	10.9	-.422	-13.1		
	26.345	619.1	28.100	613.3			+.245	+5.8
Look ₂	27.234	840.0	27.668	855.2	-.428	-13.2		
	54.214	1274.8	53.972	1269.2			+.242	+5.6

In the above table the positions of Osborn, Terry and Fire Island Light-house are directly comparable as in both cases the North American 1927 datum is used; and the differences indicate that the 1933 positions are from 0.2 to 0.5 meters too far south and that the eastern stations (Osborn and Terry) are 1.3 meters too far east and the western station (Fire Island Light-house) is 1.2 meters too far west. The comparison for Nichols, after allowing for the corrections of $-12\frac{1}{2}$ and $+3\frac{1}{2}$ meters for latitude and longitude, indicates a close check. The comparisons with Team, Lights Club, and Look₂ (also after allowing for the same corrections of $-12\frac{1}{2}$ and $+3\frac{1}{2}$ meters) indicate a difference in latitude of about $\frac{1}{2}$ meter too far south and 2 to 2 $\frac{1}{2}$ meters too far west - this is what was meant in stating above that this work appears to have slightly larger side lengths than the former and this discrepancy shows up more in an east and west direction (along axis of scheme) than in the latitude comparisons, and also showing that this length discrepancy is fairly uniform throughout, increasing to about 1 meter approximately 15 miles eastward of the base and to about 2 meters approximately 30 miles westward of the base. This length and position discrepancy was soon noticed and it was thought that an extra tie-in on Hecksher - Fire Island Light-house might prove valuable for adjustment purposes and additional angles were measured at these stations for that purpose only.

DESCRIPTIVE REPORT of TRIANGULATION through GREAT SOUTH BAY,
SOUTH SHORE, LONG ISLAND, NEW YORK, SEASON 1933 - Continued.

With this additional information a further length comparison is made available on the line Nichols - Fire Island Light-house which is 9523.5 meters as computed through the 1933 net vs. 9522.8 meters from the Fire Island Light-house - Heckscher base direct - a discrepancy of 0.7 meter. The distance Heckscher - Nichols was also taped direct with a 300 foot steel tape giving a check measurement of 513.58 meters vs. 513.59 as measured in 1932 and vs. 513.8 as computed through from Fire Island Light-house - Heckscher.

As mentioned before the 1933 net took off the Heckscher Flat line as a base through a single quad to the line Pat - Sad which in turn was then used as the base for extending the net both eastward through five figures and westward through ten figures. The observing was done with one direction instrument (Hyde) and four 7" repeaters.

In order to obtain second order accuracy it was decided to take from 12 to 16 directions with the direction instrument and two sets of six D's and R's with the repeaters. At the beginning of the season extremely poor weather conditions were encountered which greatly interfered with observing and results in many cases were none too good necessitating additional sets. The numerous sets taken frequently brought a number of sun angles into the record which complicated the local station adjustment. In order to obtain the best values in these cases a least square station adjustment was resorted to; these computations accompany the list of directions and other records. Least square station adjustments were made at stations:

Sad Cree Heckscher, Pat, Blue Point, Nichols, Island₂, North Range, Fire Island Light-house, Amity, Jones₂, Life, Fort₂ and Park.

Observations were generally made on signal poles or small targets with a small amount on helios and lights. Night observing on lights was done over particularly difficult lines or where trouble had been encountered with poor closures. In taking means of values for angles, those obtained on lights were given twice the weight of others on account of their more consistent agreement. Signals consisted generally of scaffold and tripod of moderate height or cupolas and church towers; a few along the outer beach consisted of the Coast Guard Flag Towers within which were erected instrument tripods. (The flag towers were skeleton steel pyramids surmounted by the flagstaff).

Supplemental stations tied-in consisted of recovered monuments established by Halsey in 1930, several town and property monuments, and new stations for survey control. Stations located by intersection were generally prominent objects - tanks, spires, chimneys, flagpoles, etc., many of which had been out in by previous triangulation.

