104905

95011 SET I

USGS - BAMG

SEISMIC/GEOPHYSICS LOG

SHIP: ASTERIAS

CRUISE: AST95-1

AREA: Long Island Sound

DATES: 6/6 → 6/13/95

CHIEF SCIENTIST: Poppe

NIANTIC BAY SURVEY 3.5 kHz

Line#	YrMoDy +JulDy (158)	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Sidescan/3.5 Roll#	Magnets Gravity	Comments
1	950607	1305			DGPS	1/8 sec sweep / 1/4 sec fire	1/1	1/1		SOL 1 {3.5 kHz unit ~ 1m (3) below surface
		1309								Data Gap
								recorder winch	system shuts down when in use!	
						sidescan				
						SIDESCAN, 6W NO 3.5 subbottom				
1	950607	1439	317	2.5		1/8 sec sweep	1/1	1/1		SOL 1 (restart)
1		1457				1/8 sec sweep	1/1	1/1		EOL 1
2		1459				1/8 sec sweep	1/1	1/1		SOL 2
		1504	Picked up Lobster PoV							
2		1518		line shows bedrock, millston outflow						EOL 2
3		1520				1/8 sec sweep				SOL 3
3		1537				1/8 sec sweep	1/1	1/1		EOL 3

Sidescan/3.5

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll#	Magnets Gravity	Comments
4	950607	1538	144	5.2	DGPS	1/8 sw / 1/4 fire	1/1	1/1		SOL 4
		1552								EOL 4
5		1555	295	3.6			1/1	1/1		SOL 5
5		1612								EOL 5
6		1614	278	4.7						SOL 6
6		1629						1/1		EOL 6
						New Roll of paper for sidescan hardcopy				
7		1632	103	4.1				2/1		SOL 7
7		1651								EOL 7
8		1652	150	4.4			1/1	2/1		SOL 8
8		1708				1/8 sw				EOL 8
					3.5kHz	UNN towered to about 6' (2m) below the surface				
9		1728	75	3.6						SOL 9
		1746					1/1	2/1		EOL 9
						1/8 sweep 1/4 fire				

Gaps in data due to winds

Niantic Bay LIS

JD: 158

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll# (s.disc 7.0KHz)	Magnets Gravity	Comments
10	950607	1749	182	4.9	DGPS	1/8 sec sweep	1/1	2/1		SOL 10
		1804				1/4 sec fire				EOL 10
11		1807	10.1	3.0			1/1	2/1		SOL 11
		1836								EOL 11
12		1838	180	4.1						SOL 12
		1901								EOL 12
13		1903	0	4						SOL 13
		1934								EOL 13
14		1936	180	4.0			1/1	2/1		SOL 14
		1959								EOL 14
15		2002	0	4		1/8 sec sweep	1/1	2/1		SOL 15
		20			Line Broken · Problem w/ sidescan sonar cable					
		2024			DGPS	Back on Line 15				
		2038				Broke off line early due to Lobster trap				EOL 15

switched to 7KHz to try & improve resolution within subbottom units

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Sidescan/ 7.0kHz Roll#	Magnets Gravity	Comments
16	950607	2040	180	4	DGPS	1/8 sec. Sweep	1/1	2/1		SOL16
16		2054				1/8 fire				EOL16
			END OF DAY 1 of SURVEYING							
		Installed uninterruptable power supply (UPS)								
17	950608	1228	0	4	DGPS	1/8 sec. sweep 3.5kHz	2/2	3.5kHz 2/1		SOL17
17		1249								EOL17
18		1257								SOL18
			→ 1257-1307 SIDESCAN Data Dumped to Hard DRIVE							
		1304 →				3.5kHz Down due to electrical problems				
18										EOL18
19		1329								SOL19
		1351								EOL19
20		1353								SOL20
20		1420					2/2	2/1		EOL20

3.5 Back ON

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Tidescan/B.S. Roll#	Magnets Gravity	Comments
21	950608	1424	0	4.5	DGPS	1/4 sec 3.5KHZ	2/2	2/1		SOL21
		1449				1/8 sec 1/4 sec fire				EOL21
22		1452								SOL22
		1510 - 1516			— Dodging pole					
22		1521								EOL22
23		1525					2/2	2/1		SOL23
	~	1526			Change Nav T/R Disk		2/3	2/1		
		1553								EOL23
24		1555	180	4.5						SOL24
		1624								EOL24
25		1628								SOL25
		1654								EOL25

