APPENDIX A

NLDS Seawolf Mound

Core: 27
Survey: NLDS 2001

Total Core Length: 94

Latitude: 41.2711
Longitude: -72.0839

Depth (cm)	Major Sample		Sub Sample	Lithology
0	0-5	dark greenish-gray, moist, soft, silty CLAY	0-50 TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 27	
	5-8.5	very dark greenish-gray, moist, soft, silty CLAY		
	8.5-13	very dark greenish-gray, moist, soft-firm, silty CLAY		
	13-17.5	dark greenish-gray, moist, soft-firm, silty CLAY with shell hash		
	17.5-21.5	dark greenish-gray, moist, soft-firm, silty CLAY		
-20	21.5-32.5	dark greenish-gray, moist, soft-firm, clayey silty FINE SAND		
	32.5-37	dark greenish-gray, moist, soft-firm, clayey silty FINE SAND with shell hash		
	37-48	dark greenish gray, moist, soft-firm, clayey silty FINE SAND		
-40			40.5-42.5 mussel shells	
	48-75	mottled greenish gray to dark greenish gray, moist, soft-firm, clayey silty FINE SAND with shell hash		

NLDS Seawolf Mound

Core: **27**
Survey: NLDS 2001

Total Core Length: **94**

Latitude: 41.2711
Longitude: -72.0839

Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-60 -80	75-94	dark greenish gray to greenish gray, moist, soft-firm, clayey silty FINE SAND with shell hash	

NLDS Seawolf Mound

Core: **28**
Survey: NLDS 2001

Total Core Length: 116

Latitude: 41.2720
Longitude: -72.0843

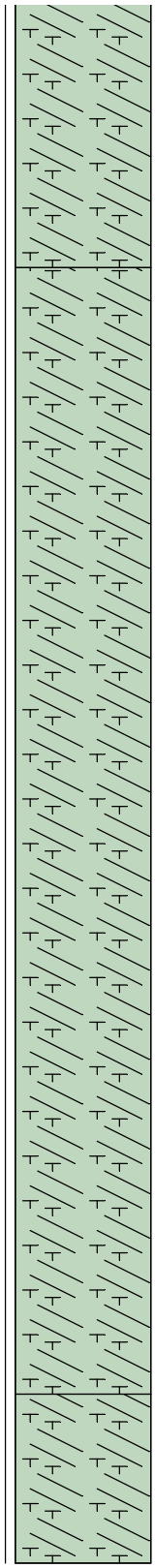
Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-20	dark greenish gray, moist, soft, silty CLAY with shell hash	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 28	
				7-7	crab claw	
	-20	20-35	very dark greenish gray, moist, soft, silty CLAY			
		35-70	greenish gray with dark greenish gray lenses, moist, soft, silty CLAY with shell hash			
	-40					
	-60					

NLDS Seawolf Mound

Core: **28**
Survey: NLDS 2001

Total Core Length: 116

Latitude: 41.2720
Longitude: -72.0843

Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-80 -100	70-110: greenish gray, moist, soft, silty CLAY 110-116: dark greenish gray, moist, soft to firm, silty CLAY with shell hash		

NLDS Seawolf Mound

Core: 29
Survey: NLDS 2001

Total Core Length: 82

Latitude: 41.2742
Longitude: -72.0860

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-19	dark greenish gray, moist, soft to firm, silty CLAY with shell hash	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 29	
	-20	19-60	greenish gray, moist, firm, silty CLAY with shell hash			
				23-23	worm	
	-40					

NLDS Seawolf Mound

Core: **29**
Survey: NLDS 2001

Total Core Length: 82

Latitude: 41.2742
Longitude: -72.0860

Core Photo	Depth (cm)		Major Sample		Sub Sample	Lithology
	-60 -80	60-82	greenish gray, moist, firm to hard, silty SAND with shell hash	45-51	clam shell (whole)	

NLDS Seawolf Mound

Core: 30
Survey: NLDS 2001

Total Core Length: 86

Latitude: 41.2733
Longitude: -72.0819

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-9	very dark grayish brown, moist, hard, coarse SAND and GRAVEL	0-50	Trace Metals: 30-B TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 30	
		9-18	dark yellow-brown, moist to dry, hard, SAND with GRAVEL	8-9	shell fragments	
	-20	18-29	dark greenish gray to black, moist, firm, SAND	20-21	lensed; greenish gray, moist, firm silty CLAY	
	-40	29-86	greenish gray, slight organic odor, moist, soft to firm, silty CLAY with shell hash	38-84	lensed black, moist, soft to firm silty CLAY	

NLDS Seawolf Mound

Core: **30**
Survey: NLDS 2001

Total Core Length: 86

Latitude: 41.2733
Longitude: -72.0819

Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-60 -80		50-51 large shell	

NLDS Seawolf Mound

Core: 31
Survey: NLDS 2001

Total Core Length: 113

Latitude: 41.2752
Longitude: -72.0832

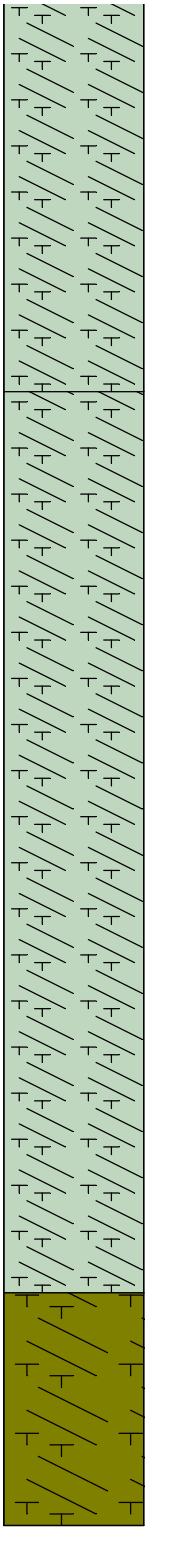
Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-48	greenish gray, organic odor, moist, soft, silty CLAY with shell fragments	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 31	
				4-30	lensed; black, organic, moist, soft silty CLAY	
	-20					
				33-33	plant fibers	
	-40					
		48-74	greenish gray, organic odor, moist, firm, silty CLAY with shell fragments	49-68	lensed; black, organic, moist, firm silty CLAY	
	-60					