DESCRIPTIVE REPORT of TRIANGULATION through GREAT SOUTH BAY,
SOUTH SHORE, LONG ISLAND, NEW YORK, SEASON 1933 - Continued.

In the vicinity of Freeport, to the northward, and westward, a few objects were cut in by intersection from stations: Lights Club, Team, Nassau, and Woodmere High School. Inasmuch as the latter two stations were not directly connected to this year's network, all computations were made on data from the 1926 Survey in this region and therefore the resulting Geographic Positions of the following stations: Apex, Freeport Bank Bldg; Spire, Wh. Baldwin; Spire, Hempstead Methodist Church; Flagpole, Hempstead Telephone Bldg; Sign, Lido; Tower, single, Lido; Tower, E. twin, Lido; Tower, W. twin, Lido; Tank, E. Rockville Center; Tank, Rockville Center are subject to a correction of approximately -13.0 meters for latitude and +5.8 meters for longitude to have them conform to the positions of other objects determined in 1933; the final adjustment of the entire net, will of course take care of all of these differences.

The net is about 46 miles long with an average length of quad of about 3.5 miles and average width of 3.0 miles. The longest line observed was 11 miles. There are 37 main scheme stations, 8 of which are starting and tie-in points with 57 closed triangles with an average closure of 2.6"; 26 supplemental stations with 50 closed triangles with an average closure of 4.4"; and 90 points determined by intersections; 10 of which latter points are from 1926 unadjusted data as mentioned above.

Accompanying this report are a progress sketch, table of contents of various angle record books, and index to stations. The least square adjustment sheets accompany the list of directions.

Respectfully submitted,

Raymond P. Eymen,
Chief of Party.

*Original filed
with triangulation
data in Mr. Sutcliffe's
office*

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 6013

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. "D"

REGISTER NO. 6013

State New York

General locality Great South Bay, Long Island.

Locality Nicoll Point to Conklin Point and Fire Island Beach.

Scale 1:20,000 Date of survey May-June, 1933

Vessel Shore Party #2, Project HT-132

Chief of party Raymond P. Eymann

Surveyed by J.C. Tison Jr., and W.D. Ayers

Inked by J.C. Tison Jr and W.D. Ayers

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated February 25, 1933

Remarks: For location of hydrographic signals and control points for air photos.

...

REVIEW OF TOPOGRAPHIC SURVEY No. 6013

Title (Par. 56) *Great South Bay, L.I., Nicoll Pt to Conklin Pt and Fire Island Beach, New York*
 Chief of Party *R.P. Eymen* Surveyed by *J.C. Tison Jr* Inked by *J.C.T. and M.D.A.*
 Ship *Shore party* Instructions dated *Feb. 25, 1933* Surveyed in *May June 1933*

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓
2. The character and scope of the survey satisfy the instructions. ✓
3. The control and closures of traverses were adequate. (Par. 12, 29.)
No check on traverse of Connetquot River, other traverses are adjusted.
4. The amount of vertical control that the Manual specifies for contours-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.)
None
5. The delineation of -contours-formlines- is satisfactory. (Par. 49, 50.) *None*
6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) *None submitted*
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
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. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.) ✓
10. The span, draw and clearance of bridges are shown. (Par. 16c.)
No bridges shown on this sheet.
11. ~~Locations and elevations of summits are given. (Par. 19, 51.)~~
12. ~~The tree line was shown on mountains. (Par. 16g.)~~

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.

