82016nav

R/V NEECHO

NE-82-4

Long Island Sound
13-26 June, 1982

(NAVIGATION LOGBOOK)

82-4
NECH 101377
82016

U.S. Geological Survey
Woods Hole, Mass 02543
617-548-8700

Deborah R. Hutchinson
Dave Mason
Arnie Tanner
Greg Miller

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NE-82-41

LOCAL ~~GMT~~ (EDT) DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION
~~13~~	~~06~~	~~82~~	~~0745~~				
13	06	82	1430				
14	06	82	0745				
			1530				
			1630				
			1900				
			2215				

NE-82-4

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Arrive Neecho in Stamford, Ct: Yacht Haven West
							Unpack gear, open boat. Raw, cold, wet outside
							Check into Stamford Motor Inn
							Greg stay on Neecho to do OFS II internal tests
							Pick Greg up at 2000 - leave Neecho at 2030 EDT
							Arrive Neecho to do more tests, measure streamer, add
							faring, repair shapes, pump bilge, replace supplies,
							set up maggie, repair tail section (had water in tail
							bird section), organize tools.
							Dave called Adrian Pascoust from SSI & ordered new
							manuals and spare tool set for 15" watergun
							Very short lunch break.
							Disaster: started winding streamer on winch without
							unplugging: total damage difficult to assess. Deck cable
							badly twisted → all wires separated.
							Internal lead in cable on drum may be alright - but may
							have some problems in 2 channels and bird connections
							Greg cleaning deck cable connector of solder. Everyone else
							helping holding lights, vise etc.
							Broken pin in connector on deck cable. Depart Neecho for night

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NE-82-4 LINE 7

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION
15	06	82	0815	Locals			
			1500	+04	ZULU		
			1508				
			1516				
			1548				
			1611				
			1656				
			1721				
			1758				26888.2 43970.6
			1808		102	31	26882.9
			1810		—		26881.9
			1817:33				
			1820				26876.4

NE-82-4 LINE 7

OPS 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							Arrive Neecho. Will reconfigure for single channel work. Beautiful day, FAC, hazy, sunny, warm
							NOTE LOG NOW ZULU TIME, Depart Stamford.
							Quick turn around to drop off Waterways book with Arnie, Dep. again.
							RECONFIGURED with: Haggie, Single channel streamer (200 element) on DFS V channel 12.
							Joe Newell will drive new lead in cable for Fairfield streamer tonight.
							Clear hurricane breakwater.
							Turn W on 43970 to preserve beginning part of line
							200 element streamer over, 10 m lead in. Testing noise heading east on 43970
							Test tape 7001 - 10 m - Neecho - start of streamer noisy
							7002 - 20 m "
							7003 - 15 m "
							7004 - 10 m "
							7005 - 50 m. okay
							Haul streamer, return to start of line at full speed.
							Turn to come on course
							Streamer (50 m lead) & Gun (50 m out) in water. Preparing to fire
							SP # 1 PSI 1650-1700 START LINE #7 (first line this cruise) SPEED = from LORAN (over bottom)
							LORAN PRINTOUT TURNED ON.
							SP 72 ENGINE RPM ≈ 900 FATHOMETER ON

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NE-82-4

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION		
15	06	82	1827						
			1830		098	3.3	26870.3	439970.0	
			1840			3.6	864.2	"	
			1850				858.0	"	
			1852						
			1857						
			1900			3.5	851.8	"	
			1910				845.7	"	
			1920				839.5	"	
			1927						
			1930			3.7	832.9	"	
			1940			3.9	826.1		
			1950			3.6	820.0		
			2000			3.8	813.5		
			2010			3.2	807.7		
			2012			3.4			
			2013						
			2050						

