

Cruise: EDDIES		Leg: #1	Cast: #1	Type: TEST	Samplers: Paul, Sarah Green, Michael														
Date: 12 Jun 04	Time: 1750	Lat: 37 56.046	Long: 068 42 176	Leg: #1	Time: 1919	Lat: 37 55.186	Long: 068 42 981												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRFF	POC/PON Vol= 2L	HPLC Vol=	Chla	Flow Cyt	DOP	N/P H-cell	15N	
				O2 <sub>1</sub>	O2 <sub>2</sub>														
1	0																		
2	0	19.4				E1-1		E1-1			E1-1-1							E1-1-1	
3	0																		
4	20	19.5				-2		-2			-2-2								-2-2
5	20											E1-2-2	E1-2-2						-2-2
6	40	15.4				-3		-3			-3-3								-3-3
7	40																		
8	50	14.9				-4		-4			-4-4								-4-4
9	60	14.6				-5		-5			-5-5								-5-5
10	60																		
11	70	14.4				-6		-6			-6-6								-6-6
12	80	14.3				-7		-7			-7-7								-7-7
13	80																		
14	90	14.0				-8		-8			-8-8								-8-8
15	100	13.9				-9		-9			-9-9								-9-9
16	100																		
17	120	13.6				-10		-10			-10-10								
18	120																		
19	140	13.8				-11		-11			-11-11								
20	140																		
21	200	12.6				-12		-12			-12-12								
22	300	10.9				-13		-13											
23	500	9.7				-14		-14											
24	700	8.7				-15		-15											

Sarah  
0-1

Cruise: ENDIES		Leg: 1		Cast: 2		Type: Eddies A3 (0-700m)											
Date:	13 JUNE 2004	Time:	1657	Lat:	34° 30.133' N	Long:	66° 30.299' W										
Date:	13 JUNE 2004	Time:	1830	Lat:	34° 29.391' N	Long:	66° 32.91										
N #	Depth	Niskin Temp	Helium	O2	O2, O2	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	DOP	N #
1	0																1
2	0	24.9		EI-1	16.17	EI-16	EI-16		EI-16	EI-1	EI-13-1	EI-13-1	EI-12-1	EI-12-1	EI-12		2
3	0																3
4	20	24.6		-2		-17	-17		-17	-2	EI-14-2	EI-13-1	EI-12-1	EI-12-1	EI-12		4
5	20																5
6	40	24.6		-3		-18	-18		-18	-3	15-3	15-3	13-2	13-2	-13		6
7	40																7
8	50	24.6		-4		-19	-19		-19	-4	16-4	15-3	14-3	14-3	-14		8
9	60	24.8		-5		-20	-20		-20	-4	17-5	16-4	15-4	15-4	-15		9
10	60											16-4	16-4	16-4	-16		10
11	70	23.5		-6		-21	-21		-21		18-6	17-5	17-6	17-6	-17		11
12	80	23.5		-7		-22	-22		-22	-5	19-7	18-6	18-7	18-7	-18		12
13	80																13
14	90	23.2		-8		-23	-23		-23		20-8	19-8	19-8	19-8	-19		14
15	100	22.9		-9		-24	-24		-24	-6	21-9	20-8	20-9	20-9	-20		15
16	100											18-6	18-6	20-9	-20		16
17	120	22.5		-10		-25	-25		-25	-7	22-10	21-9	21-10	21-10	-21		17
18	120											19-7	21-10	21-10	-21		18
19	140	22.4		-11		-26	-26		-26	-8	23-11	22-11	22-11	22-11	-22		19
20	140																20
21	200	21.7		-12		-27	-27		-27	-9	24-12	23-11	24-12	24-12	-24		21
22	300	21.9		-13		-28	-28		-28	-10	25-13	24-12	25-13	25-13	-25		22
23	500	20.7		-14		-29	-29		-29	-6	25-13	24-12	25-13	25-13	-25		23
24	700	20.2		-15	20.25	-30	-30		-30	-7	24-12	24-12	24-12	24-12	-24		24