NLDS Seawolf Mound

Core: **31**
Survey: NLDS 2001

Total Core Length: 113

Latitude: 41.2752
Longitude: -72.0832

Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-80 -100	74-105: dark greenish gray, organic odor, moist, soft to firm, silty CLAY with shell fragments 105-113: dark greenish gray to black, slight petroleum odor, moist, soft to firm, clayey silt with shell fragments		

NLDS Seawolf Mound

Core: 32
Survey: NLDS 2001

Total Core Length: 95

Latitude: 41.2767
Longitude: -72.0836

Core Photo	Depth (cm)	Major Sample		Sub Sample	Lithology
	0	0-70	greenish gray, moist, soft, silty CLAY with shell fragments	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 32
				13-70	lensed; dark greenish gray to black
	-20				
	-40				

NLDS Seawolf Mound

Core: 32
Survey: NLDS 2001

Total Core Length: 95

Latitude: 41.2767
Longitude: -72.0836

Core Photo	Depth (cm)		Major Sample	Sub Sample	Lithology
	-60				
	-80	70-82	dark greenish gray to black, slight petroleum odor, moist, soft to firm, clayey SILT		
		82-95	dark greenish gray, moist, firm, SAND with silt		

NLDS Seawolf Mound

Core: 33
Survey: NLDS 2001

Total Core Length: 84

Latitude: 41.2753
Longitude: -72.0804

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-11	dark greenish gray, moist to wet, very soft to soft, silty CLAY	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 33	
	-20	11-26	mottled: very dark to dark greenish gray, moist, soft, silty CLAY			
		26-32	mottled: very dark to dark greenish gray, moist, soft to firm, silty CLAY			
	-40	32-57.5	dark greenish gray, moist, soft to firm silty CLAY			

NLDS Seawolf Mound

Core: **33**
Survey: NLDS 2001

Total Core Length: 84

Latitude: 41.2753
Longitude: -72.0804

Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-60 -80	57.5-58.5 58.5-84	53-56	

olive brown, moist, soft to firm silty CLAY

dark greenish gray, moist, firm silty CLAY

shell

NLDS Seawolf Mound

Core: 34
Survey: NLDS 2001

Total Core Length: 114

Latitude: 41.2753
Longitude: -72.0790

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-23	greenish gray, organic odor, moist, soft, silty CLAY with shell fragments	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 34	
				7-20	lensed; greenish black, organic odor, moist, soft silty CLAY	
	-20	23-69	dark greenish gray, organic odor, moist, soft to firm, silty CLAY			
	-40					
	-60					

NLDS Seawolf Mound

Core: 34
Survey: NLDS 2001

Total Core Length: 114

Latitude: 41.2753
Longitude: -72.0790

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	-80 -100	69-108	greenish gray, organic odor, moist, soft to firm, silty CLAY with shell fragments	68-68	plant fibers	
				72-106	lensed; greenish black, organic odor, moist, soft silty CLAY	
		108-114	dark greenish gray to black, organic odor, moist, soft to firm, silty CLAY with shell fragments			

NLDS Seawolf Mound

Core: 35
Survey: NLDS 2001

Total Core Length: 116

Latitude: 41.2744
Longitude: -72.0795

Core Photo	Depth (cm)	Major Sample		Sub Sample	Lithology
	0	0-2	dark greenish gray, wet, soft, silty CLAY	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 35
		2-11	mottled; dark greenish gray and greenish black, moist, soft, silty CLAY		
		11-49	dark greenish gray, moist, soft to firm, silty CLAY		
	-20				
	-40	49-62	mottled; dark greenish gray and greenish black, moist, soft to firm, silty CLAY		
	-60				

NLDS Seawolf Mound

Core: **35**
Survey: NLDS 2001

Total Core Length: 116

Latitude: 41.2744
Longitude: -72.0795

Core Photo	Depth (cm)	Major Sample		Sub Sample	Lithology
	-80 -100	62-75	dark olive brown to black, petroleum odor, moist, firm, sandy CLAY with shell hash		
		75-108	mottled; dark greenish gray and greenish black, moist, firm, silty CLAY with shell hash		
		108-113	very dark greenish gray, moist, firm, silty CLAY		
		113-116	dark olive brown to black, petroleum odor, moist, soft to firm, sandy silty CLAY	113-116 shell	

NLDS Seawolf Mound

Core: 36
Survey: NLDS 2001

Total Core Length: 234

Latitude: 41.2727
Longitude: -72.0850

Core Photo	Depth (cm)	Major Sample		Sub Sample	Lithology
	0	0-9	mottled dark greenish gray and black, moist, soft to firm, silty CLAY	0-50	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 36-1; (ARCHIVE)	
		9-64	dark greenish gray, moist, soft to firm, silty CLAY			
	-20					
	-40			41-43	shell	
				50-75	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 36-2	

Core: 36
Survey: NLDS 2001

Total Core Length: 234

Latitude: 41.2727
Longitude: -72.0850

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	-60	64-77	greenish gray to dark greenish gray, moist, soft to firm, silty CLAY	75-100	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 36-3	
		77-147	dark greenish gray, moist, soft to firm, silty CLAY with shell hash	78-89	brick	
	-80					
	-100					

Core: 36
Survey: NLDS 2001

Total Core Length: 234

Latitude: 41.2727
Longitude: -72.0850

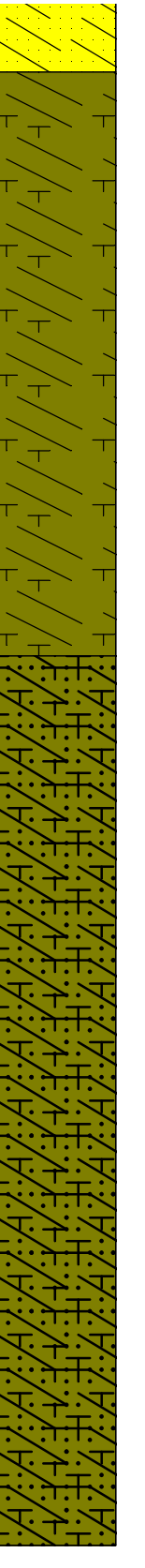
Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	-120 -140 -160	147-154	dark greenish gray to greenish black, moist, soft to firm, clayey SILT	147-181	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 36-4	
		154-160	dark greenish gray, moist, soft to firm, clayey SILT with shell hash			
		160-181	dark greenish gray, moist, firm, clayey SAND with shell hash and gravel			