NE - 82 - 4 LINE 7

OPS: 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							PSI ≈ 1500 - 1570
							SP # 132 Depth - 59' PSI 1550 - 1600
							SP # 193
							SP # 253
							SP # 264
							SP # 286 Move streamer back ≈ 10 m offset = 60 m
							# 296 Streamer move completed. Done to prevent overdriving the DFS V (at on min gain).
							file # 311
							file # 372 PSI : 1600
							file 432 1918 - Lobster boat Prosperity pulled alongside to check that we weren't snagging any pots
							Wind SE ≈ 10 kts. Sailboats visible. Tug and tow ≈ 1 mi in front of us & pulling ahead slowly.
							SP 464 - 477 change lead in on streamer to 70 m offset now 35 m. & c/ filter to 20/150.
							SP # 492 PSI : 1650 - 1700
							SP # 552 PSI : 1650 - 1700
							SP # 612 PSI : 1450 - 1700 RPM ≈ 900
							SP # 672 PSI : 1650 - 1700
							SP # 732
							SP # 743 LAST SHOT FOR THIS LINE
							GUN OFF, COMPRESSOR OFF
							SP 753 } NOISE TESTS GUN OUT, but off, No comp.
							754 }
							Talk to Joe - who has arrived at Stamford. We'll be in in ½ hr.
							Depart Neecho 1930 EDT

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NE-82-4 LINE 7A

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION
16	06	82	0800	EDT			
			1230				
			1700				
			1830				
			2000				
17	06	82	0630				
			1010				
			1030				
			1530	GMT			
			1645				
			1647		095	40	26850.1 43970.1

NE-82-4 LINE 7A

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.
						Arrive Neecho to work on connector, rerig watergun for easier launching plus other small tasks Sort out lead in wires, many extra preamp wires., rerig watergun for easier deployment.
						Mason & Hutchinson leave to scout out Stratford marinas & hotels: Stratford Marina
						Ho Jo's
						Arrive back Neecho. Miller & Taner still soldering.
						Connectors on lead in & deck cable don't mate.
						Quit for dinner & good nights sleep.
						Arrive Neecho to deal w/ connector, Light S-SW wind, cloudy, showers predicted until front passes early afternoon.
						Problem w/ winch - chain off. Must remove spacer from brake.
						Winch fixed. Multichannel streamer on drum! Connector fixed, disconnecting power, lengthen tail buoy.
						Depart Dock, Stamford, Ct. Partly cloudy, warm, winds 10-15, white caps, but no appreciable seas.
						Begin streaming gear (1130 EDT)
						Streamer & gun in water. Testing depth & birds.
						Shooting ev. 10 s, bringing up to speed 4 kts.
						SP #1 12 channel streamer 120 m. START LINE 7A.
						40 m offset
						80 in^3 water gun 2 s record 1 msec sample.
						1500 - 1550 psi. 72 ft. 5' depth

NE-82-4 LINE 7A

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION	
17	06	82	1700	+04	087	4.2	26841.2	43970.0
							.	.
			1707				.	.
			1710		095	4.1	26834.0	43970.0
			1711				.	.
			1720				26826.4	.
			1730		095	4.2	26819.3	43970.1
			1740		095	4.0	26811.8	43970.1
			1750		060	4.0	26804.9	43970.2
							.	.
			1800				26798.2	43970.0
			1810			4.1	26793.5	43972.1
			1820		080	4.2	26786.8	43972.8
			1825				.	.
			1831		110	4.3	26777.8	43971.1
							.	.
			1840				26770.8	43969.4
			1850		090	3.9	26764.7	43970.1
			1900		086	4.1	26757.7	43970.0
							.	.
			1910		080	4.2	26750.5	43970.0
							.	.
			1920		084	4.2	26743.5	43970.0
			1930		082	4.0	26736.6	43969.9
			1940		084	3.8	26730.1	43970.1
			1950		080	4.0	26723.2	43969.9
			2000		083	4.0	26716.5	43970.0
			2010		081	3.6	26709.8	43969.9
			2020		083	3.7	26703.0	43970.0
			2030		079	3.7	26696.5	43970.0