PHYTO

1

2

Cruise: EDDIES		Leg: #1		Cast: CTD #3		Type: A1 (0-700m)		Samplers:									
Date: 6/15/04		Time: 0845		Lat: 33 00.892		Long: 63 22.85		POC/PON		HPLC		Chia					
Date: 6/15/04		Time: 0934		Lat: 33 00.79		Long: 63 22.85		Vol= 2L		Vol= 4L		Flow Cyt					
N #	Depth	Niskin Temp	Helium Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	DOP	W/P Hassell	15N/13C
			O2	O2, O2													
	1 0				E1-	E1-	E1-	E1-									0.3
	2 0	23.2			31	31	11	11	37-12							1	0.3
	3 0	23.6			31	31	12	12	36-11	25	-1.23	-1.23	-1.23	-1.23	23		0.3
	4 20	23.6			32	32	12	12	36-11	26	-2.24	-2.24	-2.24	-2.24	24		0.3
	5 20	22.9			33	33	13	13	35-10	27	-3.25	-3.25	-3.25	-3.25	25		0.3
	6 40	21.4			34	34	14	14	34-9	26	-4.26	-4.26	-4.26	-4.26	26		0.3
	8 50	20.0			35	35	14	14	33-8	28	-4.27	-5.27	-5.27	-5.27	27		0.3
	10 60	19.8			36	36	15	15	32-7	28	-6.28	-6.28	-6.28	-6.28	28		0.3
	11 70	19.5			37	37	16	16	31-6	29	-5.29	-7.29	-7.29	-7.29	29		0.3
	12 80	19.5															0.3
	13 80	19.5			38	38	16	16	30-5	30	-8.30	-8.30	-8.30	-8.30	30		0.3
	14 90	19.4			39	39	17	17	29-4	30	-6.31	-9.31	-9.31	-9.31	31		0.3
	15 100	19.4															0.3
	16 100	19.4			40	40	17	17	28-3	31	-7.32	-10.32	-10.32	-10.32	32		0.3
	17 120	19.3			41	41	18	18	27-2	32	-8.33	-11.33	-11.33	-11.33	33		0.3
	18 120	19.3															0.3
	19 140	19.3															0.3
	20 140	19.3			42	42	19	19	26-1	33	-9.34	-10.34	-10.34	-10.34	34		0.3
	21 200	18.9			43	43	20	20	34*-10	35*	-11.35	-11.35	-11.35	-11.35	35*		0.3
	22 300	17.7			44	44			-13	36*	-12.36	-12.36	-12.36	-12.36	36*		0.3
	23 500	17.7			45	45			*=3L								0.3
	24 700	17.7															0.3

W/P Hassell

12#

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

F-10

Φ = pressures phytoplankton

Cruise: E201E3		Lag: 1		Cast: CTD # 4		Type: A1		Samplers: PAUL, VASELY, TOM, GILL		(0-700-)					
Date: 15 JUNE 2004	Time: 1208	Lat: 32° 39.707' N	Long: 64° 28.782' W	Date: 15 JUNE 2004	Time: 1257	Lat: 32° 39.420' N	Long: 64° 29.440' W	POC/PON	HP/LC	Chia	Flow Cyt	BoP	D1P	ISV	
N	Depth	Niskin Temp	Helium	O2	O2, O2, #	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	Vol= 2L	Vol= 4L		
1	0														
2	0	27.5		1	16.17	E1-46	E1-46		E1-46		49 12				
3	0											E1-37	E1-34	E1-34	E1-34
4	20	24.3		2							48 11				
5	20														
6	40	21.4		3							47 10				
7	40														
8	50	*		4							46 9				
9	60	20.8		5							45 8				
10	60														
11	70	20.4		6							44 7				
12	80	20.3		7							43 6				
13	80														
14	90	20.1		8							42 5				
15	100	19.9		9							41 4				
16	100														
17	120	20.0		10							40 3				
18	120														
19	140	19.9		11							39 2				
20	140														
21	200	19.7		12											
22	300	19.9		15											
23	500			14											
24	700	17.0		15											

fixing

Lockers

MISFIRE

Filler not salt correctly  
 Toached by hand accidentally.

(0-7000)

Cruises: <i>APPLES</i>		Leg: <i>1</i>	Cast: <i>CTD CAST # 5</i>	Type: <i>A</i>	Samplers: <i>Paul VALELEY BILL SARA H</i>														
Date: <i>15 JUNE 2004</i>	Time: <i>1532</i>	Lat: <i>32° 18.650' N</i>	Long: <i>64° 35.230' W</i>	POC/PON	HPLC	Chia	Flow Cyt	DOP	N/P										
N #	Depth	Niskin Temp	Helium	Oxygens	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRFF	Vol= 2L	Vol= 4L							
1	0																		
2	0	24.5		41	E1-61	E1-61		E1-61	E1-21	63 13									1
3	0										E1-44	E1-45	E1-45	E1-45					5
4	20	24.2		42	62	62		12	22	62 12									2
5	20										50	2	46	2	-46	2	-44		
6	40	21.9		43	63	63		13	23	61 11									3
7	40										51	3	47	3	-47	3	-47		
8	50	22.1		44	64	64		64	24	60 10			48	4	48	4	-48		4
9	60	<del>22.1</del> 20.8		45	65	65		65	24	59 9							-49		5
10	60										52	4	48	5	49	5	-50		
11	70	20.4		46	66	66		66		58 8			50	6	50	6	-50		6
12	80	19.9		47	67	67		67	25	57 7									7
13	80										53	5	58	7	51	7	51		8
14	90	20.0		48	68	68		68		56 6			52	8	52	8	52		9
15	100	19.9		49	69	69		69	26	55 5									
16	100										54	6	58	9	53	9	53		
17	120	19.8		50	70	70		70	27	54 4									
18	120										55	7	54	10	54	10	54		
19	140	19.7		51	71	71		71	28	53 3									
20	140										56	8	55	11	55	11	55		
21	200	19.5		52	72	72	K-15	72	29	52 2									
22	300	19.5		53	73	73	-16	73	30		57	9							
23	500	18.8		54	74	74	-17	74			58	11							
24	700	16.8		55	75	75	-18	75			59	12							
					56	57					60								
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N #

