Bailey
85016

CRUISE REPORT
AST 85-8

Vessel: R/V ASTERIAS
Cruise number: AST 85-8
Project: New England Coastal Geology (9470-00479)

Area of study: central and westernmost Long Island Sound
Cruise dates: May 18-30,1985
Port stops:
18 May: Block Island, RI
19-22 May: Bridgeport, CT
23 May: Northport,Long Island
24-26 May: Stamford, CT
27 May: Port Jefferson, Long Island
28 May: Bridgeport, CT
29 May: Block Island, RI
30 May: Woods Hole, MA

Personnel: Ralph Lewis, chief scientist, Connecticut Department of Environmental Protection
Doug Owen, USGS
Ken Parolski, electronics technician, USGS
Arthur D. Colburn, captain, RV ASTERIAS, WHOI

Cruise objective:
1) to define the geology and shallow structure of westernmost Long Island Sound and selected areas in central Long Island Sound.
2) to determine the geologic framework and Quaternary development of the area.
3) to identify and map potential geologic hazards.

Equipment:
1) EG&G Uniboom seismic-profiling system
2) ORE Geopulse seismic-profiling system
3) Klein Sidescan sonar system
4) Innerspace and Benthos hydrophone streamers
5) Northstar LORAN-C navigation system
6) TI Silent 700 to record navigation
7) Analog tape recorder to tape seismics

Operational procedures:
1) Seismic sound source/receiver position=10m astern
2) Seismic sound source/receiver separation=10m
3) Seismic source trigger interval=.50sec.
4) Band pass filter: 200-5000Hz
5) Seismic recorder sweep rate=.25 sec.
6) Sidescan sonar fish position=astern
7) Sidescan slant range=100-150m each side
8) LORAN C slave transmitters 9960 Northeast chain X and Y
9) Position logged at 5 minute interval

Tabulated information:
Total workings days=13
Line kilometers of high-resolution seismic profiling: 662.5
Line kilometers of sidescan-sonar profiling:404.3

Narrative: There were numerous equipment failures and problems during this cruise. However, overall the seismic records are satisfactory. Sidescan sonar was run primarily in the westernmost part of the Sound (a winch is needed in the future). The seismic records were mostly collected using the EG&G Uniboom system with the Benthos streamer.

Track charts attached.

Distribution:

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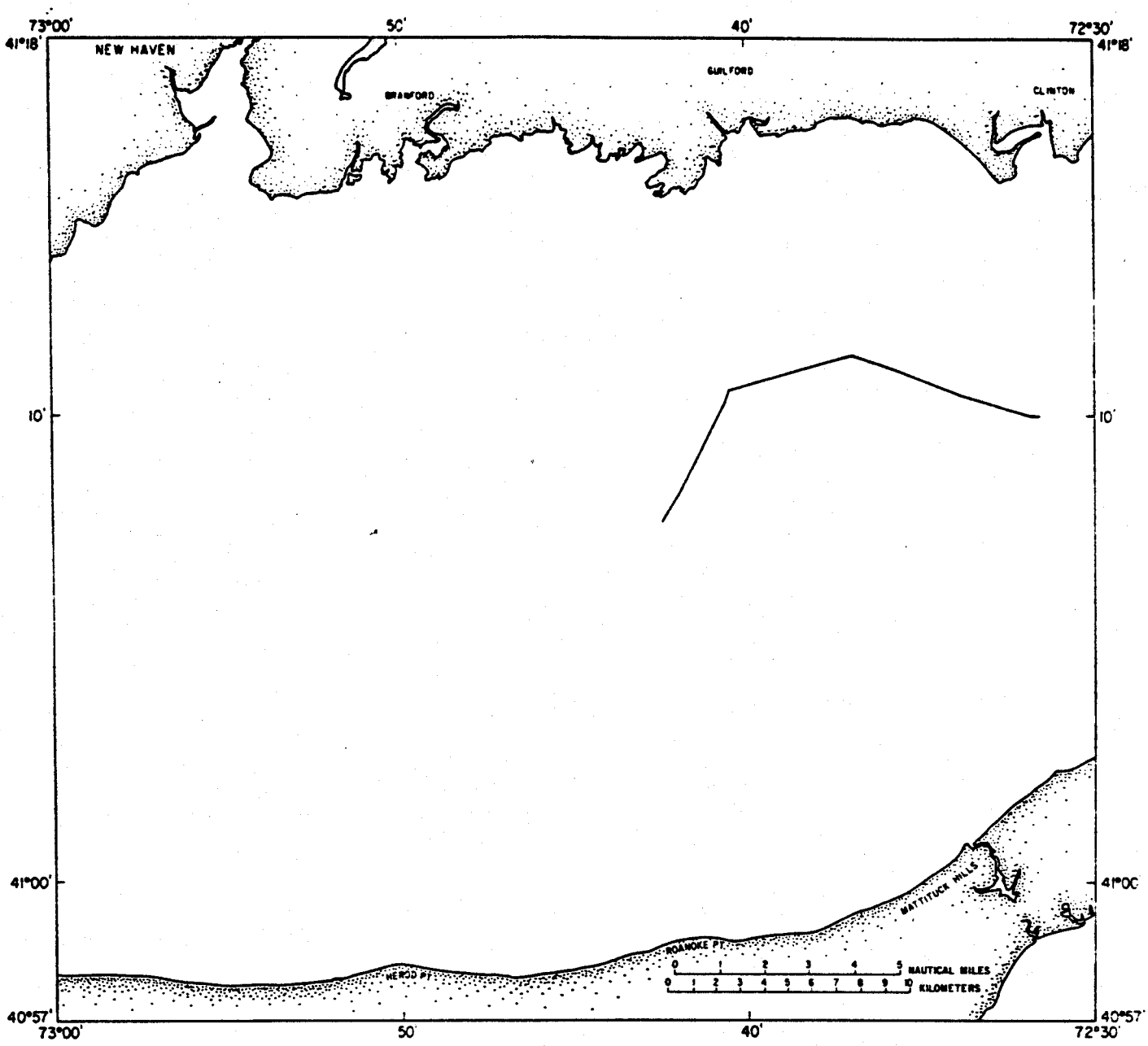