NE-82-4 LINE 7A

OPS 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							SP # 74 1500 psi channel 2 = bad.
							bird 2 = weak connection.
							Ch 1 & 2 = dead, 6 = 60 cycle noise
							SP #133 PSI 1500.
							SATELLITE CLOCK IN.
							SP #195 PSI 1500
							SP # 253 PSI 1500 Winds have shifted NW, front has passed,
							SP # 313 PSI 1500 Water depth 102
							SP #1 376 c/adj to pass buoy PASSING drifting power boat w/
							2 windsurfers sunbathing.
							APPROACHING FIELD OF LOBSTER BUOYS. (AY CARAMBA)
							} Maneuvering through buoys.
							SP 555 1820 }
							c/ filter 30 - 150 on near trace monitor, out of buoys.
							SP # 621 PSI 1550 - 1600 c/ streamer depth to 10'
							SP 676 Depth has disappeared ≈ 94 BACK ON LINE
							SP 735 PSI ≈ 1600
							SP 799 SPI = 1600 Depth = 087 + 1.5' fr. Nucho depth indicator
							Echosounder = very poor record. RPM = 950.
							SP# 855 fathometer = ok - lack of response must be
							weak bottom return. Seas quiet, becoming glassy calm.
							SP #915 water depth = 97 + 1.5' (Nucho depth ind)
							SP #976 WD = 104
							SP # 1035 PSI ≈ 1550 109 + 1.5'
							SP # 1095 PSI ≈ 1550 111 + 1.5'
							SP # 1157 PSI ≈ 1600 104 + 1.5'
							SP # 1215 PSI ~ 1550 101 + 1.5'
							SP # 1275 99 + 1.5' Prepare to deploy maggie
							SP # 1335 PSI ~ 1550 95 + 1.5'

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GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION	
17	06	82	2040	+04	082	3.8	26689.8	43969.9
			2050		074	3.6	26683.3	43969.8
			2100		084	4.0	26676.8	43970.0
			2110				26669.6	43970.0
			2120		081	4.2	26662.4	43970.0
			2130		055	3.8	26656.0	43970.4
			2132		060	3.6	26655.0	43971.3
			2220					

NE-82-4 LINE 7A

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO. STA.	
						SP 1395 fathometer back on.
						Problems getting maggie over: keeps pulling boom up - too much drag on it maybe?? Looks like its fouled on the watergun hose. Norwegian float ≈ ½ distance between gun and streamer. Towing just beneath the surface so not visible except w/ binocs. Will test it out and leave it as is until we haul the gun.
						SP 1455 PSI = 1530 WD ≈ 91 ± 1.5' Maggie a little noisy
						SP 1515 PSI = 1600 WD ≈ 89 ± 1.5 RPM ≈ 1150-1200
						Maggie = noisy
						SP 1575 PSI = 1650-1700 SEAS FAC!
						SP 1635 Middle Ground, Stratford Shoal well visible ahead
						SP 1696 maneuver for buoy
						1706 LAST SHOT
						ALL GEAR SECURED - HEAD FOR STRATFORD.
						36.0 km multichannel, fathometer.
						5.5 km maggie
						2330Z (1930 EDT) arrive Stratford Marina, Stratford, Ct.
						Staying at Howard Johnsons, Stratford, Ct.
						1740 EDT finish hauling gear

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GMT DAY	GMT MO	GMT YR	LOCAL TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION	
18	06	92	0800					
			0859					
			0920					
			1132					
			1534	GMT			26656.0	43969.7
			1538		c/adj			
			1540	+04	092	4.3	26652.2	43970.1
			1550		090	4.3	26644.3	43969.7
			1600		095	4.2	26637.2	43970.3
			1610		c/adj	39	26629.8	43969.8
			1620		087	3.8	26623.1	43970.0
			1622					
			1626					
			1630		090	4.2	26615.7	43970.0
			1640		085	4.2	26607.9	43970.0
			1650		091	4.4	26600.1	43 70.1