1

2



Cruise: EBPRES		04/04-1		Leg: 1		Cast: CTD CAST # 7		Type: A1 (0-700m)		Samplers: N-Flan, Volort, Dnn'S, TOR1		(0-700m)								
Date: 15 Jun 04		Time: 2342		Lat: 33 21.6		Long: 63 16.73														
Date: 16 Jun 04		Time: 0230		Lat: 33 20.67		Long: 63 16.12														
N #	Depth	Mlkin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRFF	POC/PON	HPLC	Chia	Flow Cyt	DOP	N/P	HNS/SL	15 N	
				O2	O2, O2															
1	0																			1
2	0	23.4				E1-76	E1-76		E1-76	E1-71 13										6
3	0										E1-61 1	E1-56 1	E1-56 1	E1-56						2
4	20	23.2				77	-77		-77	75 12	62 2	57 2	57 2	57 2	-57					3
5	20																			6
6	40	20.7				78	78		78	74 11	63 3	58 3	58 3	58 3	58					3
7	40																			7
8	30	20.0				79	79		79	73 10		59 4	59 4	59 4	59					4
9	60	19.6				80	80		80	72 9										5
10	60										64 4	60 5	60 5	60 5	60					10
11	70	19.4				81	81		81	71 8		61 6	61 6	61 6	61					6
12	80	19.3				82	82		82	70 7										7
13	80										65 5	62 7	62 7	62 7	62					13
14	90	19.2				83	83		83	69 6		63 8	63 8	63 8	63					14
15	100	19.2				84	84		84	68 5										15
16	100										66 6	64 9	64 9	64 9	64					16
17	120	19.2				85	85		85	67 4										17
18	120										67 7	65 10	65 10	65 10	65					18
19	140	19.1				86	86		86	66 3										19
20	140										68 8	66 11	66 11	66 11	66					20
21	200	19.1				87	87		87	65 2										21
22	300	18.9				88	88		88	* 70 10										22
23	5400	18.1				89	89		89	* 71 11										23
24	1500	17.3				90	90		90	* 72 12										24
										* 3L										

Centon

N # 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: EDDIES		Leg: 1	Cast: 8	Type: A1 (0-700)	Samplers: Nurlan, Sarah, Grace, Dennis, Tony														
Date: 16 Jun 04		Time: 0253	Lat: 33 41.809	Long: 63 9.74	POC/PON		HPLC		Chla	Flow Cyt	DOP	W/D							
N #	Depth	Niakin Temp	Helium	Time: 0331	Lat: 33 41.84	DIC/ALK	TOC/TON	Salts	Long: 63 9.74	Bact	FRRF	Vol=	Vol=						
												O2	O2, O2s						
1	0																	1	
2	0	23.8			911	911					8913						4	1	
3	0											73	1	67	-1	67	-1	67	2
4	20	23.7			92	92					8712								2
5	20				93	93						74	2	68	-2	68	-2	68	3
6	40	21.2									8711								3
7	110											75	3	69	-3	69	-3	69	7
8	50	20.9			94	94					8610								4
9	60	20.5			95	95					859								5
10	60											72	4	71	-5	71	-5	71	10
11	70	20.2			96	96					848								11
12	80	20.0			97	97					837								12
13	80											77	5	73	-7	73	-7	73	13
14	90	19.9			98	98					826								14
15	100	19.6			99	99					815								15
16	100											78	6	75	-9	75	-9	75	16
17	120	19.3			100	100					804								17
18	120											79	7	76	-10	76	-10	76	18
19	140	19.3			101	101					79-3								19
20	140											80	8	77	-11	77	-11	77	20
21	200	19.1			102	102					78-2								21
22	300	19.1			103	103					84*10								22
23	500	18.6			104	104					83*11								23
24	700	16.7			105	105					84*12								24

$\phi = \text{mg} / \text{ml} / \text{L} / \text{m}^3$

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Cruise: EN01ES		Leg: 1	Cast: # CTd #9	Type: Helium A1 (0-1500m)										
Date: 16-Jan-04	Time: 0714	Lat: 33 06.302	Long: 63 23 02.2	Samplers: N11, Kevin Ogan, Martin										
Date: 16-Jan-04	Time: 0845	Lat: 32 59 41.1	Long: 63 23 02.2											
N #	Depth	Miskin Temp	Helium	Oxygens	DiC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HLPLC	Chia	Flow Cyt
				O2 <sub>1</sub>							Vol=	Vol=		
				1411.1										
1	0	22.2	146	G1	ED01-1			106						
2	50	19.8		G2				107						
3	100	19.3	155	G3				108						
4	150	19.2		G4				109						
5	200	19.2	156	G5				110						
6	250			G6				111		* 1000m				
7	300	19.0	157	G7				112						
8	350	18.8		G8				113						
9	400	18.7	168	G9				114						
10	450	18.3		G0				115						
11	500	17.9	169	G1				116						
12	550	17.5		G2				117						
13	600	17.6	160	G3				118						
14	650	17.5		G4				119						
15	700	17.5	161	G5				120						
16	750	17.0		G6				121						
17	800	16.7	162	G7				122						
18	900	15.3	163	G8				123						
19	1000	13.7	164	G9				124						
20	1100	12.0	165	G0				125						
21	1200	10.8	166	G1	ED02-13			126						
22	1300	11.0	167	G2				127						
23	1400	10.5	169	G3				128						
24	1500	10.0	170	G4				129						