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll# (55/3.5)	Magnets Gravity	Comments
26	950608	1656	180	4.5	DGPS	8 sec 3.5 KHz	2/3	2/1		SOL 26
		1723								EOL 26
27		1727								SOL 27
		1804								EOL 27
28		1809								SOL 28
		1820-1830			Picked UP A Lobster TRAP					
		1832			Change Nave Disk		2/4	2/1		
28		1840								EOL 28
29		1843	0	4.5						SOL 29
		1904			Ship Wake					
		1908			Ship Wake		2/4	2/1		
		1911								EOL 29
		1914								SOL 30
		1938								EOL 30

NIANTIC

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll#	Magnets Gravity	Comments
31	950608	1940	0	4.5	DGPS	1/8 sec sweep	2/4	2/1		SOL31
		2017								EOL31
						1/4 sec fire				
32		2022	180	4.5						SOL32
32		2059								EOL32
					END OF 2nd DAY OF SURVEYING					
33	950609 160	1230	0	4.5	DGPS	1/8 sec sweep	3/5	2/1		SOL33
		1254			NO Depth	2nd nav files on Diskette #5				
		1306				Trawl marks				EOL33
						ship wake				
34		1308								SOL34
		~1315			we have depth again					
		1347								EOL34
		1350								SOL35
		1358			PICKED UP A LOBSTER TRAP					
					CHANGED TO ROLL #3					
		1403			on sidescan record - sidescan printer back on line		3/5	3/1		

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll#	Magnets Gravity	Comments
35	950609		0	4.5	DGPS	1/8 sec sweep/1/4 sec fire	3/5	3/1		SOL
			Changed Nav DISK (Error #13 bombed system)				3/6			
		1428	Back on recording nav.							
35		1432					3/6	3/1		EOL 35
36		1433	180	4.5			3/6	3/1		SOL 36
		1443	Lost Nav (Error #13 at Line 1081)							
		1452	Nav back on disk 1511 New Nav Disk				3/7	3/1		
		1516				(Error #5 at 1081)				EOL 36
		1519					3/7	3/1		SOL 37
		1547	Kew wasn't paying attention or trap were picked up and dragged forever							
		1556								EOL 37
		1559					3/7	3/1		SOL 38
		1612			New Nav DISK		3/8	3/1		
		1633					3/8	3/1		EOL 38

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	55/3.5 Roll#	Magnets Gravity	Comments
39	950609	1636	0	4	DGPS	1/8 sec sweep	3/8	3/1		SOL 39
		1707				1/4 sec fire				EOL 39
		1709								SOL 40
		1740					3/8	3/1		EOL 40
		1743								SOL 41
		1811								EOL 41
		1813					3/8	3/1		SOL 42
		1837								EOL 42
		1840								SOL 43
		1909								EOL 43
					Pulled Sidescan Fish to Check					
					Bedrock on Line 44 with					
					3.5KHZ Only					

NIANTIC

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll#	Magnets Gravity	Comments
44s	950609	1924	180		DGPS	1/8 sweep/1/8 fire	3/8	3/1		SOL 44s Line 44 w/o sidescan
		1934								EOL 44s
~~44~~		~~1952~~				1/8 sweep 1/4 sec fire	3/8	3/1		~~SOL 44~~
44		1952			New Nav Disk		3/9	3/1		SOL 44
44	950609	2003	180	5.2		1/8 sec sweep/1/4 sec fire	3/9	3/1		EOL 44

END OF NIANTIC BAY
SIDESCAN SONAR
SURVEY

FISHERS ISLAND SOUND

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	55 3.5 Roll#	Magnets Gravity	Comments
1	950610	1136	090	3.5	DGPS	4 sec sweep 4 sec fire	4/10	4/1		SOL 1
		1245 - 1249			Picked up a Pot					
		1306								EOL1
2		1308	270	4.7						SOL2
				1225-1327		Picked up a Pot				
					1427	Pot				
					1440	Pot				
		1450								EOL 2
		1453								SOL 3
		1513			Pot (Lobster)					
		1555								EOL 3
		1557								SOL 4
		1729			Changed Nav Disk		4/11	4/1		
		1739								EOL 4