NE-82-4 LINE 7A CONT

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Arrive Nucho
							Depart Stratford dock after fueling, phone calls etc.
							Clear Stratford harbor.
							All gear streamed, coming on line to 1st SP.
							FIRST SHOT SP #1707 CONTINUE LINE NO. 7A same config.
							c/adj to go south of buoy off middleground - to stay in deep water. Channels 2,5,6 = bad.
							SP # 1739 RPM ~900
							SP # 1799 PSI = 1600 WD = 58 ft. BACK ON LINE AFTER PASSING MIDDLEGROUND BUOY.
							SP # 1859 PSI = 1550 LOST CHANNEL 1 (1,2,5,6) Current setting us to the north, appreciably. ~100 cycle noise on channel 12 - not visible on fixed gain
							SP # 1919 WD = 693 PSI: out of buoys No visible lead in or tow noise
							SP# 1979 PS = 1500-1550 WD = 92 +1.5' SEAS = GLASSY CALM, BEAUTIFUL SEA STATE!
							change paper in fathometer. fathometer back up.
							SP # 2039 PSI ≈ 1550 WD ~ 95 +1.5' Blue fish all over
							SP # 2099 PSI ≈ 1550 WD ~ 95 +1.5 RPM ≈ 900 Blue fish ~ gone.
							SP # 2159 PSI = 1550 WD ~ 95+1.5 Radio says boat aground off Stratford Shoal.

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GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION	
18	06	82	1700	+04	095	4.1	26592.4	43970.0
			1710		098	4.2	26585.1	43970.1
			1720		084	3.9	26577.7	43969.9
			1730		096	4.4	26570.8	43970.0
			1740		087	3.9	26563.7	43970.0
			1741					
			1750		091	3.6	26557.4	43970.2
			1800		093	3.7	26550.5	43970.0
			1810		088	3.8	26543.5	43970.0
			1820		086	3.8	26536.5	43969.8
			1820				26536.0	
			1840					
18	06	82	1950	+04			26578.6	43010.7

NE-82-4 LINE 7A cont / LINE 8

OPS 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							SP # 2219 PSI ≈ 1600 channel 5 back on.
							SP # 2279 PSI ≈ 1600
							SP # 2339 PSI ≈ 1600 WD = 79 + 1.5'
							SP # 2399 PSI ≈ 1600 WD = 89 + 1.5' RPM = 800-900
							SP # 2459 PSI ~ 1600 WD = 89 + 1.5
							Dave going to engine room to find hydraulic leak.
							SP # 2519 PSI ≈ 1600 WD = 90 + 1.5' Dave back.
							SP # 2579 PSI = 1600-1650 WD = 89 + 1.5
							all channels except 1,2 = working 6 = weak.
							SP # 2639
							SP # 2699 SP # 2703 = LAST SHOT END LINE 7A
							SP # 2703
							START TURN 350°T to line 8. Hauling Maggie
							Maggie in.
							1853 26544.5 43985.1
							1909 551.9 995.2
							1921 557.9 003.4
							1930 starting turn to come on line
							1942 - snag lobster buoy - slow down & it freed itself Lost Sat. temporarily
							SP #1 START LINE 8 120m streamer 80 in³ watergun
							40 m offset 0-2 s, 1ms sample,
							18 - 256 Hz
							PSI ≈ 1550

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GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION	
18	06	82	1955	+04	270	3.0		
			2000		240	4.1	26585.8	40011.2
			2010	~	270		26592.1	40010.0
			2020		260	3.9	26599.4	40010.1
			2030		253	3.5	26606.3	40010.1
			2040		265	3.7	26612.9	40010.0
			2050		260	4.4	26620.0	40009.9
			2100		265	4.3	26627.9	40009.9
			2101		270	4.0	26628.8	40010.0
			LOCAL TIME					
			1810					
			1855					

NE-82-4 LINE 8

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							We are dodging lobster pots – very tricky!
							SP #61 PSI 1750-1800 RPM ≈ 900-1000
							SP #121
							SP #181
							SP #241 PSI = 1550
							SP # 301
							SP #361 PSI = 1500-1550
							SP #421
							#428 TERMINATE LINE 8 for DAY.
							Arrive Stratford Marina
							Shut up Nucho for weekend.
							Will meet back at Ho Jo's, Stratford on Sun 9:00 p.m.