← Slow Drift

Cruise: ENDIES		Leg: 1		Cast: CTA#10		Type: C2 (0-700m)									
Date: 18 Jun 04		Time: 0859		Lat: 31 14.942		Long: 60 27.571									
Date: 18 Jun 04		Time: 0942		Lat: 31 15.03		Long: 60 27.45									
N #	Depth	Miskin Temp	Helium		DIC/ALK	TOC/TON *DOF	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC *15N Vol= 4L	Chla	Flow Cyt	Ø
			O2 <sub>1</sub>	O2 <sub>2</sub>											
1	0	23.6			106	106		130		102		*8			
2	0														
3	0	23.5			107	167		131		161					
4	20														
5	20	23.3			103	108	108*	132		100					
6	40														
7	40	21.6			104	109	109	133		99					
8	50														
9	60	20.5			106	110	110	134		98					
10	60														
11	70	20.1			107	111	111	135		97					
12	80														
13	80	19.8			108	112	112	136		96					
14	90	19.8			109	113	113	137		95					17
15	100	19.5			110	114	114	138		94					
16	100														
17	120	19.5			111	115	115	139		93					
18	120														
19	140	19.3			112	116	116	140		92					
20	140														
21	200	18.9			113	117	117	141		91					
22	300	18.6			114	118	118	142		90					
23	500	16.4			115	119	119	143		90					
24	700	13.3			116	120	120	144		90					

Ø = phytoplankton

Cruise: EDOIES		Leg: 1		Cast: 11		Type: C2 (0-700m)		Samplers: Paul, DENNIS, VALUITY, TOM							
Date: 18-Sun-04		Time: 1209		Lat: 31.14830		Long: 60 01.860									
Date: 18-Sun-04		Time: 1255		Lat: 31.14670		Long: 60 01.760									
N #	Depth	Niskin Temp	Helium		DIC/ALK	TOC/TN	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	
			O2	O2:O2											*DOP
1	0	23.9			121	121	145	31	115		97	89	89	89	9
2	0				122	122	146	32	114						
3	0	23.7			122	122	146	32	114						
4	20				122	122	147	33	113		98	90	90	90	
5	20	23.3			122	122	147	33	113		99	91	91	91	
6	40				124	124	148		112		92	92	92	92	
7	40	21.9			124	124	148		112		100	93	93	93	
8	50				125	125	149	34	111						
9	60	20.1			125	125	149	34	111						
10	60				126	126	150	35	110						
11	70	19.6			126	126	150	35	110		101	95	95	95	
12	80				127	127	151	36	109						
13	80	19.5			127	127	151	36	109						
14	90	19.4			128	128	152	37	108						
15	100	19.2			129	129	153	38	107						
16	100				130	130	154	39	106		102	97	97	97	
17	120	19.0			130	130	154	39	106						
18	120				131	131	155	40	105		103	98	78	98	
19	140	18.9			131	131	155	40	105						
20	140				132	132	156	41	104		104	99	99	99	
21	200	16.7			132	132	156	41	104		105				
22	200	18.2			133	133	157	42			106				
23	300	16.1			134	134	158				107				
24	700	12.7			135	135	157				103	108			

0.2 filter  
Tom

Cruise: EDP1ES		Leg: 1	CTD CAST # 12		Type: C2	Samplers: PAUL SARAH GRACE DENNIS MICHAKS		(0-700m)							
Date: 18 JAN 04	Time: 1514	Lat: 31°14.97'N	Long: 59°36.75'W	Lat: 31°14.5'N	Long: 59°36.3'W	POC/PON	HPIC	Chia	Flow Cyt						
Date:	Time: 1605	Lat:	Long:	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	Vol= 2	Vol= 4L	Chia	Flow Cyt		
										O <sub>2</sub>	O <sub>2</sub> /O <sub>2</sub>			↑ DOP	
N #	Depth	Niakin Temp	Helium	O <sub>2</sub>	O <sub>2</sub> /O <sub>2</sub>	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPIC	Chia	Flow Cyt
1	0	24.1				136	136		160	43	128	13			
2	0														
3	20	23.3				137	137		161	44	127	12			
4	20														
5	40	22.5				138	138		162	45	126	11			
6	40														
7	50	21.3				139	139		163		125	10			
8	60														
9	60	20.0				140	140		164	46	124	9			
10	70														
11	70	19.8				141	141		165	47	123	8			
12	80														
13	80	19.4				142	142		166	48	122	7			
14	90	19.2				143	143		167	49	121	6			
15	100	19.1				144	144		168	50	120	5			
16	100														
17	120	19.1				145	145		169	51	119	4			
18	180														
19	140	18.9				146	146		170	52	118	3			
20	140														
21	200	18.7				147	147		171	53	117	2			
22	300	17.9				148	148		172	54	116	1			
23	500	15.8				149	149		173		119	11			
24	700	12.8				150	150		174		120	12			