Figure 1. Location of high-resolution seismic-reflection tracks in Central Long Island Sound, R/V ASTERIAS cruise AST 85-8. Map 1 of 3.

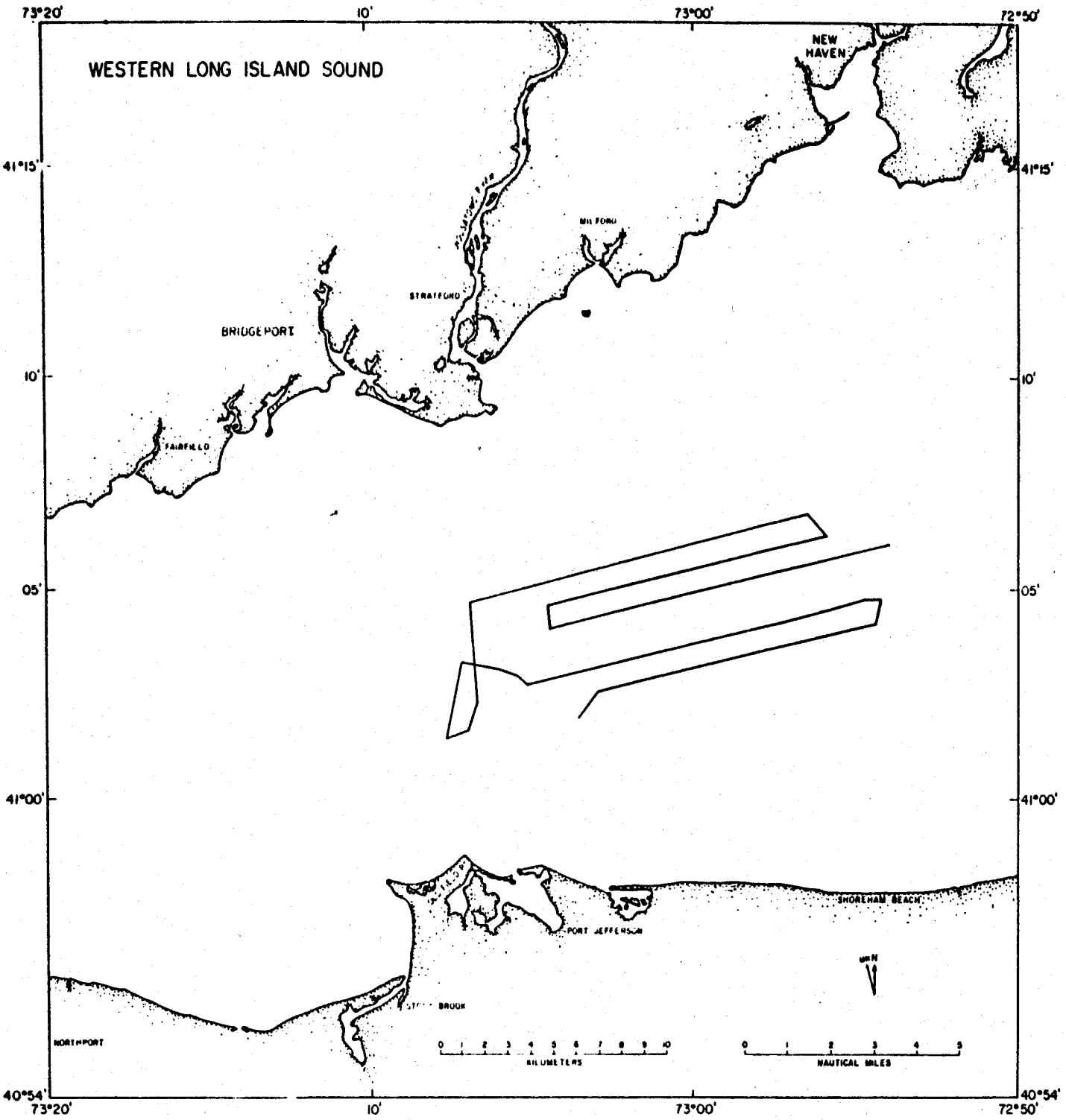

Figure 2. Location of high-resolution seismic-reflection tracks in