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GMT DAY	GMT MO	GMT YR	GMT LOCAL TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION		
21	06	82	0815						
			GMT 1550	+04					
21	06	82	1550	10	1003.3		26726.4	44010.8	
			1600		9840		26719.5	44009.9	
			1602						
			1610		10242		26712.6	44010.2	
			1620		9837		26705.4	44009.9	
			1630		10040		26698.0	44010.0	
			1640		9945		26691.1	44009.9	
			1650		9941		26683.8	44009.9	
			1700		10041		26676.8	44010.0	
			1710		9940		26669.7	44009.9	
			1720		9939		26666.0	44009.9	
			1730		10043		26655.3	44010.0	
			1740		10044		26648.1	44010.0	
			1750		9941		26643.6	44009.9	
			1800		1004.2		26636.4	44010.0	

check these

NE-82-4 LINE 8

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO. STA.	
						Arrive Neecho after checking UPS office
						UPS office for Fairfield is in Norwalk.
						Course to steer after clearing harbour = 221°M.
						John Madsen from URI aboard.
						SOL #1A 26598.1 44023.5 } from 1981 cruise
						EOL #1A 26647.1 44030.3 }
						Arnie will stay ashore to track down SSI tools pkg.
						Winds S-SW ~15-20 kts, bad chop.
						all gear streamed, some pots around.
						SOL #81 CONT SP #500 gun & streamer depth = 10'
						12 channel streamer 10m groups.
						40 m offset 80 in³ gun.
						Maneuvering through pot buoys.
						SP #560 PSI ≈ 1700 RPM = 1000, 800
						Pretty much clear of pot buoys
						SP #620
						SP #680 PSI ≈ 1600 RPM ≈ 800
						SP #740 PSI ≈ 1600
						SP #800 PSI ≈ 1550 RPM ≈ 700
						SP #860
						SP #920 RPM ≈ 700
						SP #980 PSI ≈ 1600
						SP #1040
						SP #1100 PSI ≈ 1600 RPM ≈ 700
						SP #1160
						SP #1220 PSI ≈ 1600 RPM ≈ 600
						SP #1280

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GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE GMT ±	SHIPS COURSE	SHIPS SPD	NAVIGATION		
21	06	82	1810	+04	102	4.4	Check 26625.1	44009.9	
			1820		92	4.4	26618.6	44009.8	
			1830		95	4.0	26611.4	44010.0	
			1840		103	4.4	26603.5	44009.5	
			1850		088	4.4	26596.2	44010.1	
			1900		097	4.2	589.1	44009.8	
			1907						
			1910		079	3.9	26583.2	44010.9	
			1920		104	4.1	26575.3	44009.9	
			1921				26574.4	44009.7	
			1927				26575.8	44012.0	
			1932				26576.7	15.0	
			1938				26577.7	19.0	
			1942				26579.2	21.6	
			1945				79.5	21.2	
			1946				79.2	20.7	
			1950				80.8	20.6	
			1951						
			1951				81.4	20.6	
			1953				82.1	20.5	
			1955				83.1	20.5	

NE-82-4 LINE 8 / LINE 1C

OPS: 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							SP # 1340 Problem w/ LORAN HARD COPY – LOST TIME SYNCH
							AT 1715. Brg re-programing. ok.
							SP # 1400 PSI = 1550 - 1600
							Note: 100 cycle noise on channels may be tied to reproduce
							module c/ filter 60-250 on EPC analog record.
							SP # 1460
							SP # 1520
							SP # 1580 PSI = 1600 RPM = VERY LOW
							SP # 1640 PSI = 1600
							Snagged a buoy on the gun slowed – it dropped off.
							SP # 1700
							SP # 1760
							SP # 1764 EOL # 8 cont LAST SHOT.
							Compressor off
							c/c head to Line 1c.
							Compressor coming on.
							SOL # 1C SP # 1