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll# (5s/3.5)	Magnets Gravity	Comments
5	950610	1742	090		DGPS	6sec sweep 6 section	4/11	4/1		SOL 5
		1839			New Nav Disk 1836		4/12	4/1		EOL 5
6		1841	270	4.5						SOL 6
		1859								EOL 6
						New 3.5kHz	ROLL			
7		1907	270	4.5			4/12	4/2		SOL 7
		1917			Lost Nav POV					
		1924					4/12	4/2		EOL 7
8		1933								SOL 8
		1948			Hit Bottom / Broke off line to repair Vibe					
		1956			Back on Line 8					
8		2003					4/12	4/2		EOL 8

FISHERS ISLAND SOUND

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	SS/3.5 Roll#	Magnets Gravity	Comments
9	950611	1128	090	3.0	DGPS	1/8 secs sweep 1/4 sec fire	5/13	5/2		SOL 9
		1147								EOL 9
10		1150	270							SOL 10
		1201								EOL 10
11		1204	090	4.2						SOL 11
		1207			POD					
		1223								EOL 11
12		1231	270	4.7						SOL 12
		1237								EOL 12
13		1243	090	3.8						SOL 13
		1323								EOL 13
14		1326								SOL 14
		1343								EOL 14

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll#	Magnets Gravity	Comments
15	950611	1345	090	4.8	DGPS	½ sec sweep / ¼ sec fire	5/13	5/2		SOL15
		1353								EOL15
		1402	270	4.1						SOL16
		1413			Broke off Line early because of Lobster Pots					EOL16
		1415	090							SOL17
		1424								EOL17
		1426	270	4.7						SOL18
		1440								EOL18
		1448	090	5.7						SOL19
		1500								EOL19
		1525	090	6.2			5/13	5/2		SOL20
		1551			Lobster PoV					
		1558					5/13	5/2		EOL20

Line#	YrMoDy +JulDy	Time +Zone	Crs	Spd	Navigation	Seismic System Sweep/Fire/Filters	Tape# Disk#	Roll#	Magnets Gravity	Comments
21	950611	1600	270	3.9	DGPS	1/8 sec sweep 1/4 sec fire	5/13	5/2		SOL 21
		1651					5/14	5/2		EOL 21 New NAV Disk @ 1642
22		1653	090			NAV CRASHED @ 1702	5/14	5/2		SOL 22
		1721								EOL 22
		1727	270							SOL 23
		1734								EOL 23
		1740	270							SOL 24
		1749								EOL 24
		1756								SOL 25
25	950611	1804	270	3.9	DGPS	1/8 sec sweep 1/4 sec fire	5/14	5/2		EOL 25
					END OF FISHERS ISLAND					
					SOUND 100 KHZ SURVEY					

CRUISE REPORT

1) **SHIP NAME:** RV Asterias, Woods Hole Oceanographic Institution

2) **CRUISE LEG:** AST95-1 (96016)

3) **PROJECT NUMBER AND NAME:** 6 7241 32021 Detailed Sea Floor Surveys of Critical Habitats, Long Island Sound Environmental Studies

4) **FUNDING AGENCY:** Ship Costs: USGS

5) **CONTRACT:** N/A

6) **AREA OF OPERATION:** Long Island Sound

7) **DATES AND PORTS OF CALL:**

6/11/95	Woods Hole, MA
6/11/96-6/14/96	Mattituck, NY
6/14/96-6/18/96	Clinton, CT
6/17/95	Woods Hole, MA

8) **CHIEF SCIENTIST/BRANCH PRINCIPAL:** L. Poppe

9) **SCIENTIFIC PARTY:**
L. Poppe - Marine Geologist, USGS
K. Parolski - Physical Scientist, USGS
M. Persaud - Geologist, NY State Dept.