13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) ✓
14. The descriptive report also contains additional information required in ~~aero-topography~~ relative to type of photographs, method of compilation and type of ground control.
15. ^{No} descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of IMs and DP's, 68.) *List of planetable positions are attached to Desc. Rep.*
16. ^{general} A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) *Filed as Letter 707/1933. Land marks are described in the body of this report and listed as triangulation & planetable positions.*
17. The magnetic meridian was shown and declination was checked. ✓ (Par. 17, 52.)
18. The geographic datum of the sheet is *North American 1927* and the reference station is correctly noted. (Par. 34.) ✓ *name of datum was added in the office*
19. Junctions with contemporary surveys are adequate. ✓
20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.) ✓
21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) ✓
22. No additional surveying is recommended. ✓
23. The Chief of Party inspected and approved the sheet and the descriptive report, ~~after review by~~

24. Remarks:

*See the attached following
see last page of this report.*

Reviewed in office by *R. J. Christman, Feb. 27, 1934*

Examined and approved:

L. O. Lobat.
Chief, Section of Field Records

J. B. Borden,
Chief, Section of Field Work

W. H. Papenbark
Chief, Division of Charts

G. T. de
Chief, Division of Hyd. and Top.

The detailed description of shoreline here given should be helpful for air photo work. It could be even more specific. E. C. B.

POST-OFFICE ADDRESS: Chincoteague, Va.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

file in R 6013

40

1934 MAR 11 11:55

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

March 13, 1934.

To: The Director,
U. S. Coast and Geodetic Survey,
Washington, D. C.

From: Ensign James C. Tison, Jr.
U. S. Coast and Geodetic Survey,
Chincoteague, Va.

Subject: Point of Woods Dock, L. I.; Topo. Sheet #6013 (Field letter D).

Reference: No. 80-DRM dated March 1, 1934.

The location and dimensions of the Point of Woods dock as shown on Topo. Sheet #6013, field letter D, are believed to be unquestionably accurate. This dock was located in the field as follows:

A plane table set-up was made on the shore to the westward of triangulation station "Poi 1933" and position obtained by solution of the three point problem. This position was checked by distance and direction to station "Poi 1933". Rod readings were taken at the inshore end of the dock, at the four corners of the outer end of the dock, and at the junction of the narrow part of the dock leading from shore and the outer end. The dock outline as obtained agreed in every detail with its appearance to the eye. Before leaving a set-up with the plane table, this topographer has always made it a point to check the orientation of the sheet and in this way avoid possible errors due to a shifting of orientation.

Field inspection of photographs in the vicinity of Pt. of Woods was made simultaneously with the execution of topography on Sheet #6013, and it seems doubtful that the inspector should attempt to locate the dock in question when he knew of its location by topography. Another dock is located at Pt. of Woods just to the East of the one shown on Sheet 6013, and it is remembered that this second dock is somewhat shorter in length and also different in shape. The easterly dock is bulkheaded and forms a harbor of sorts for small boats. If this easterly dock was built after the photographs were taken, it is suggested that it may have been the one located by the field inspection party.

Copy to:
Lieut. Comdr. R. P. Eyman.

James C. Tison, Jr.
James C. Tison, Jr.
Ensign, C. & G. Survey.

80-DEM

March 1, 1934.

To: Lieut. Comdr. R. P. Hyman,
U. S. Coast and Geodetic Survey,
Ship MATOMA,
Beaufort, South Carolina.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Review of topographic sheets, vicinity of Long Island.

Topographic sheets Nos. 6007 to 6814 inclusive have been reviewed in this office. It is considered that the work represented on these sheets was done in an excellent manner. There are a few points which it is desired to call to your attention.

On these sheets it has been noted that the name of the datum used was omitted; that Form 524 was not submitted, and that the list of landmarks submitted on Form 567 for the season does not include many objects which are noted in the various descriptive reports as prominent landmarks.

It is realized that there are numerous triangulation stations within the area covered by these sheets, but there is need for supplemental stations such as those determined by topographic methods, for future revision use. Form 524 is provided in order that there may be a file of recoverable stations located by topographic methods. In each of the descriptive reports there are listed pages of plane table positions. It is possible that you intended these positions to take the place of Form 524, but it should be noted that the descriptions are now required on Form 524 and listing of plane table positions has been canceled from the Topographic Manual.

The list of landmarks submitted on Form 567 under date of November 9 appear to be the minimum for this area. If a selection was made of only the most prominent from seaward, that information might well have been included on that form. It would appear from

an office review of the statements made in the descriptive reports that there are many additional objects which could be placed on the charts.