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GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±GMT	SHIPS COURSE	SHIPS SPD	NAVIGATION		
21	06	82	2000	+04	268		2658 6.4	4402 1.0	
			2003		276	35	88.7	21.4	
			2008				92.1	21.9	
			2010		270		93.3	22.1	
			2015		273	30	96.9	22.9	
			2020		273		600.7	23.8	
			2025		271		04.5	24.6	
			2030		269	38	08.5	25.4	
			2035		267		12.0	26.1	
			2040		263		15.6	26.6	
			2042		259		17.1	26.9	
			2045		258		19.1	26.9	
			2047		255		20.7	27.0	
			2050		252		22.6	26.9	
			2055		251	40	25.9	26.6	
			2100		252		29.3	26.5	
			2105		255		32.8	26.6	
			2110		260		36.7	26.9	
			2115		262		40.7	27.3	
			2116				42.11	27.4	
			LOCAL TIME						
			1745						
			1815						
			1840						
			1910						
			1930						

NE-82-4 LINE 1C

OPS 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							SP #52 Heading into seas and wind – RPM up ≈ 1000. Current setting us north. Winds picking up. PSI ≈ 1600 [2 - 3 ft seas]
							SP #112
							PSI ≈ 1600
							SP #172
							SP #232 PSI ≈ 1600 Some maneuvering to pot buoys on this line.
							SP #292
							PSI ≈ 1550
							SP #352
							SP #412
							SP #472
							SP #511 EOL 1C Seas still 2-3 ft. Lose 2 floats from gun line – return & recover them.
							Contact w/ Arnie – the package has arrived – he will pick it up in Fairfield and return to Stratford ≈ 1900.
							Abeam Stratford breakwater
							Tie up at Stratford Marina, fuel dock.
							Tied up back at our dock, Stratford Marina. Greg working on tape drive, Dave working on watergun.
							Depart Neecho for day.

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NE-82-4

GMT DAY	GMT MO	GMT YR	LOCAL TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION			
22	06	82	0800							
			1010							
			1140							
			GMT							
			1640							
			1650		100	38		26645.2		94030.1
			1655					41.8		29.8
			1658					40.1		29.5
			1700					38.6		29.0
			1702.30					36.7		28.6

26595
44005

NE - 82 - 4 LINE 1D

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Arrive Neecho Gug redoing DFS V for ½ msec sampling. Dave & Arnie returned to Ho Jo's to finish putting 15" watergun back together. Beautiful clear day, light northerly now SW 10 - 15 predicted for day.
							Dave & Arnie arrive at Neecho w/ rebuilt gun. Hook it up, redesign float arrangement. – initially it did not want to hold pressure at low pressure, but seals held at 1500 p.s.i.
							Cast lines from Stratford Marina. Winds E-SE-S light in the harbour, just enough to keep the gnats off.
							Compass course for line 1D = 100° Mag.
							Hear over, testing streamer and 15" gun.
							SP # 1 SOL # 1D. 15" gun 120m streamer DFS V = 0 - 1 sec. ½ ms. sample 77-512 Hz 30m offset weather = clear, calm, flat seas very light wind.
							SP# 223 Channel 4 = weak

NE-82-41

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION		
22	06	82	1706		100	3.9	26634.4	44028.4	
			1710				30.7	28.1	
			1715			4.0	27.1	27.4	
			1720				23.3	26.8	
			1725			4.1	19.5	26.2	
			1730				15.7	25.6	
			1735				11.9	25.3	
			1740				07.9	24.5	
			1745			4.2	03.8	23.8	
			1750			4.3	26599.7	23.3	
			1755				96.0	22.8	
			1800				92.0	22.1	
			1804				88.8	21.2	
			1810						
			1835						
			1940						
			1951						
			1959		010		26579.8	45865.3	
			2000				79.8	65.8	
			2005				80.0	68.6	
			2010				79.9	71.2	
			2012						
			2020				80.7	76.9	

NE-82-4 LINE ID, LINE 9.