85N  
40L

\*Lat double  
to make 1L

Cruise: EDDIES		Leg: 1	Cast: CTD CAST # 13	Type: C2	Samplers: PAUL SARAH GRACE BILL KEVIN		(0-700)									
Date: 18-Sep-04		Time: 1824	Lat: 31 15.040	Long: 59 10.560	POC/PON	HPLC	Chia	Flow Cyt								
Date: 18-Sep-04		Time: 1914	Lat: 31 14.820	Long: 59 10.560	Vol= 2L	Vol= 4L		15 N								
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	Vol= 2L	Vol= 4L	Chia	Flow Cyt	15 N
				O2	O2, O2											
1	0	24.3		151	151				175	55	141	13				11
2	0															
3	20	23.7		152	152				176	56	140	12				20
4	20															
5	40	22.9		153	153.11				177	57	139	11				
6	40															
7	50	20.9		154	154				178	58	138	10				
8	60															
9	60	24.6		155	155				179	59	137	9				
10	70															
11	70	24.6		156	156				180	59	136	8				
12	80															
13	80	20.4		157	157				181	60	135	7				
14	90	20.5		158	158				182	61	134	6				21
15	100	14.9		159	159				183	62	133	5				
16	100															
17	120	19.6		160	160				184	63	132	4				
18	120															
19	140	19.5		161	161				185	64	131	3				
20	140															
21	200	19.2		162	162				186	65	130	2				
22	300	18.9		163	163				187	66	129	1				
23	500	16.8		164	164				188							
24	700	14.0		165	165				189							

21919  
 Shaker  
 on Sealix  
 Run OGO2  
 19/10/06



Cruiser: EDDIES		Leg: 1	Cast: CTD #14		Type: C2 (0-700m)									
Date: 18-Sep-04		Time: 2141	Lat: 31 14.73	Long: 58 45.24	Samplers: Paul, Bill, Veloy, Olga, Kevin									
N #	Depth	Maskin Temp	Heilium	Time: 2229		Long: 58 44.76	Bact	FRRF	POC/PON Vol: 2L	HPLC * = 5% Vol: 4L	Chia	Flow Cyt	⊗	
				Oxygens	O <sub>2</sub>									O <sub>2</sub> O <sub>2</sub>
1	0	24.3				190	67	154		*12				22
2	0								133	122	122	122		
3	20	24.0				191	68	153						
4	20								134	123	123	123		
5	40	23.4				192	69	152						
6	40								135	124	124	124		
7	50	21.4				193		151		125	125	125		
8	60								136	126	126	126		
9	60	20.9				194	70	150						
10	70									127	127	127		
11	70	20.6				195	71	149						
12	80								137	128	128	128		
13	80	20.4				196	72	148						
14	90	20.3				197	73	147		129	129	129		23
15	100	20.1				198	74	146						
16	100								138	130	130	130		
17	120	19.8				199	75	145						
18	120								139	131	131	131		
19	140	19.6				200	76	144						
20	140								140	132	132	132		
21	200	19.4				201	77	143						
22	300	18.9				202	78	142		142*				
23	500	16.8				203				143*				
24	700	13.7				204				144*				
									3L					

⊗ = Phytoplankton

Cruise: ED01ES		Leg: 1		Cast: 570 #15		Type: MacBrians C2 (0-80)										
Date: 19 Jun 04		Time: 0610		Lat: 31 10.709		Long: 59 36.275										
Date: 19 Jun 04		Time: 0638		Lat: 31 10.828		Long: 59 35.807										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	Invert. turb.
				O <sub>2</sub>	O <sub>2</sub> O <sub>2</sub>							Vol=	Vol=			
1	0															
2	0															
3	0															
4	0															Bea Inc
5	0															Bea Inc
6	0															"
7	20															Bea Inc
8	20															Bea Inc
9	20															"
10	20															"
11	40															Bea Inc
12	40															"
13	40															"
14	40															"
15	80															Bea Inc
16	80															"
17	80															"
18	80															"
19	80															"
20	80															"
21	80															"
22	80															"
23	80															"
24	80															"

Samplers: Bea-1 Thomas

4000-1  
CDS + 8

Cruise: EDDIES		Leg: 1	Cast: CTD CAST # 16	Type: C1 (0-300m)	Samplers: PAUL, VALERAY, TOM, BILL, DENNIS																	
Date: 21 Jun 04	Time: 1234	Lat: 30.29.590	Long: 65.45.620		POC/PON	HPLC	Chla	Flow Cyt	NIP													
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/ALK	TOC/TN	Salts	Nuts	Bact	FRRF	Vol= 2L	Vol= 4L									
				O2	O2:O2							*3000										
1	0	24.9		101		184	181		205		167	13	145	-1	133	-1	133	-1	133	1	*3000 (4L)	
2	0												145	-1	133	-1	133	-1	133			
3	20	24.8		102		182	181		206		164	12	146	-2	134	-2	134	-2	134	2		
4	20												146	-2	134	-2	134	-2	134			
5	40	23.9		103		183	183		207		165	11	147	-3	135	-3	135	-3	135	3		
6	40												147	-3	135	-3	135	-3	135			
7	50	22.2		104		184	184		208		164	10	148	-4	136	-4	136	-4	136	4		
8	60												148	-4	137	-5	137	-5	137			
9	60	21.7		105		185	185		209		163	9			138	-6	138	-6	138	5		
10	70														138	-6	138	-6	138			
11	70	20.7		106		186	186		210		162	8			144	-5	139	-7	139	6		
12	80												144	-5	139	-7	139	-7	139			
13	80	20.9		107		187	187		211		161	7			140	-5	140	-8	140	7		
14	90	20.4		108		188	188		212		160	6			140	-5	140	-8	140	8		
15	100	20.3		109		189	189		213		159	5			150	-6	141	-9	141	9		
16	100														150	-6	141	-9	141			
17	120	19.9		110		190	190		214		158	4			151	-7	142	-10	142	10		
18	120												151	-7	142	-10	142	-10	142			
19	140	19.7		111		191	191		215		157	3			152	-8	142	-11	142	11		
20	140												152	-8	142	-11	142	-11	142			
21	200	19.5		112		192	192		216		156	2	153	-9						11		
22	300	19.0		113		193	193		217		155	1	154	-10	*							
23	500	18.3		114		194	194		218		155	1	155	-11	*							
24	700	17.5		115		195	195		219		156	1	156	-12	*							
													*3L									