western Long Island Sound, R/V ASTERIAS cruise AST 85-8. Map 2 of 3.

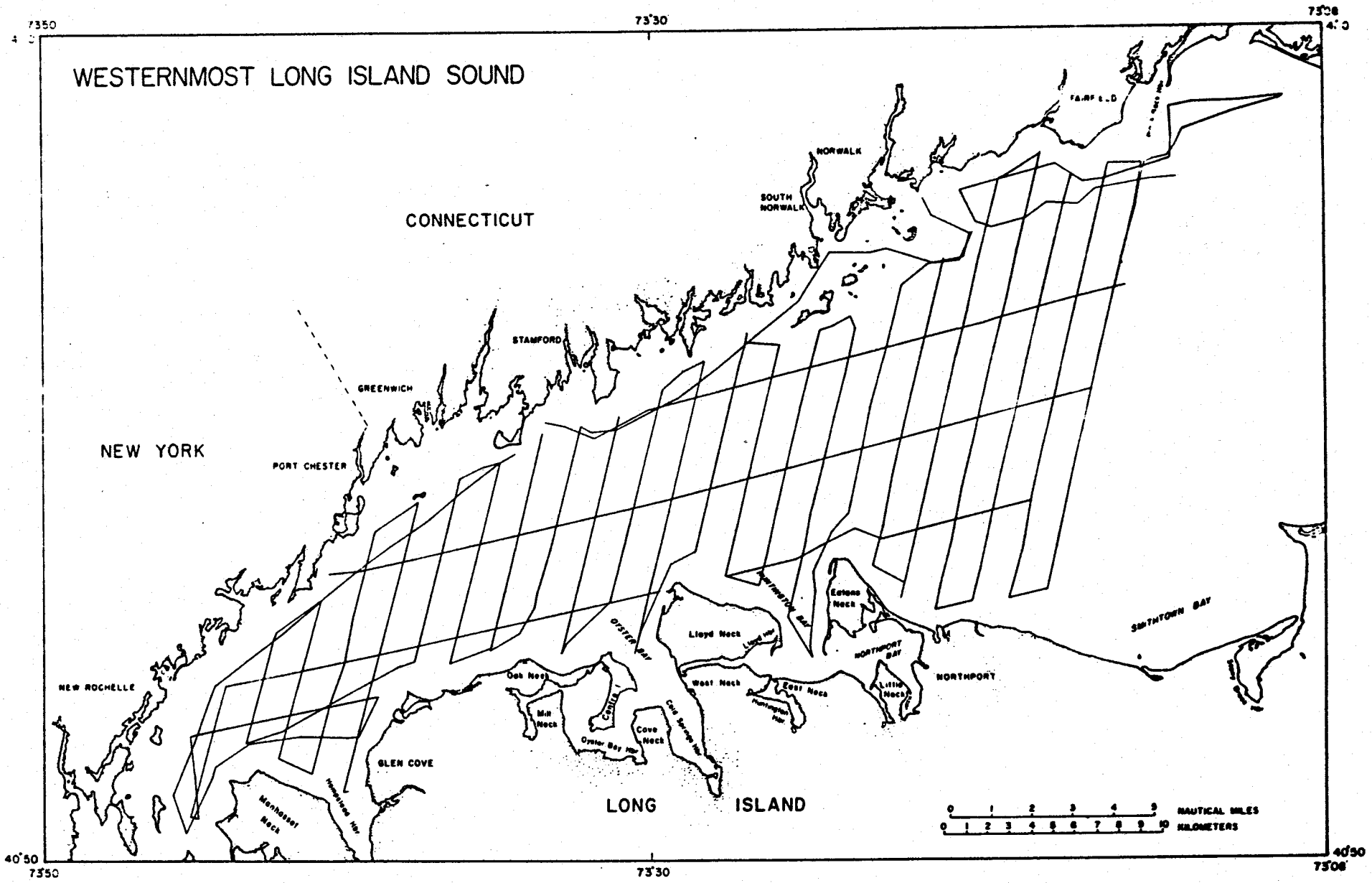

Figure 3. Location of high-resolution seismic-reflection tracks in westernmost Long Island Sound, R/V ASTERIAS cruise AST 85-8. Map 3 fo 3.