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO. STA.	
						Sp # 461
						Sp # 700
						Sp # 940
						Sp # 1179
						Sp # 1299
						Sp # 1418
						Sp # 1657
						sp # 1760 EOL 1-D
						Doing turn, snagged double buoy on gun - hauled gun and proceeded to catch streamer on same pass. Gun and streamer on deck - steam to middle of sound to redeploy and shoot headed north.
						Slow to turn & redeploy gear. Satellite clock up, all gear ready to go.
						SOL #9 Sp # 1 Speeds = erratic on Loran C temp.
						Sp # 16 120m streamer, 10m channels 5 depth 30m offset 15" watergun shot int = 5s (10m)
						Sp # 134 strong current flowing east.
						Large ship (Celtic BC) empty passing astern
						Sp # 254 Dodging Pot buoys

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NE - 82 - 4

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION		
22	06	82	2030				26580.9	43982.7	
			2032	25 0					
			2040				82.0	88.5	
			2050				80.2	93.8	
			2100				80.2	99.8	
			2110				80.1	44005.6	
			2120				79.5	11.0	
			2130				80.0	16.5	
			2140				79.9	22.0	
			2150				80.1	27.4	
			2200				80.1	33.3	
			2201				80.0	33.9	
			2220						
			LOCAL						
			1945						
			2000						

NE-82-4 LINE 9

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							SP#374
							SP#407 } Manouevering through pot buoys. change shot interval to 4.3s @ 4.5 kts.
							SP#508
							SP#647 RPM ≈ 1000
							SP#787
							SP#926
							SP#1069
							SP#1205
							SP#1348
							SP#1484
							SP#1624
							SP#1636 EOL #9
							rec gear secured
							arrive dock after look at start of line 10
							Leave [illegible] for day.

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NE - 82 - 4

GMT DAY	GMT MO	GMT YR	GMT LOCAL TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION		
23	06	82	0805						
			0850						
			0905						
			0935						
			GMT						
			1433						
			1454		225	4.7	2663	8.2	4403	1.3
			1456						
			1500		200	4.8	40	.1	28	.8
			1510		202	4.2	40	.1	23	.3
			1520				39	.9	17	.9
			1530			4.5	40	.1	12	.5
			1540		197	4.0	40	.0	07	.1
			1547							
			1550		198	4.4	40	.0	01	.8
			1600		201	3.5	39	.8	4499	6.5
			1610				39	.2	91	.3

NE-82-4 Line 10

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO. STA.	
						Arrive Neecho - Dave, Greg, Annie pumping bilges into 5 gal. jugs. Dave checking compressor.
						Winds W-NW 10-15 kts weak front passed through yesterday. [Hutchinson, Miller, Mason, Tanner]
						Move Neecho to fuel dock to dump bilge water.
						Clear fuel dock and head out.
						Aim for 44035 26615 to start deploying gear.
						Headed for start of line
						All gear in water - preparing DFS V. chan 7 = bad.
						Seas ~1 ft, white caps just beginning. winds WNW.
						big billowy clouds.
						BOL #10 sp #1
						120 m streamer 10m spacing 30 m offset.
						5 sec shot int (10 m) 15 in³ gun @ 1.5 m
						Maneuvering to reach 26640.0 DFS V = 0-1s, ½ms, 7.7-512
						Sp #71 PSI holding at 2000 RPM = 800
						Current setting us west, Wind setting us east.
						SP # 191
						SP# 311
						SP# 431 PSI = 1975
						SP # 551
						Gun pressure 2100 p.s.i
						SP # 671
						SP # 790
						SP# 911 Slight change of course - avoid buoys.

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NE-82-4

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION		
23	06	82	1620	+04	198	3.5	26639.4	43986.3	
			1622						
			1630				39.6	81.6	
			1637						
			1640				36.1	77.0	
			1648						
			1650				32.6	72.1	
			1700				34.1	68.4	
			1710		210	4.0	33.8	63.8	
			1720				33.9	58.4	
			1730		218	3.5	34.6	54.0	
			1740				35.9	49.9	
			1750				37.5	45.9	
			1800				39.4	42.0	
			1902		030	3.1	72.9	38.0	
			1910				71.9	41.4	
			1920				71.7	47.3	
			1930		TRUE		71.4	52.5	
			1940		031	4.3	70.1	57.5	
			1950		012	4.2	70.0	62.6	
			2000		014	4.0	70.0	67.6	
			2010		012	3.8	70.2	72.6	
			2020		020	3.6	69.8	77.6	
			2030		013	3.2	70.0	82.6	
			2040		008	3.6	70.1	87.7	
			2050			4.3	69.9	92.9	