NLDS Seawolf Mound

Core: **36**
Survey: NLDS 2001

Total Core Length: 234

Latitude: 41.2727
Longitude: -72.0850

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	-180 -200 -220	181-202	dark greenish gray, moist, soft to firm, clayey SILT with shell hash	181-234	TOC, PAH, Zinc, Grain Size, Moisture Content composite 36-5; (ARCHIVE)	
		202-234	dark greenish gray, moist, firm, clayey sandy SILT with shell hash			

NLDS Seawolf Mound

Core: 37
Survey: NLDS 2001

Total Core Length: 266

Latitude: 41.2738
Longitude: -72.0828

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-16	dark greenish gray, organic odor, moist, soft, CLAY	0-50	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 37-1; (ARCHIVE)	
		16-121	dark greenish gray, moist, soft, silty CLAY with plant fragments			
	-20			24-27	plant fibers	
	-40					
				50-75	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 37-2	
	-60					

Core: 37
Survey: NLDS 2001

Total Core Length: 266

Latitude: 41.2738
Longitude: -72.0828

Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-80 -100 -120	121-234 dark greenish gray, moist, soft to firm, silty CLAY	75-100 TOC, PAH, Zinc, Grain Size, Moisture Content: composite 37-3 100-200 TOC, PAH, Zinc, Grain Size, Moisture Content: composite 37-4 107-120 shell fragments 122-134 lensed; greenish black, moist, soft, silty SAND	

Core: 37
Survey: NLDS 2001

Total Core Length: 266

Latitude: 41.2738
Longitude: -72.0828

Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-140 -160 -180 -200		151-211: shell fragments 162-234: lensed; greenish black, moist, soft to firm, silty SAND 171.5-175: rock 201-210: pocket of greenish black, moist, soft to firm coarse SAND	

NLDS Seawolf Mound

Core: 37
Survey: NLDS 2001

Total Core Length: 266

Latitude: 41.2738
Longitude: -72.0828

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	-220 -240 -260	234-266	dark greenish gray to greenish black, petroleum odor, moist, firm, silty FINE SAND with shell hash	234-266	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 37-5; (ARCHIVE)	

NLDS Seawolf Mound

Core: 38
Survey: NLDS 2001

Total Core Length: 238

Latitude: 41.2744
Longitude: -72.0812

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	0	0-15	very dark greenish gray to greenish black, petroleum odor, moist to wet, soft to firm, silty CLAY	0-50	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 38-1; (ARCHIVE)	
		15-123	very dark greenish gray, moist, soft to firm, silty CLAY			
	-20					
				32-36	banding: greensih black, moist, soft to firm silty CLAY	
	-40					
				50-75	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 38-2	

Core: 38
Survey: NLDS 2001

Total Core Length: 238

Latitude: 41.2744
Longitude: -72.0812

Core Photo	Depth (cm)	Major Sample		Sub Sample	Lithology
	-60		59-94	banding: greensih black, moist, soft to firm silty CLAY	
			70-72	shell	
			75-100	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 38-3	
	-80				
	-100		100-199	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 38-4	
			100-199	PAH	

Core: 38
Survey: NLDS 2001

Total Core Length: 238

Latitude: 41.2744
Longitude: -72.0812

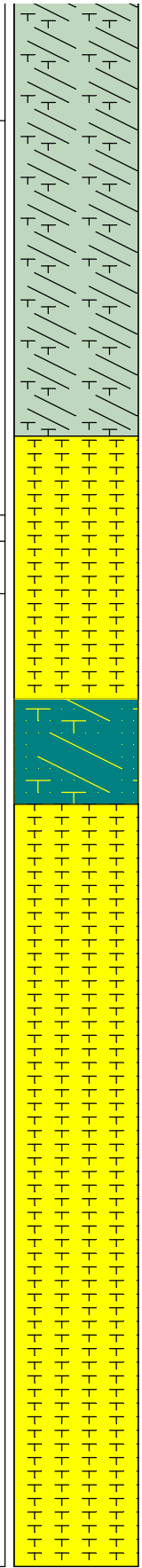
Core Photo	Depth (cm)	Major Sample	Sub Sample	Lithology
	-120 -140 -160	123-195 banded dark greenish gray with greensih black, moist, soft to firm, silty CLAY	152-156 lensed: dark greenish gray, moist, soft to firm SAND 164-166 lensed: dark greenish gray, moist, soft to firm SAND 174-183 rock and gravel	

NLDS Seawolf Mound

Core: 38
Survey: NLDS 2001

Total Core Length: 238

Latitude: 41.2744
Longitude: -72.0812

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	-180 -200 -220	195-205	greensih black, moist, soft to firm, silty coarse SAND	198-242	TOC, PAH, Zinc, Grain Size, Moisture Content: composite 38-5; (ARCHIVE)	
		205-209	dark greenish gray to greenish black, moist, soft to firm, sandy silty CLAY			
		209-238	greenish black, petroleum odor, moist, soft to firm, silty coarse SAND			

NLDS Seawolf Mound

Core: 39
Survey: NLDS 2001

Total Core Length: 70.5

Latitude: 41.2701
Longitude: -72.0995

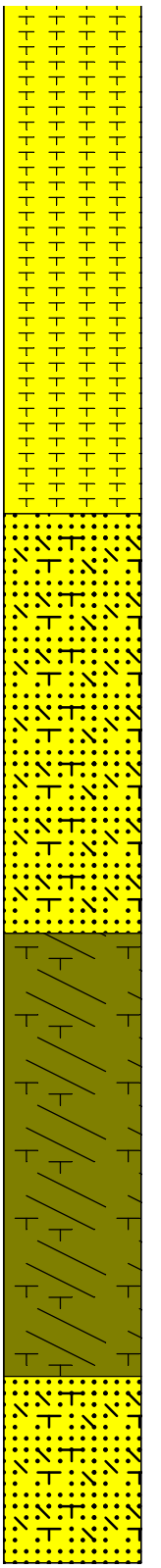
Core Photo	Depth (cm)		Major Sample		Sub Sample	Lithology
	0	0-20	dark greenish gray, moist, soft, clayey silty FINE SAND with shell hash	0-50	TOC, PAH, Trace Metals, Grain Size, Moisture Content: composite 39	
	-20	20-48	dark greenish gray, moist, soft to firm, silty FINE SAND with shell hash			