N # 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24



Cruise: EDDIES		Leg: 1	Cast: CTD CAST # 17	Type: C1 (0-700m)	Samplers: PAUL SARAH GRACE GILL MICHAEL													
Date: 21 June 04	Time: 1558	Lat: 30 29.830	Long: 15 20.150	Depth	Niskin Temp	Helium												
Date: 21 June 04	Time: 1646	Lat: 30 29.150	Long: 15 19.472	O2 <sub>1</sub>	O2 <sub>2</sub>	DIC/AIK												
N #	Depth	Niskin Temp	Helium	O2 <sub>1</sub>	O2 <sub>2</sub>	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	15 N/4L	
1	0	24.9		41		196			220	80	180	13				1	14	
2	0											157	1	144	1	144	1	144
3	20	25.8		42		197			221	81	179	12				2		
4	20											158	2	145	2	146	2	145
5	40	22.6		43		198			222	82	178	11				3		
6	40											159	3	146	3	146	3	146
7	50	22.1		44		199			223		177	10				4		
8	60											160	4	148	5	148	5	148
9	60	21.0		45		200			224	83	176	9				5		
10	70															6		
11	70	21.2		46		201			225	84	175	8				7		
12	80											161	5	150	7	150	7	150
13	80	20.8		47		202			226	85	174	7				8		
14	90	20.5		48		203			227	86	173	6				8		
15	100	20.3		49		204			228	87	172	5				9		
16	100											162	6	152	9	152	9	152
17	120	19.0		50		205			229	88	171	4				10		
18	120											163	7	153	10	153	10	153
19	140	19.7		51		206			230	89	170	3				11		
20	140											164	8	154	11	154	11	154
21	200	19.6		52		207			231	90	169	2				12		
22	200	18.9		53		208			232	91	168	1				12		
23	500	17.2		54		209			233			167	11			12		
24	700	13.0		55		210			234			168	12			12		

15 N/4L

#

Cruise: EDDIES		Leg: 1	Cast: STD CRST # 18	Type: C1 (0-700m)	Samplers: FUL RILL GEN OLGA KEVIN													
Date: 21 Jun 04	Time: 1915	Lat: 30 29 340	Long: 64 55.080	POC/PON	HPLC	Chla	Flow Cyt	N/P	<sup>15</sup> N									
N #	Depth	Niskin Temp	Hellum	Oxygens	O2, O2, O2	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	Vol= 2L	Vol= 4L	Chla	Flow Cyt	N/P	<sup>15</sup> N	
1	0	24.9		21		211	211		255	92	193	13				1	15	φ
2	0																	27
3	20	24.4		22		212	212		236	93	192	12				2		
4	20																	
5	40	21.6		23		213	213 <sup>45</sup>		237	94	191	11				3		
6	40																	
7	50	20.9		24		214	214		238		190	10				4		
8	60																	
9	60	20.6		26		215	215		239	95	189	9				5		
10	70																	
11	70	20.3		28		216	216		240	96	188	8				6		
12	80																	
13	80	20.3		29		217	217		241	97	187	7				7		
14	90	20.3		30		218	218		242	98	186	6				8		
15	100	20.3		31		219	219		243	99	185	5				9		28
16	100																	
17	120	19.4		32		220	220		244	100	184	4				10		
18	120																	
19	140	19.9		33		221	221		245	101	183	3				11		
20	140																	
21	200	19.5		34		222	222	P1	246	102	182	2				12		
22	300	18.9		35		223	223	P2	247	103	181	1						
23	500	16.7		37		224	224	P3	248	103	179	11						
24	700	13.7		38		225	225	P4	249	103	180	12						