NE-82-4 Line 10, Line 11

OPS 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							SP 1031
							Course changes to maneuver around buoys
							Sp# 1151
							More maneuvering - buoys
							Sp# 1281
							Equipment down
							SP 1369 - DFSJ - KAPUT Maybe
							still down
							sp. #1370 equip. back up all 12 channels working
							fathometer beeps sticking
							Winds going more SW.
							SP #1483 course East of that desired - buoys, etc.
							Sp# 1603
							SP # 1723
							SP # 1843
							sp# 1963 BAD POT BUOY GEOMETRY
							Sp# 2082 EOL #10
							Compressor off.
							sp# BOL #11 seas ≈ 1 foot, Barely white caps.
							Sp# 87 Pots around. Current running hard to the east
							Sp# 207
							Sp. # 327 RPM ≈ 800
							Sp# 447
							SP# 567
							Sp# 687
							Sp # 807
							Sp # 927
							Sp# 1047
							Sp# 1167

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NE-82-4

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION
23	06	82	2051	+04	020	4.5	
			2100		mag 351	4.0	26670.0 98.0
			2110		349	4.3	26669.9 44003.3
			2115				
			2120		354	3.7	70.0 08.3
			2128		350	4.4	70.0 12.6
			2145				
			LOCAL				
			1845				
			1915				

NE-82-4 Line 11

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Sp# 1292 Power boat passing off starboard
							Sp# 1407
							Sp# 1527 Current still very strong to the east.
							Abram R "18" Bell ~100yds off port
							Sp# 1652 Winds still bout of west
							Sp# 1743 EOL #11 1-2' seas.
							Compressor off 2129
							all gear aboard. Head to Stratford
							Note on this line: very bad crab for entire line. Ship & streamer headed much more west than line.
							350° M = 344° True.
							Loran said we we steering ≈ 012° T } This = current effect.
							Tie up at fuel dock
							Tied up & secured at marina, Depot Neck.

GMT DAY	GMT MO	GMT YR	GMT LOCAL TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION			
24	06	82	0800							
			0845							
			0930					26621.4	44016.0	
			0955					26580.5	43999.5	
			1015					26545.3	43980.7	
			1025					26528.2	43971.5	
			GMT							
			1427							
			1459							
			1515							
			1526							
			1532					495.7		70.0
			1541						SP #100	
			1545					87.5		70.0
			1550							
			1558							
			1635							
			1245					26472.3	43970.2	
			1730							
			1750							

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.
						Arrive Nucho, Stratford Marina. Take 200 element
						streamer off to clear deck space, hook up trailer.
						Clear dock, depart Stratford Marina. Hutchinson, Mason, Miller
						Tanner taking van and trailer to Noank.
						Pot buoys have thinned.
						Slow to turn onto 43970.0 and stream gear.
						Streamer out.
						Channels 3, 4, 7 giving problem
						Gun cover of pressurized
						SP # 1
						SP # 1 - 100 DFS V - OUT - 512 Hz
						#101 - 285 = 77 - 512 Hz
						SP # 198 PSI ≈ 1800 WD ≈ 28m.
						SP # 215 PSI dropped to 1500
						285. END TEST TAPE
						all gear on deck. Head to NOANK
						Arrive NOANK fuel dock.
						Arrive Marine Sciences Inst. UCONN dock.

GMT				TIME ZONE	SHIPS		NAVIGATION
DAY	MO	YR	TIME	±	COURSE	SPD	
			1900				

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO. STA.	
						Depart Ramada Inn at Noank having left annie, Greg and Dave to return the DEECHO to W.H. on 25 June 1982.