10) **SHIP'S CAPTAIN:** D. Olmsted, WHOI

11) **PURPOSE OF CRUISE:** First, to conduct detailed (continuous) 100 kHz sidescan sonar surveys off Roanoke Point, NY, and around Falkner Island, CT. These surveys were completed (1) to determine the textural distributions of surficial sediments and to relate these distributions to active sedimentary processes; and (2) to delineate habitats and relate them to benthic community structure. Second, to provide reconnaissance sidescan sonar data in areas not previously covered as part of the regional sedimentary environments component of the Long Island Sound project. These areas included the sea floors north of Falkner Island and Long Sand Shoal.

12) **NAVIGATION TECHNIQUES:** Differential Geographical Positioning System (GPS)

13) **Scientific Equipment:**
SIS 1000 sidescan sonar system with winch and cable
ISIS data acquisition system
Chirp kHz subbottom profiler echosounder
Differential GPS navigation system

14) **TABULATED INFORMATION:**

Days at sea: 7
Sidescan data tapes (8 mm): 6
Navigation/Bathymetry Diskettes: 7
Analog data
3.5 kHz/Sidescan sonar: 6 rolls
Number and length of lines completed:

	Lines	Total Length (km)
Roanoke Point Survey	25	204
Falkner Island Survey	33	74
Long Sand Shoal Survey	2	21

SOL/EOL Navigation:

ROANOKE POINT SURVEY

Latitude	Longitude	LINE
41d01.2290'	-72d38.2900'	SOL1
41d00.9030'	-72d44.1610'	EOL1
41d00.8200'	-72d44.1830'	SOL2
41d01.1510'	-72d38.1900'	EOL2
41d01.0740'	-72d38.1370'	SOL3
41d00.7170'	-72d44.1580'	EOL3
41d00.6360'	-72d44.2260'	SOL4
41d00.9950'	-72d38.2140'	EOL4
41d00.9120'	-72d38.1150'	SOL5
41d00.5750'	-72d44.1310'	EOL5
41d00.4960'	-72d44.1060'	SOL6
41d00.8320'	-72d38.1180'	EOL6
41d00.7460'	-72d38.1350'	SOL7
41d00.4150'	-72d44.1130'	EOL7
41d00.3350'	-72d44.1660'	SOL8
41d00.6630'	-72d38.1880'	EOL8
41d00.5740'	-72d38.1970'	SOL9
41d00.2550'	-72d44.1140	EOL9
41d00.1750'	-72d44.1030'	SOL10

41d00.5010'	-72d38.1630'	EOL10
41d00.4200'	-72d38.1870'	SOL11
41d00.0880'	-72d44.0820'	EOL11
41d00.0130'	-72d44.0950'	SOL12
41d00.3420'	-72d38.1520'	EOL12
41d00.2640'	-72d38.1080'	SOL13
40d59.9230'	-72d44.0830'	EOL13
40d59.8440'	-72d44.1170'	SOL14
41d00.1850'	-72d38.1240'	EOL14
41d00.1030'	-72d38.0810'	SOL15
40d59.7680'	-72d44.0500'	EOL15
40d59.6880'	-72d44.0190'	SOL16
41d00.0220'	-72d38.1110'	EOL16
40d59.9320'	-72d38.1200'	SOL17
40d59.6090'	-72d44.0460'	EOL17
40d59.5250'	-72d44.0150'	SOL18
40d59.8550'	-72d38.0860'	EOL18
40d59.7690'	-72d38.1140'	SOL19
40d59.4430'	-72d44.0290'	EOL19
40d59.3540'	-72d44.0070'	SOL20
40d59.6940'	-72d38.0880'	EOL20
40d59.6090'	-72d38.1600'	SOL21
40d59.2750'	-72d44.0430'	EOL21
40d59.1930'	-72d44.1120'	SOL22
40d59.5380'	-72d38.0730'	EOL22
40d59.4530'	-72d38.0630'	SOL23
40d59.1130'	-72d43.9860'	EOL23
40d59.0380'	-72d44.0580'	SOL24
40d59.3710'	-72d38.0490'	EOL24
40d59.2950'	-72d38.0600'	SOL25
40d58.9550'	-72d43.9740'	EOL25