φ = 4 μg/L

N# 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: EDDIES		Leg: 1	Cast: 30	CTD cast # 19	Type: C1 (0-700m)	Samplers: PAUL GHL GEN KEVIN NATHAN OLGA WAREAY											
Date: 21 Jun 06	Time: 2241	Lat: 30.30.000	Long: 64.29.950	Lat: 30.30.700	Long: 64.29.950	POC/PON Vol= 2L	HP/LC Vol= 4L										
N #	Depth	Niskin Temp	Heilum	O2	O2, O2s	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HP/LC	Chla	Flow Cyt	N/P	15 N (4L)
1	0	25.0		1		226	226		250	104	206	13				1	16
2	0																
3	20	24.5		2		227	227		251	105	205	12				2	
4	20																
5	40	23.0		3		228	228		252	106	204	11				3	
6	40																
7	50	21.6		4		229	229		253		203	10				4	
8	60																
9	60	20.9		5		230	230		254	107	202	9				5	
10	70																
11	70	20.8		6		231	231		255	108	201	8				6	
12	80																
13	80	20.4		7		232	232		256	109	200	7				7	
14	90	20.4		8		233	233		257	110	199	6				8	
15	100	19.9		9		234	234		258	111	198	5				9	30
16	100																
17	120	19.7		10		235	235		259	112	197	4				10	
18	120																
19	140	20.0		11		236	236		260	113	196	3				11	
20	140																
21	200	19.6		12		237	237		261	114	195	2				12	
22	300	19.0		13		238	238		262	115	194	1					
23	500	17.0		14		239	239		263								
24	700	14.1		15		240	240		264								

φ = phyto

deeped filter

Cruise: EMOIE		Lag: 1		Cast: C-10 Cast # 30		Type: Incubator (0.200)						
Date: 22 Jun 04		Time: 0131		Lat: 30 28.890		Long: 64 55.186						
Date: 22 Jun 04		Time: 0212		Lat: 30 30.040		Long: 64 55.080						
N #	Depth	Niskin Temp	Heilium	Oxygens		Salts	Bact	FRRF	POC/PON	HP/LC	Chla	Flow Cyt
				O <sub>2</sub>	O <sub>2</sub> O <sub>2</sub>							
1	0											
2	0											
3	0											
4	0											
5	0											
6	0											
7	0											
8	0											
9	20											
10	20											
11	20											
12	20											
13	40											
14	40											
15	40											
16	40											
17	60											
18	60											
19	60											
20	60											
21	60											
22	60											
23	60											
24	60											

Samplers: 150  
(0.200)

Cruise: E001B		Leg: 1	Cast: CTD #21	Type: C1 (0-700m)	Samplers: O <sub>2</sub> , B <sub>2</sub> , K <sub>2</sub> , B <sub>1</sub> , N <sub>2</sub> , L <sub>2</sub> , M						
Date: 22 Jan 04	Time: 0745	Lat: 30 30.094	Long: 64 4.366	POC/PON	HPLC	Chla	Flow Cyt	N/P	φ		
Date: 22 Jan 04	Time: 1030	Lat: 30 30.580	Long: 64 3.555	Vol=	Vol=4L						
N #	Depth	Miskin Temp	Helium	TOC/TON	Salts	FRFF					
			Oxygen	*1000							
			O <sub>2</sub>								
			O <sub>2</sub>								
1	0	24.8	101	241	241	21113		1			
2	0										
3	20	24.3	102	242	242	21812	193 -1	177 -1	177	2	31
4	30										
5	40	22.6	103	243	243	21711	194 -2	178 -2	178	3	
6	40										
7	50	21.6	104	244	244	21610	195 -3	179 -3	179	4	
8	60										
9	60	21.4	105	245	245	2159	196 -4	180 -4	180	4	
10	70										
11	70	20.9	106	246	246	2148	197 -5	181 -5	181	5	
12	80										
13	80	20.5	107	247	247	2137	198 -6	182 -6	182	6	
14	90	20.3	108	248	248	2126	199 -7	183 -7	183	7	
15	100	20.3	109	249	249	2115	184 -8	184 -8	184	8	
16	100										32
17	120	20.0	110	250	250	2104	185 -9	185 -9	185	9	
18	120										
19	140	19.9	111	251	251	2093	186 -10	186 -10	186	10	
20	140										
21	200	19.6	112	252	252	2082	187 -11	187 -11	187	11	
22	300	19.2	113	253	253	2071	200 -8	189 -11	187	12	
23	800	17.6	114	254	254	2060	201 -9				
24	700	14.3	115	255	255	2049	202 -10				
							203 -11				
							204 -12				
							*=3L				

C. \* Collected @ 700m

Cruise: ENOTES		Log: 1	Cast: CTD # 22	Type: C	(0-700)		SWRSHOT # 1-1		55						
Date:	23 JUNE 2004	Time: 1344	Lat: 29° 46' 35" N	Long: 64° 04' 34" W	Samplers: PAUL RILL UNDERWAY TOW										
Date:	23 JUNE 2004	Time: 1431	Lat: 29° 46' 35" N	Long: 64° 04' 16" W											
N #	Depth	Miskin Temp	Helium	O2	DIC/AIK *DAP	TOC/TON	Salts	Nuts	Bact	FRFF	POC/PON Vol=2L	HPIC Vol=4L	Chla	Flow Cyt	N/P
1	0	25.5		101											1
2	0		146.165		E102-11										2
3	20	24.7		102											2
4	20		15c												2
5	40	22.3		103											3
6	40		157												3
7	50	22.7		104											4
8	60		158												4
9	60	21.2		105											5
10	70		160												5
11	70	20.9		106											6
12	80		161												6
13	80	20.4		107											7
14	90	21.4		108											8
15	100	20.6		108											9
16	100		163												9
17	120	20.4		110											10
18	120		164												10
19	140	20.3		111											11
20	140		165												11
21	200	20.3		112											12
22	200	19.6		113											13
23	500	19.8		114											14
24	700	14.8		115											15

\* - ONCE at these v on right.