NLDS Seawolf Mound

Core: **39**
Survey: NLDS 2001

Total Core Length: 70.5

Latitude: 41.2701
Longitude: -72.0995

Core Photo	Depth (cm)	Major Sample		Sub Sample		Lithology
	-40 -60	48-57	dark greenish gray, moist, soft to firm, clayey silty FINE SAND with shell hash	59-64.5	dark greenish gray, moist, firm, clayey silty FINE SAND with shell hash	
		57-66.5	dark greenish gray, moist, firm, clayey SILT			
		66.5-70.5	dark greenish gray, moist, firm, clayey silty FINE SAND with shell hash			

APPENDIX B

Appendix B1

NLDS Seawolf Mound REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Grain Size (phi)			Mud Clasts	
					Min	Max	Maj Mode	Count	Avg. Diam
CTR	A	6/21/2001	15:48	ST_II	>4	-1	>4	0	0
CTR	B	6/21/2001	15:49	ST_I_TO_II	>4	3	>4	0	0
CTR	C	6/21/2001	15:50	ST_II_ON_III	>4	3	>4	0	0
75E	A	6/21/2001	15:41	ST_II_ON_III	>4	3	>4	0	0
75E	B	6/21/2001	15:42	ST_II_ON_III	>4	3	>4	0	0
75E	C	6/21/2001	15:42	ST_I_TO_II	>4	3	>4	1	0.4
150N	A	6/22/2001	10:50	ST_I_ON_III	>4	2	>4	0	0
150N	B	6/22/2001	10:51	ST_II_ON_III	>4	3	>4	0	0
150N	D	6/22/2001	10:54	ST_I_TO_II	>4	3	>4	0	0
150W	A	6/21/2001	16:41	ST_II	>4	2	>4	0	0
150W	B	6/21/2001	16:42	ST_I_ON_III	>4	3	>4	3	0.22
150W	C	6/21/2001	16:42	ST_II	>4	2	>4	0	0
300SE	A	6/21/2001	15:27	ST_I_ON_III	4	2	4 to 3	0	0
300SE	B	6/21/2001	15:27	ST_I	>4	-1	4 to 3	0	0
300SE	F	6/22/2001	10:16	ST_I_ON_III	4	-1	4 to 3	0	0
300WSW	A	6/21/2001	15:14	ST_II_ON_III	>4	2	>4	0	0
300WSW	B	6/21/2001	15:15	ST_I_TO_II	>4	2	>4	0	0
300WSW	C	6/21/2001	15:16	ST_II_TO_III	>4	2	>4	0	0

Appendix B1

NLDS Seawolf Mound REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Camera Penetration (cm)				Dredged Material Thickness (cm)		
					Min	Max	Range	Mean	Min	Max	Mean
CTR	A	6/21/2001	15:48	ST_II	11.18	12.2	1.02	11.69	11.18	12.2	>11.69
CTR	B	6/21/2001	15:49	ST_I_TO_II	10.48	10.91	0.43	10.7	10.48	10.91	>10.7
CTR	C	6/21/2001	15:50	ST_II_ON_III	12.69	13.71	1.02	13.2	12.69	13.71	>13.2
75E	A	6/21/2001	15:41	ST_II_ON_III	15.86	16.29	0.43	16.08	15.86	16.29	>16.08
75E	B	6/21/2001	15:42	ST_II_ON_III	14.35	15.48	1.13	14.92	14.35	15.48	>14.92
75E	C	6/21/2001	15:42	ST_I_TO_II	11.4	12.85	1.45	12.12	11.4	12.85	>12.12
150N	A	6/22/2001	10:50	ST_I_ON_III	13.28	16.08	2.8	14.68	13.28	16.08	>14.68
150N	B	6/22/2001	10:51	ST_II_ON_III	12.9	13.55	0.65	13.23	12.9	13.55	>13.23
150N	D	6/22/2001	10:54	ST_I_TO_II	13.66	14.52	0.86	14.09	13.66	14.52	>14.09
150W	A	6/21/2001	16:41	ST_II	10.22	10.91	0.7	10.56	10.22	10.91	>10.56
150W	B	6/21/2001	16:42	ST_I_ON_III	14.19	16.56	2.37	15.38	14.19	16.56	>15.38
150W	C	6/21/2001	16:42	ST_II	11.29	13.71	2.42	12.5	11.29	13.71	>12.5
300SE	A	6/21/2001	15:27	ST_I_ON_III	10.6	11.59	0.99	11.1	10.6	11.59	>11.1
300SE	B	6/21/2001	15:27	ST_I	8.82	10.54	1.72	9.68	8.82	10.54	>9.68
300SE	F	6/22/2001	10:16	ST_I_ON_III	7.04	7.85	0.81	7.45	7.04	7.85	>7.45
300WSW	A	6/21/2001	15:14	ST_II_ON_III	14.87	15.77	0.9	15.32	14.87	15.77	>15.32
300WSW	B	6/21/2001	15:15	ST_I_TO_II	14.34	15.5	1.16	14.92	14.34	15.5	>14.92
300WSW	C	6/21/2001	15:16	ST_II_TO_III	15.4	16.19	0.79	15.79	15.4	16.19	>15.79

Appendix B1

NLDS Seawolf Mound REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Redox Rebound Thickness (cm)			Apparent RPD Thickness (cm)		
					Min	Max	Mean	Min	Max	Mean
CTR	A	6/21/2001	15:48	ST_II	0	0	0	0.43	2.1	1.6
CTR	B	6/21/2001	15:49	ST_I_TO_II	0	0	0	0.81	1.99	1.36
CTR	C	6/21/2001	15:50	ST_II_ON_III	0	0	0	1.72	2.37	1.98
75E	A	6/21/2001	15:41	ST_II_ON_III	0	0	0	0.22	4.68	2.44
75E	B	6/21/2001	15:42	ST_II_ON_III	0	0	0	0.22	4.41	2.95
75E	C	6/21/2001	15:42	ST_I_TO_II	0	0	0	0.32	1.94	1.38
150N	A	6/22/2001	10:50	ST_I_ON_III	0	0	0	0.38	1.77	2
150N	B	6/22/2001	10:51	ST_II_ON_III	0	0	0	0.32	2.37	2.1
150N	D	6/22/2001	10:54	ST_I_TO_II	0	0	0	0.54	1.34	2
150W	A	6/21/2001	16:41	ST_II	0	0	0	0.75	3.92	2.76
150W	B	6/21/2001	16:42	ST_I_ON_III	0	0	0	1.08	2.63	1.88
150W	C	6/21/2001	16:42	ST_II	0	0	0	0.32	5.75	3.44
300SE	A	6/21/2001	15:27	ST_I_ON_III	0	0	0	0.05	5.11	2.67
300SE	B	6/21/2001	15:27	ST_I	0	0	0	0.05	4.78	2.63
300SE	F	6/22/2001	10:16	ST_I_ON_III	0	0	0	0.54	4.84	3.19
300WSW	A	6/21/2001	15:14	ST_II_ON_III	0	0	0	1.85	5.24	4.31
300WSW	B	6/21/2001	15:15	ST_I_TO_II	0	0	0	0.16	3.81	2.81
300WSW	C	6/21/2001	15:16	ST_II_TO_III	0	0	0	0.9	5.08	3.04