FALKNER ISLAND SURVEY

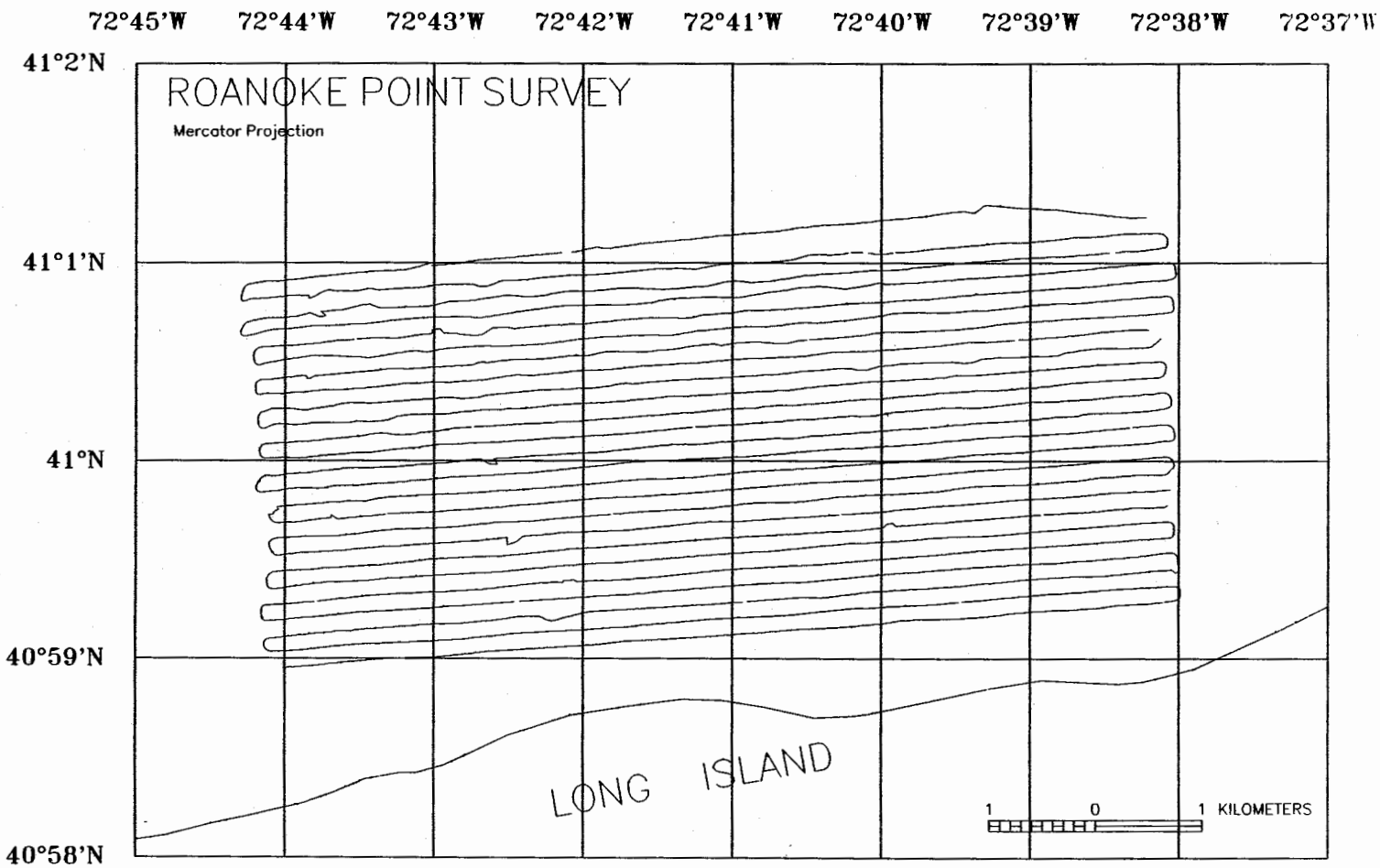
Latitude	Longitude	LINE
41d12.0250'	-72d38.1820'	SOL1A
41d12.0140'	-71d40.7470'	EOL1A
41d12.0920'	-71d40.7810'	SOL2A
41d12.0920'	-72d38.3310'	EOL2A
41d12.1710'	-72d38.3720'	SOL3A
41d12.1770'	-71d40.7480'	EOL3A
41d12.2570'	-71d40.7240'	SOL4A
41d12.2540'	-72d38.3350'	EOL4A
41d12.2770'	-72d38.2650'	SOL5A
41d12.3340'	-71d39.9360'	EOL5A
41d12.4170'	-71d39.9250'	SOL6A
41d12.4220'	-71d38.3310'	EOL6A
41d12.5020'	-71d38.3220'	SOL7A
41d12.5060'	-71d39.8010'	EOL7A
41d12.5750'	-7138.4520'	SOL8A
41d12.5720'	-72d38.3390'	EOL8A
41d12.5690'	-72d38.3440'	SOL9A
41d13.2560'	-71d38.3520'	EOL9A
41d13.2180'	-71d38.4490'	SOL10A
41d12.5620'	-72d38.4600'	EOL10A
41d12.5640'	-72d38.5790'	SOL11A
41d13.2640'	-71d38.5690'	EOL11A
41d13.2720'	-71d38.6700'	SOL12A
41d12.5579'	-72d38.6690'	EOL12A
41d12.5460'	-72d38.7840'	SOL13A
41d13.2690'	-72d38.7780'	EOL13A
41d13.2850'	-72d38.8740'	SOL14A
41d12.5590'	-72d38.8910'	EOL14A
41d12.5370'	-72d38.9910'	SOL15A
41d13.2700'	-712d38.9920'	EOL15A
41d13.2760'	-72d39.0840'	SOL16A
41d12.5600'	-72d39.0990'	EOL16A