T. 6007 -- Field letter E

This sheet was surveyed by A. M. Weber.

It is noted that a one hundred meter length of ordinary insulated lamp cord was used in a traverse between two triangulation stations $4\frac{1}{2}$ miles apart. The closing error of 65 meters exceeds that permitted by the Topographic Manual and the traverse should have been rerun for the location of the topographic signals.

On this traverse signal "Hi" differs from that noted on the air photo compilation sheet but there is a question whether the spotting on the photographs was definite enough to cause a change from the topographic location. About half way on this traverse the shoreline of a prominent point on the bay side differs by 20 meters in longitude from that shown on the air photo sheet. This is probably due to the adjustment in the traverse.

T. 6008 -- Field letter G

Surveyed by William D. Ayers. -- On this sheet there are two bridges. The span and clearance of these bridges were not noted. One is marked with a draw and the other is unmarked.

T. 6009 -- Field letter H

Surveyed by A. M. Weber. -- The descriptive report on this sheet is excellent.

T. 6010 -- Field letter A

Surveyed by Ensign James C. Tison, Jr. -- This is a control sheet only and shows no topography.

T. 6011 -- Field letter B

Surveyed by William D. Ayers. -- The spelling of some geographic names was corrected in the office.

The words "sand fill" noted on this sheet in the vicinity of the road to triangulation station "Life" are not explained in the descriptive report and the area covered by the fill is not definite on the sheet.

From a preliminary comparison with the aerial photographs a discrepancy was indicated in details on the shoreline near topographic signal "Wax", in that two small creeks are shown on the topographic sheet where the photograph shows one.

T. 6012 -- Field letter C

Surveyed by William D. Ayers. No comments.

T. 6013 -- Field letter D

Surveyed by Ensign James C. Tison, Jr. and William D. Ayers. An excellent descriptive report prepared by Ensign Tison.

Information from the topographer would be desirable in regard to the method of determining and the probable accuracy of the length of the wharf at Point of Woods. The delineation of this dock on the air photo compilation sheet was 60 meters short in length. It is understood that measurements were made by a field inspection party and furnished the compiler, as the dock was not constructed until after the photographs had been taken. Pending further investigation the topographic sheet will be assumed to be correct.

T. 6014 -- Field letter

Surveyed by A. M. Weber and William H. Lea. It is noted on this sheet that the magnetic meridian drawn through triangulation station "Bulkhead" near the mouth of Fords River shows a variation of about $6\frac{1}{2}^{\circ}$ West. The chart shows $11\frac{1}{2}^{\circ}$ in this vicinity. The other topographic sheets of the past season vary from $10^{\circ}50'$ to $12^{\circ}08'$. This large discrepancy from the average has been called to the attention of the Division of Terrestrial Magnetism and Seismology for further investigation.

Copies to

Mr. William D. Ayers
Mr. William H. Lea
Ensign James C. Tison, Jr.
Mr. A. M. Weber

Acting Director.

80-LE

March 17, 1934.

To: Ensign James C. Tison, Jr.,
U. S. Coast and Geodetic Survey,
Chincoteague, Virginia.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Chart of Point of Woods Dock - Topographic
Sheet #6013.

It is desired to acknowledge receipt of your letter of March 13, 1934, and thank you for the comprehensive statement made in regard to the location and dimensions, by plane table method, of the dock at Point of Woods, shown on topographic sheet #6013.

At the same time this matter was referred to you as topographer, a letter was written to the New York Field Station to advise them of the disagreement between the photo compilation and the topographic sheet. From the information received in reply, it is apparent that an error was made in the unit of measurement for the figures stated on the photographic print. When the change was made the photographic compilation agreed with the topographic sheet.

In view of the fact that this difference has been satisfactorily cleared up, it will be noted in the Descriptive Report of this sheet, with a copy of your letter.

Acting Director.