Appendix B1

NLDS Seawolf Mound REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Methane Min	Methane Max	Methane Mean	OSI	Surface Roughness	Low DO
CTR	A	6/21/2001	15:48	ST_II	0	0	0	6	BIOGENIC	NO
CTR	B	6/21/2001	15:49	ST_I_TO_II	0	0	0	4	PHYSICAL	NO
CTR	C	6/21/2001	15:50	ST_II_ON_III	0	0	0	8	BIOGENIC	NO
75E	A	6/21/2001	15:41	ST_II_ON_III	0	0	0	9	BIOGENIC	NO
75E	B	6/21/2001	15:42	ST_II_ON_III	0	0	0	9	BIOGENIC	NO
75E	C	6/21/2001	15:42	ST_I_TO_II	0	0	0	4	PHYSICAL	NO
150N	A	6/22/2001	10:50	ST_I_ON_III	0	0	0	8	PHYSICAL	NO
150N	B	6/22/2001	10:51	ST_II_ON_III	0	0	0	8	PHYSICAL	NO
150N	D	6/22/2001	10:54	ST_I_TO_II	0	0	0	5	PHYSICAL	NO
150W	A	6/21/2001	16:41	ST_II	0	0	0	7	BIOGENIC	NO
150W	B	6/21/2001	16:42	ST_I_ON_III	0	0	0	8	PHYSICAL	NO
150W	C	6/21/2001	16:42	ST_II	0	0	0	8	BIOGENIC	NO
300SE	A	6/21/2001	15:27	ST_I_ON_III	0	0	0	9	BIOGENIC	NO
300SE	B	6/21/2001	15:27	ST_I	0	0	0	5	PHYSICAL	NO
300SE	F	6/22/2001	10:16	ST_I_ON_III	0	0	0	10	PHYSICAL	NO
300WSW	A	6/21/2001	15:14	ST_II_ON_III	0	0	0	11	BIOGENIC	NO
300WSW	B	6/21/2001	15:15	ST_I_TO_II	0	0	0	6	BIOGENIC	NO
300WSW	C	6/21/2001	15:16	ST_II_TO_III	0	0	0	9	BIOGENIC	NO

Appendix B1

NLDS Seawolf Mound REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Comments
CTR	A	6/21/2001	15:48	ST_II	DM>P; SANDY/GR CLAY; ROCKS; HYDROIDS; TUBES; SHELLS; AMP TUBES; WORM@Z
CTR	B	6/21/2001	15:49	ST_I_TO_II	DM>P; SILTY/GRAY CLAY; AMPHIPOD TUBES; HYDROID
CTR	C	6/21/2001	15:50	ST_II_ON_III	DM>P; SANDY M/ GRAY CLAY; VOIDS; TUBES; ORG DETRITUS; SHELL BITS
75E	A	6/21/2001	15:41	ST_II_ON_III	DM>P; SANDY/GRY CLAY; VOID; AMPELISCA TUBES; SHELL HASH; SURF REWORKING
75E	B	6/21/2001	15:42	ST_II_ON_III	DM>P; SANDY M/CLAY; LIVE&DECAY. AMP MAT; VOID; TUBES; WORM@Z;ORG DETRITUS
75E	C	6/21/2001	15:42	ST_I_TO_II	DM>P; SANDY/GR CLAY; LG MUD CLST/ROCK; LIVE AMP TUBES;DETRITUS;RED CLST;SHELLS
150N	A	6/22/2001	10:50	ST_I_ON_III	DM>P; SANDY/GR CLAY; VOID; SM TUBES; ALGAE; SHELL LAG; ORG DETRITUS
150N	B	6/22/2001	10:51	ST_II_ON_III	DM>P; SANDY/GRAY CLAY; VOID; AMPS; ORGANIC DETRITUS; SHELL LAG
150N	D	6/22/2001	10:54	ST_I_TO_II	DM>P; SANDY/TAN CLAY; SM TUBES; AMPS; ORG DETRITUS
150W	A	6/21/2001	16:41	ST_II	DM>P; SANDY M>P; LIVE&DECAY AMP MAT; ORG DETRITUS; SHELL LAG;BURROW-OPENING
150W	B	6/21/2001	16:42	ST_I_ON_III	DM>P; SANDY/GRAY CLAY; VOIDS; TUBES; WORM @Z; HYDROID
150W	C	6/21/2001	16:42	ST_II	DM>P; SANDY/GR CLAY; TUBES; LIVE AMP TUBES; DETRITUS; BURROW/OPENING; WORMS@Z
300SE	A	6/21/2001	15:27	ST_I_ON_III	SANDY GRY CLY=DM>P; S M>P; BURROWS/OPNING; HERMIT CRAB; VOIDS; TUBES; HYDROIDS
300SE	B	6/21/2001	15:27	ST_I	SANDY GREY CLAY=DM>P; SAND/SILT; ROCKS; TUBES; WORM @Z; SHELL HASH
300SE	F	6/22/2001	10:16	ST_I_ON_III	DM>P; SAND/SILT; ROCKS; VOIDS; BURROW; HYDROIDS; SHELL HASH; TUBES
300WSW	A	6/21/2001	15:14	ST_II_ON_III	SANDY GRY CLAY=DM>P; SANDY M>P; BURROW/OPNING; WORMS@Z;VOID;TUBES;AMP TUBES;SHELL
300WSW	B	6/21/2001	15:15	ST_I_TO_II	GREY CLAY=DM>P; SANDY MUD>P;DENSE TUBES;DECAYING AMP MAT;SHELL HASH;ORG DETRITUS
300WSW	C	6/21/2001	15:16	ST_II_TO_III	GRY CLAY=DM>P; S M>P;TUBES; BURROWS/OPNING;WORM@Z; LIVE&DECAY AMP TUBES;SHELLS