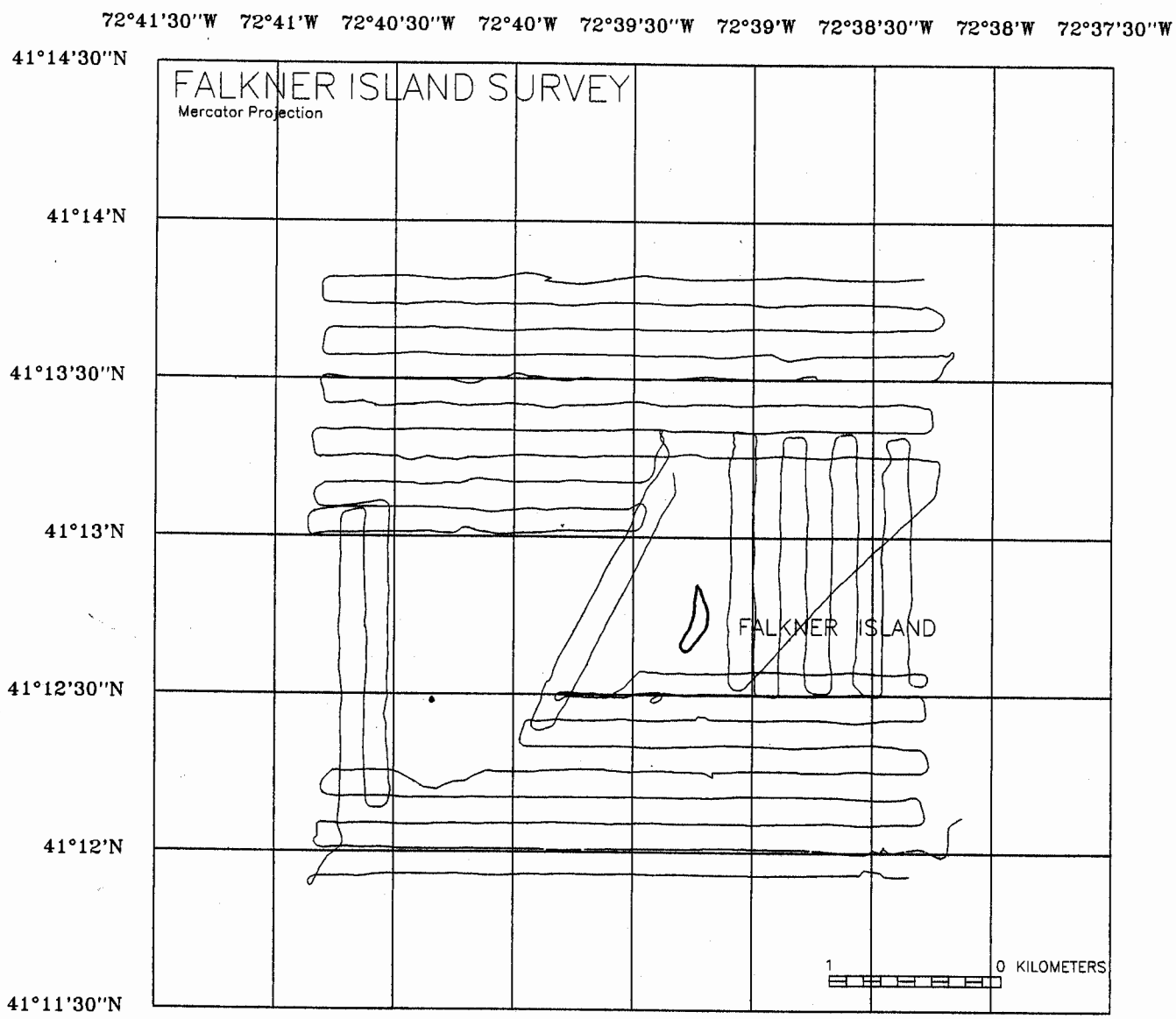
41d13.2510'	-72d38.2970'	SOL17A
41d13.2540'	-72d40.7320'	EOL17A
41d13.3400'	-72d40.7970'	SOL18A
41d13.3350'	-72d38.3240'	EOL18A
41d13.4200'	-72d38.3140'	SOL19A
41d13.4210'	-72d40.7270'	EOL19A
41d13.5060'	-72d40.7310'	SOL20A
41d13.5000'	-72d38.3340'	EOL20A
41d13.5800'	-72d38.2410'	SOL21A
41d13.5750'	-72d40.7410'	EOL21A
41d13.6690'	-72d40.7490'	SOL22A
41d13.6622'	-72d38.2810'	EOL22A
41d13.7330'	-72d38.3430'	SOL23A
41d13.7400'	-72d40.7360'	EOL23A
41d13.8220'	-72d40.7530'	SOL24A
41d13.8240'	-72d38.3150'	EOL24A
41d11.9260'	-72d38.3470'	SOL25A
41d11.9230'	-72d40.7390'	EOL25A
41d12.2570'	-72d40.7240'	SOL26A
41d13.0230'	-72d40.7250'	EOL26A
41d13.0560'	-72d40.6220'	SOL27A
41d12.2400'	-72d40.6210'	EOL27A
41d12.2180'	-72d40.5190'	SOL28A
41d13.0240'	-72d40.5230'	EOL28A
41d13.0120'	-72d40.7370'	SOL29A
41d13.0240'	-72d39.4800'	EOL29A
41d13.0900'	-72d39.5130'	SOL30A
41d13.0920'	-72d40.7480'	EOL30A
41d13.1690'	-72d40.7690'	SOL31A
41d13.1740'	-72d39.4870'	EOL31A
41d13.2450'	-72d39.3590'	SOL32A
41d12.4670'	-72d39.8930'	EOL32A
41d12.4420'	-72d39.8070'	SOL33A
41d13.1590'	-72d39.3250'	EOL33A