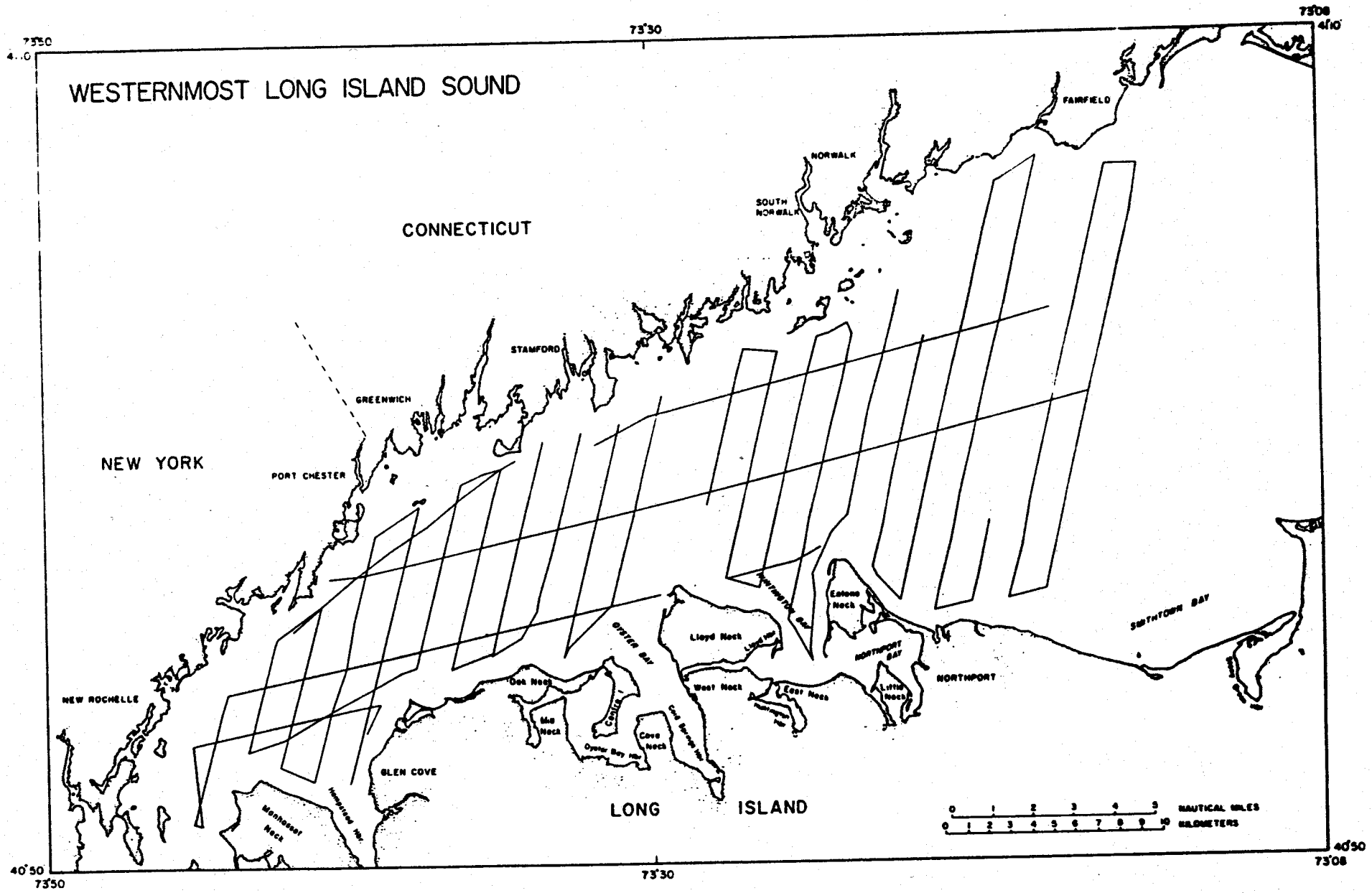

Figure 4. Location of sidescan sonar tracks in westernmost Long Island Sound, R/V ASTERIAS cruise AST 85-8.