Appendix B2

NLDS Reference Area REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Grain Size (phi)			Mud Clasts		Camera Penetration (cm)			
					Min	Max	Maj Mode	Count	Avg. Diam	Min	Max	Range	Mean
NLON-REF													
1	A	6/21/2001	12:45	ST_I_ON_III	>4	2	>4	0	0	10.63	11.1	0.47	10.86
1	B	6/21/2001	12:45	ST_I	>4	2	>4	0	0	8.01	8.74	0.73	8.38
1	C	6/21/2001	12:48	ST_II_ON_III	>4	2	>4	3	0.12	8.48	10.16	1.68	9.32
2	A	6/21/2001	12:29	ST_I	>4	3	>4	0	0	8.43	9.16	0.73	8.8
2	B	6/21/2001	12:30	ST_I	>4	3	>4	0	0	8.06	8.69	0.63	8.38
2	C	6/21/2001	12:30	ST_I	>4	2	>4	0	0	7.75	8.53	0.79	8.14
3	A	6/21/2001	12:15	INDET	>4	2	>4	0	0	10.21	11.15	0.94	10.68
3	B	6/21/2001	12:19	ST_I	>4	2	4 to 3	0	0	8.06	8.59	0.52	8.32
3	C	6/21/2001	12:20	ST_I_ON_III	>4	2	4 to 3	0	0	8.59	8.74	0.16	8.66
4	A	6/21/2001	13:08	ST_I	4	2	4 to 3	0	0	4.76	5.71	0.95	5.24
4	B	6/21/2001	13:09	ST_I	4	2	4 to 3	0	0	3.76	4.44	0.69	4.1
4	C	6/21/2001	13:10	ST_I	>4	3	4 to 3	0	0	3.65	4.02	0.37	3.84
5	A	6/21/2001	12:52	ST_I_ON_III	>4	2	4 to 3	0	0	5.18	5.65	0.47	5.42
5	B	6/21/2001	12:58	ST_I	>4	2	4 to 3	0	0	6.34	7.23	0.89	6.78
5	C	6/21/2001	12:59	ST_I	>4	2	4 to 3	0	0	4.66	6.03	1.38	5.34

Appendix B2

NLDS Reference Area REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Dredged Material Thickness (cm)			Redox Rebound Thickness (cm)			Apparent RPD Thickness (cm)			Methane			OSI
					Min	Max	Mean	Min	Max		Min	Max	Mean	Min	Max	Mean	
NLON-REF																	
1	A	6/21/2001	12:45	ST_I_ON_III	0	0	0	0	0	0	0.16	4.08	1.89	0	0	0	8
1	B	6/21/2001	12:45	ST_I	0	0	0	0	0	0	0.16	4.92	2.32	0	0	0	5
1	C	6/21/2001	12:48	ST_II_ON_III	0	0	0	0	0	0	0.73	3.61	1.94	0	0	0	8
2	A	6/21/2001	12:29	ST_I	0	0	0	0	0	0	0.31	3.35	1.82	0	0	0	4
2	B	6/21/2001	12:30	ST_I	0	0	0	0	0	0	0.1	2.51	1.62	0	0	0	4
2	C	6/21/2001	12:30	ST_I	0	0	0	0	0	0	0.1	2.72	1.49	0	0	0	3
3	A	6/21/2001	12:15	INDET	0	0	0	0	0	0	NA	NA	NA	0	0	0	99
3	B	6/21/2001	12:19	ST_I	0	0	0	0	0	0	1.78	3.04	2.5	0	0	0	5
3	C	6/21/2001	12:20	ST_I_ON_III	0	0	0	0	0	0	1.83	3.56	2.73	0	0	0	9
4	A	6/21/2001	13:08	ST_I	0	0	0	0	0	0	1.59	4.29	3.13	0	0	0	6
4	B	6/21/2001	13:09	ST_I	0	0	0	0	0	0	1.43	3.65	2.75	0	0	0	5
4	C	6/21/2001	13:10	ST_I	0	0	0	0	0	0	0.74	2.75	1.95	0	0	0	4
5	A	6/21/2001	12:52	ST_I_ON_III	0	0	0	0	0	0	0.16	3.35	2.06	0	0	0	8
5	B	6/21/2001	12:58	ST_I	0	0	0	0	0	0	0.16	3.3	2.12	0	0	0	4
5	C	6/21/2001	12:59	ST_I	0	0	0	0	0	0	0.05	2.96	1.5	0	0	0	3

Appendix B2

NLDS Reference Area REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Surface Roughness	Low DO	Comments
NLON-REF							
1	A	6/21/2001	12:45	ST_I_ON_III	PHYSICAL	NO	SANDY MUD>P; TUBES; VOIDS; WORMS @Z; RED SED; SHELL BITS
1	B	6/21/2001	12:45	ST_I	PHYSICAL	NO	SANDY MUD>P; TUBES; REDUCED SEDIMENT; WIPER CLAST; SHELL BITS
1	C	6/21/2001	12:48	ST_II_ON_III	PHYSICAL	NO	SANDY MUD>P; AMP TUBES; VOIDS; OX&RED CLASTS; LG WORMS @Z
2	A	6/21/2001	12:29	ST_I	PHYSICAL	NO	SANDY MUD>P; TUBES; SM VOID?; WORM @Z
2	B	6/21/2001	12:30	ST_I	PHYSICAL	NO	SANDY MUD>P; TUBES; REDUCED SEDIMENT @ SURFACE; WIPER SMEARS
2	C	6/21/2001	12:30	ST_I	PHYSICAL	NO	SANDY MUD>P; TUBES; REDUCED SEDIMENT; WORM @Z?; PATCHY RPD
3	A	6/21/2001	12:15	INDET	INDET	NO	SANDY MUD>P; PULL AWAY; TUBES; WORMS@Z; VOIDS; SED REWORKING; DIST SURF
3	B	6/21/2001	12:19	ST_I	PHYSICAL	NO	SANDY MUD>P; SM TUBES; S/M
3	C	6/21/2001	12:20	ST_I_ON_III	PHYSICAL	NO	SANDY MUD>P; TUBES; VOIDS; MACRO ALGAE
4	A	6/21/2001	13:08	ST_I	BIOGENIC	NO	SAND>P; ALGAE; BIVALVE SHELLS; GASTROPOD
4	B	6/21/2001	13:09	ST_I	PHYSICAL	NO	SAND>P; PLANT MATERIAL; TUBES; ROCK?
4	C	6/21/2001	13:10	ST_I	PHYSICAL	NO	SAND>P; UNDERPEN; WORM @Z; SHELL BITS
5	A	6/21/2001	12:52	ST_I_ON_III	PHYSICAL	NO	SANDY MUD>P; TUBES; SMALL VOID; SHELL BITS; WORM @Z
5	B	6/21/2001	12:58	ST_I	PHYSICAL	NO	SANDY MUD>P; TUBES; REDUCED SED; SHELL BITS; ORGANIC DETRITUS
5	C	6/21/2001	12:59	ST_I	BIOGENIC	NO	SANDY MUD>P; BIVALVE SHELLS; WIPER CLAST