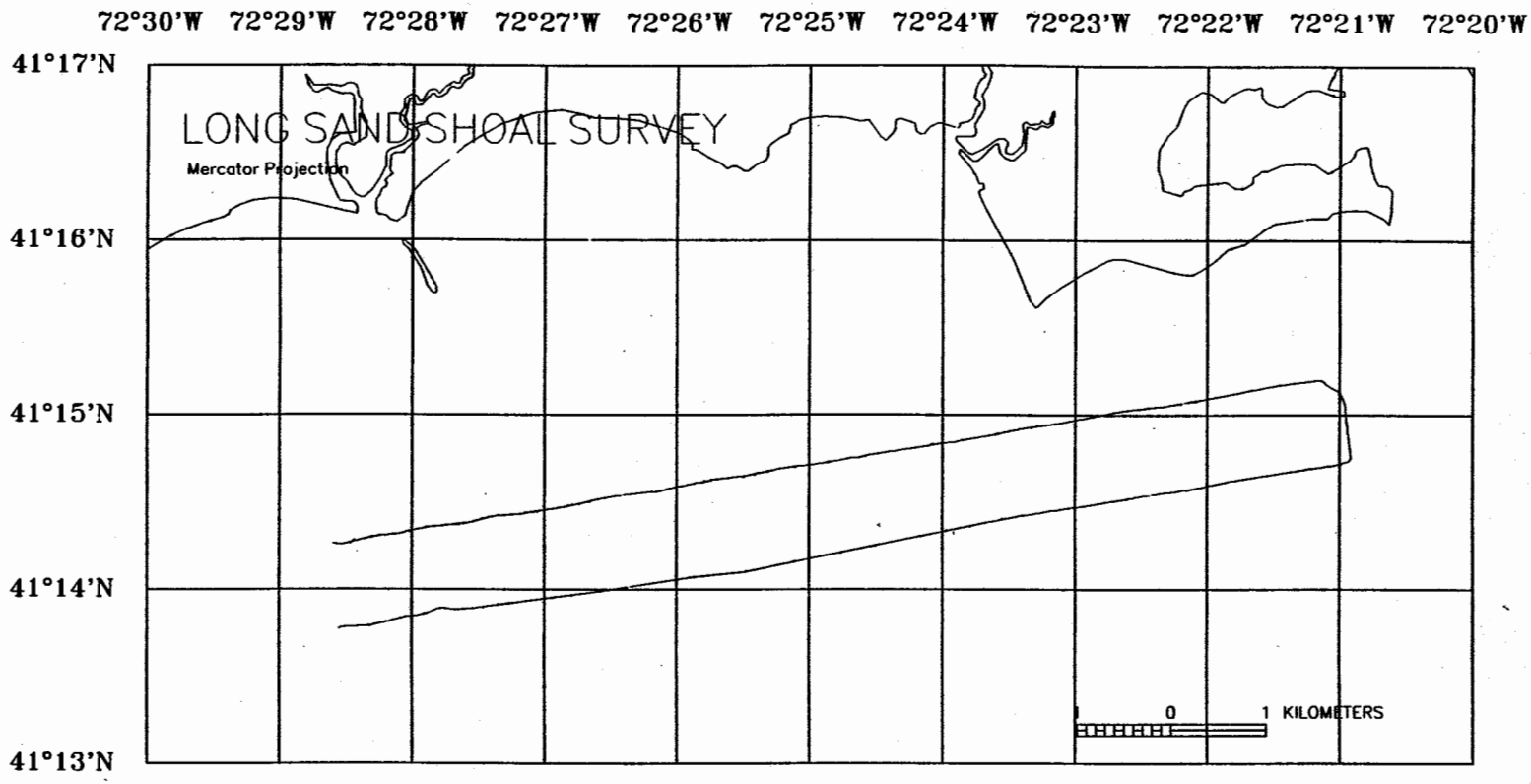
LONG SAND SHOAL SURVEY

Latitude	Longitude	LINE
41d14.2610'	-72d28.5680'	SOL1B
41d15.1980'	-72d21.1820'	EOL1B
41d14.7280'	-72d20.9640'	SOL2B
41d13.7800'	-72d28.5350'	EOL2B

15) **SUBMITTED BY:** L. Poppe


ROANOKE POINT SURVEY
Mercator Projection
72°45'W
72°44'W
72°43'W
72°42'W
72°41'W
72°40'W
72°39'W
72°38'W
72°37'W
41°2'N
41°1'N
41°N
40°59'N
40°58'N
LONG ISLAND
1 0 1 KILOMETERS


FALKNER ISLAND SURVEY
Mercator Projection
72°41'30"W
72°41'W
72°40'30"W
72°40'W
72°39'30"W
72°39'W
72°38'30"W
72°38'W
72°37'30"W
41°14'30"N
41°14'N
41°13'30"N
41°13'N
41°12'30"N
41°12'N
41°11'30"N
FALKNER ISLAND
1
0 KILOMETERS


LONG SAND SHOAL SURVEY
Mercator Projection
72°30'W
72°29'W
72°28'W
72°27'W
72°26'W
72°25'W
72°24'W
72°23'W
72°22'W
72°21'W
72°20'W
41°17'N
41°16'N
41°15'N
41°14'N
41°13'N
1 0 1 KILOMETERS