REVIEW OF PHOTO COMPILATION T-6066 (1933)

Comparison with Other Surveys:

1. T-6013 (1933), plane table control survey on 1:10,000 and 1:20,000 scales showing location of shore-line and signals for Hydrography. The differences in location of objects between this compilation and T-6013 are listed on pages 4 to 6 of the preceding report. These differences have been examined in the office as discussed below.

a. Stations Sly, Club, Fa, Or, Ed, Dun, and Not, differences in location of 12 to 20 meters in directions from 0° to 60° from North. None of these stations are shown as topographic stations on the printed compilation. Only two are recoverable, Ed, the end of a small dock, and, Or, a tower on the corner of a house. The house and the small dock are shown on the compilation. The photo locations of these stations can be scaled from the celluloid if needed.

Part of the differences noted may be due to errors in locating the objects on the photographs. The banners and flags do not show on the photographs and must have been identified by field inspection. However, the differences are about the same as the differences in location shore-line in this area.

The differences are probably due to error in the plane table traverse which was run up the river without closing on control and is questioned in the plane table descriptive report, page 6. The compilation is on a larger scale in this area and is accepted as correct for this detail.

The hydrographic sheet has been plotted on the plane table control. However, no change in the hydrographic sheet,

H-5367b, seems necessary as the maximum difference is 20 meters. In compiling the charts of this area it is suggested that this shore-line be taken from the compilation and the hydrography swung slightly to fit as was done in compiling the new chart 578. A copy of this report is attached to descriptive report H-5367b and a note has been placed on the plane table sheet referring to the compilation for topographic detail in this area.

b. Stations No Name, Kin, and Bag listed on pages 4 and 5 of the preceding descriptive report. These stations are in the 1:20,000 scale area of T-6013 and were located by a three mile traverse which was adjusted 22 meters in distance (page 7 of the descriptive report T-6013).

The photo plot shows a good intersection for the location of station Bag. difference of 16 meters, but the preceding report, page 3, expresses some doubt as to the accuracy of spotting this point on the photographs and for that reason the plane table position is accepted. The station is not recoverable and does not appear on the printed compilation.

In regard to stations Kin and No Name, the photo plot is not well controlled and the photographs are not clear. The differences may be due to the photo plot, or error in the plane table traverse, or to both. To accurately replot this area as a check would necessitate re-mounting the photographs and possibly additional field inspection, requiring about two weeks of one man's time in this office. Comparison of the plane table survey and the compilation shows the probable error in location to be within 20 meters which is not large when applied to the 1:40,000 scale chart. This

detail has already been applied to chart 578. Due to the press of work at this time replotting of this area, Lat. $40^{\circ} 42'$, Long. $73^{\circ} 10'$ to $73^{\circ} 11.5'$, has been deferred to a later printing of the compilation. The stations are not shown on the printed copies of the compilation.

c. Stations Col, difference of 8 meters. The photo plot has been checked in the office and is accepted as correct. The chimney is shown as a topographic station on the printed compilation.

d. "Cod", difference of 23 meters. Described in the plane table survey report as East chimney stone house. Photo location is the east gable of the house. The house is shown on the compilation and can be seen clearly on the photographs but the chimney does not show on the photographs. The plane table position of the chimney when transferred to the compilation falls on the house but not on the east gable. The photo plot has been checked in this office and the three intersecting cuts are shown on the plane table sheet. The difference here is more likely due to location of different objects. There seems to be no basis for the compiler's assumption that the east chimney is necessarily the east gable. There is also a good possibility that the plane table location is of a chimney near the center of the house and that the description is either incomplete or erroneous.

2. Comparison with the older plane table surveys 1374a (1874) and 3483 (1914) shows changes in the marsh area at Timber Point and numerous changes throughout this area due to filling and construction. The compilation is adequate to supersede these old surveys.

-4-

Accuracy:

The estimate of accuracy of the plot of 2 to 4 meters given on page 19 is too high. A better estimate is an accuracy of location of 3 to 5 meters for intersected points and 3 to 10 meters for other detail. This value may be exceeded in the area mentioned on the preceding page.