Appendix B2

NLDS Reference Area REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Grain Size (phi)			Mud Clasts		Camera Penetration (cm)			
					Min	Max	Maj Mode	Count	Avg. Diam	Min	Max	Range	Mean
NE-REF													
1	A	6/21/2001	13:58	ST_I	>4	2	>4	0	0	10.79	11.53	0.74	11.16
1	B	6/21/2001	13:58	ST_I	>4	2	>4	0	0	8.73	11.16	2.43	9.95
1	C	6/21/2001	13:59	ST_I_ON_III	>4	2	>4	3	0.21	12.7	13.07	0.37	12.88
2	A	6/21/2001	13:51	ST_II	>4	3	4 to 3	0	0	10.11	10.42	0.32	10.26
2	B	6/21/2001	13:52	ST_I_TO_II	>4	2	4 to 3	2	0.34	9.95	10.79	0.85	10.37
2	C	6/21/2001	13:53	ST_I_ON_III	>4	3	4 to 3	0	0	4.5	5.5	1.01	5
3	A	6/21/2001	13:35	ST_I_TO_II	>4	3	4 to 3	7	0.26	10.63	11.16	0.53	10.9
3	B	6/21/2001	13:36	ST_I_TO_II	>4	3	4 to 3	0	0	8.57	8.99	0.42	8.78
3	C	6/21/2001	13:37	ST_II_ON_III	>4	2	4 to 3	0	0	7.88	10.05	2.17	8.97
4	A	6/21/2001	13:44	ST_II_ON_III	>4	3	4 to 3	0	0	10.63	11.06	0.42	10.85
4	B	6/21/2001	13:45	ST_II	>4	3	4 to 3	4	0.21	6.93	8.94	2.01	7.94
4	C	6/21/2001	13:46	ST_II_TO_III	>4	3	4 to 3	0	0	7.04	8.31	1.27	7.67
WEST-REF													
1	A	6/22/2001	11:56	ST_I_TO_II	>4	2	3 to 2	0	0	8.55	9.35	0.81	8.95
1	B	6/22/2001	11:56	ST_I_TO_II	>4	2	3 to 2	0	0	8.62	9.63	1.01	9.13
1	C	6/22/2001	11:58	ST_I	>4	2	3 to 2	0	0	5.7	6.67	0.97	6.18
2	A	6/22/2001	11:18	ST_I	4	2	3 to 2	0	0	5.81	6.72	0.91	6.26
2	C	6/22/2001	11:20	ST_I	4	2	3 to 2	0	0	6.24	6.83	0.59	6.53
2	D	6/22/2001	11:21	ST_I	4	2	3 to 2	0	0	4.89	5.27	0.38	5.08
3	A	6/22/2001	11:37	ST_I	>4	2	3 to 2	0	0	6.99	7.31	0.32	7.15
3	B	6/22/2001	11:37	ST_I	>4	2	3 to 2	0	0	7.47	7.9	0.43	7.69
3	D	6/22/2001	11:41	ST_I	>4	2	3 to 2	0	0	6.45	7.04	0.59	6.75
4	A	6/22/2001	12:03	ST_I_TO_II	>4	2	4 to 3	0	0	6.45	7.2	0.75	6.83
4	B	6/22/2001	12:04	ST_I_TO_II	>4	2	4 to 3	0	0	8.28	9.52	1.24	8.9
4	C	6/22/2001	12:05	ST_II_ON_III	>4	2	4 to 3	0	0	8.76	9.41	0.65	9.09

Appendix B2

NLDS Reference Area REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Dredged Material Thickness (cm)			Redox Rebound Thickness (cm)			Apparent RPD Thickness (cm)			Methane			OSI
					Min	Max	Mean	Min	Max		Min	Max	Mean	Min	Max	Mean	
NE-REF																	
1	A	6/21/2001	13:58	ST_I	0	0	0	0	0	0	0.05	2.65	1.06	0	0	0	3
1	B	6/21/2001	13:58	ST_I	0	0	0	0	0	0	NA	NA	NA	0	0	0	99
1	C	6/21/2001	13:59	ST_I_ON_III	0	0	0	0	0	0	0.05	3.23	2.12	0	0	0	8
2	A	6/21/2001	13:51	ST_II	0	0	0	0	0	0	1.22	2.49	1.94	0	0	0	6
2	B	6/21/2001	13:52	ST_I_TO_II	0	0	0	0	0	0	0.79	2.7	2.04	0	0	0	5
2	C	6/21/2001	13:53	ST_I_ON_III	0	0	0	0	0	0	NA	NA	NA	0	0	0	99
3	A	6/21/2001	13:35	ST_I_TO_II	0	0	0	0	0	0	0.53	1.69	2	0	0	0	5
3	B	6/21/2001	13:36	ST_I_TO_II	0	0	0	0	0	0	0.21	4.29	2.41	0	0	0	6
3	C	6/21/2001	13:37	ST_II_ON_III	0	0	0	0	0	0	0.05	2.7	1.75	0	0	0	8
4	A	6/21/2001	13:44	ST_II_ON_III	0	0	0	0	0	0	0.05	3.28	1.85	0	0	0	8
4	B	6/21/2001	13:45	ST_II	0	0	0	0	0	0	0.05	3.54	1.73	0	0	0	6
4	C	6/21/2001	13:46	ST_II_TO_III	0	0	0	0	0	0	0.9	2.38	1.73	0	0	0	7
WEST-REF																	
1	A	6/22/2001	11:56	ST_I_TO_II	0	0	0	0	0	0	0.59	2.9	2	0	0	0	5
1	B	6/22/2001	11:56	ST_I_TO_II	0	0	0	0	0	0	0.48	2.96	0.5	0	0	0	3
1	C	6/22/2001	11:58	ST_I	0	0	0	0	0	0	0.22	1	0.5	0	0	0	2
2	A	6/22/2001	11:18	ST_I	0	0	0	0	0	0	1.67	4.52	3.18	0	0	0	6
2	C	6/22/2001	11:20	ST_I	0	0	0	0	0	0	1.02	3	2.75	0	0	0	5
2	D	6/22/2001	11:21	ST_I	0	0	0	0	0	0	0.05	3.23	2.14	0	0	0	4
3	A	6/22/2001	11:37	ST_I	0	0	0	0	0	0	0.38	2.8	1.72	0	0	0	4
3	B	6/22/2001	11:37	ST_I	0	0	0	0	0	0	0.16	4.14	1.89	0	0	0	4
3	D	6/22/2001	11:41	ST_I	0	0	0	0	0	0	0.22	2.9	1.82	0	0	0	4
4	A	6/22/2001	12:03	ST_I_TO_II	0	0	0	0	0	0	0.27	4.46	2.24	0	0	0	5
4	B	6/22/2001	12:04	ST_I_TO_II	0	0	0	0	0	0	1.08	5.11	3.05	0	0	0	7
4	C	6/22/2001	12:05	ST_II_ON_III	0	0	0	0	0	0	0.16	2.53	1.37	0	0	0	7

Appendix B2

NLDS Reference Area REMOTS® Sediment-Profile Photography Data from the 2001 Survey

Station	Replicate	Date	Time	Successional Stage	Surface Roughness	Low DO	Comments
NE-REF							
1	A	6/21/2001	13:58	ST_I	PHYSICAL	NO	SANDY MUD>P; TUBES; WORMS @Z; REDUCED SED @Z; SHALLOW RPD
1	B	6/21/2001	13:58	ST_I	PHYSICAL	NO	SANDY MUD>P; IRREG TOPO; SHALLOW RPD/WIPER SMEARS; RED SED;WORM@Z;TUBES
1	C	6/21/2001	13:59	ST_I_ON_III	PHYSICAL	NO	SANDY M>P; SM TUBES; RED CLASTS; SM VOID; WORMS @Z; REDUCED SED @Z
2	A	6/21/2001	13:51	ST_II	PHYSICAL	NO	SANDY MUD>P; TUBES; WORM @Z; SM AMPHIPOD MAT; REDUCED SED @Z
2	B	6/21/2001	13:52	ST_I_TO_II	PHYSICAL	NO	SANDY MUD>P; SM TUBES; OX&RED CLASTS; WIPER CLSTS;WORM @Z;RED SED @Z
2	C	6/21/2001	13:53	ST_I_ON_III	PHYSICAL	NO	MUDDY SAND>P; SM TUBES; VOID; REDUCED SED; WIPER SMEARS
3	A	6/21/2001	13:35	ST_I_TO_II	BIOGENIC	NO	MUDDY SAND>P; TUBES; LG WORMS @Z; OX & RED CLASTS; FECAL MOUND?
3	B	6/21/2001	13:36	ST_I_TO_II	PHYSICAL	NO	MUDDY SAND>P; TUBES; JUVENILE AMPELISCA
3	C	6/21/2001	13:37	ST_II_ON_III	PHYSICAL	NO	MUDDY SAND>P; AMP TUBES; VOID; WORMS @Z; PATCHY RPD; WIPER CLSTS
4	A	6/21/2001	13:44	ST_II_ON_III	PHYSICAL	NO	MUDDY SAND>P; AMP TUBES; VOID; LG OCCUPIED BURROW; WORMS @Z; SHELL BITS
4	B	6/21/2001	13:45	ST_II	PHYSICAL	NO	SANDY MUD>P; AMP TUBES; OX&RED CLASTS; SLOPING TOPO; SHELL BITS
4	C	6/21/2001	13:46	ST_II_TO_III	PHYSICAL	NO	MUDDY SAND>P; AMP TUBES; BURROWS; WORM @Z; REDUCED SED @Z
WEST-REF							
1	A	6/22/2001	11:56	ST_I_TO_II	BIOGENIC	NO	SANDY MUD>P; SHELL BED; ORG DETRITUS; DECAYING AMPS; WORM @Z; SM TUBES
1	B	6/22/2001	11:56	ST_I_TO_II	BIOGENIC	NO	SANDY M>P; SHELL HASH; WORM @Z; DECAYING AMPS; ORG DETRITUS; RED SED; TUBES?
1	C	6/22/2001	11:58	ST_I	PHYSICAL	NO	MUDDY SAND>P; SHALLOW RPD; RED SED; SHELL HASH; TUBES; ORG DETRITUS
2	A	6/22/2001	11:18	ST_I	PHYSICAL	NO	BRN SAND/GRAY SILT; SHELL HASH; SHELLS
2	C	6/22/2001	11:20	ST_I	PHYSICAL	NO	TAN SAND/GRAY SILT; SHELL HASH; WIPER CLST; MUSSEL SHELL
2	D	6/22/2001	11:21	ST_I	BIOGENIC	NO	SAND W/GRAY SILT; SHELL BED; ORGANIC DETRITUS; RED SED @Z; TUBES
3	A	6/22/2001	11:37	ST_I	PHYSICAL	NO	SAND/GRAY SILT; SHELL HASH; WORMS @Z; TUBES; V. REDUCED SED @Z
3	B	6/22/2001	11:37	ST_I	PHYSICAL	NO	SAND/GREY-BLK SILT&CLAY; WORM @Z; SHELL HASH; REDUCED SED @Z
3	D	6/22/2001	11:41	ST_I	PHYSICAL	NO	SANDY MUD>P; REDUCED SED; SHELL HASH; WORM @Z; SHELLS
4	A	6/22/2001	12:03	ST_I_TO_II	PHYSICAL	NO	SANDY MUD>P; SHELLS; ORGANIC DETRITUS; TUBES
4	B	6/22/2001	12:04	ST_I_TO_II	BIOGENIC	NO	SANDY MUD>P; SHELL HASH; LG WORMS @Z; BURROW/OPENING; ORG DETRITUS
4	C	6/22/2001	12:05	ST_II_ON_III	BIOGENIC	NO	SANDY MUD>P; SHELL HASH; VOIDS; WORMS @Z; ORG DETRITUS; SHELL