11#

24

Cruiser: EDDIES		Leg: 1	Cast: CTD CAST # 23	Type: C1	SNAP SHOT 1-2		(0-700m)		53									
Date: 23 JUN 2004	Time: 1737	Lat: 29°46.83'N	Long: 64°29.98'W	Samplers: POC GRACE SARANT MICHAEL DENNIS														
Date: 23 JUN 2004	Time: 1828	Lat: 29°46.98'N	Long: 64°28.99'W															
N #	Depth	Miskin Temp	Heilum	O2	DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	W/P			
				02	W/mgAP	+ DOP					Vol= 2L	Vol= 4L						
1	0	21.1			271	271		245		245 13							19	33
2	0										217 1	199 1	199 1	199 1				
3	20	25.1			272	272		246		249 12								
4	20										218 2	200 2	200 2	200 2				
5	40	23.9			273	273		247		243 11								
6	40										219 3	201 3	201 3	201 3				
7	50	22.7			274	274		248		242 10								
8	60										220 4	203 5	203 5	203 5				
9	60				275	275		249		241 9								
10	70											204 6	204 6	204 6				
11	70	21.5			276	276		200		240 8								
12	80										221 5	205 7	205 7	205 7				
13	80	21.1			277	277		201		239 7								
14	90	21.0			278	278		202		238 6								
15	100	20.8			279	279		203		237 5								34
16	100										222 6	207 9	207 9	207 9				
17	120	20.5			280	280		204		236 4								
18	120										223 7	208 10	208 10	208 10				
19	140	20.2			281	281		205		235 3								
20	140										224 8	209 11	209 11	209 11				
21	200	20.3			282	282		206		234 2	225 9							
22	300	19.6			283	283		207		233 1	226 10							
23	500	17.8			284	284		208		227 11								
24	700	15.0			285	285		209		228 12								
										4 3L								

N # 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

19  
33  
Ø

180ml  
750ml

Cruise: EDDIES		Leg: 1		Cast: CTD CAST # 04		Type: C1		SWASHOT 1-3		(0-700m)		51						
Date: 23 JUNE 2004		Time: 2104		Lat: 29° 46.807' N		Long: 64° 55.07' W		Samplers: PAUL KEVIN BEN DENNIS OGA QIAN										
Date: 23 JUNE 2004		Time: 2147		Lat: 29 47.06' N		Long: 64 54.46												
N #	Depth	Niskin Temp	Helium	OXYGENS		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRFR	POC/PON	HPLC	Chla	Flow Cyt	S <sup>15</sup> N	Φ	
				O2	O2, O2													
1	0	25.6				286	286		310	140	258	13					20	
2	0																	
3	20	24.9				287	287		311	141	257	12						35
4	20																	
5	40	23.0				288	288		312	142	256	11						
6	40																	
7	50	22.2				289	289		313		255	10						
8	60																	
9	60	21.6				290	290		314	143	254	9						
10	70																	
11	70	21.5				291	291		315	144	253	8						
12	80																	
13	80	21.2				292	292		316	145	252	7						
14	90	21.0				293	293		317	146	251	6						
15	100	20.9				294	294		318	147	250	5						
16	100																	
17	120	20.7				295	295		319	148	249	4						
18	120																	
19	140	20.3				296	296		320	149	248	3						
20	140																	
21	200	20.2				297	297	P-5	321	150	247	2						
22	300	19.7				298	298	P-6	322	151	246	1						
23	500	18.0				299	299	P-7	323									
24	700	14.9				300	300	P-8	324									

36



Cruise: EDDIES		Leg: 1	Cast: CTD CAST # 25	Type: C1 SNAPSHOT 1 - 4	Samplers: TONGUE VALLEY & CASSELL, NOTHERN		(0-300m)	49.						
Date: 24 Jun 04		Time: 0006	Lat: 29 46.714	Long: 65 20.230	POC/PON Vol= 2L		HPLC Vol= 4L	Chla # 21						
Date: 24 Jun 04		Time: 0055	Lat: 29 46.720	Long: 65 19.309	POC/PON Vol= 2L		HPLC Vol= 4L	Chla # 815						
N #	Depth	Niskin Temp	Heilum	OXYGENS	DIC/ALK	TOCTON	Salts	NITS	Bact	FRRF	POC/PON	HPLC	Chla #	Flow Cyt
				02, 02, 02										
1	25.7	0		21	301	301		325		271 13			* 21	
2	0	0									241 1	221 1	221 1	221
3	4.9	20		22	<del>301</del> 302	302		326		270 12				
4		20									242 2	222 2	222 2	222
5	22.9	40		23	<del>302</del> 303	303		327		269 11				
6		40									243 3	223 3	223 3	223
7	<del>22.9</del>	50		24	304	304		328		268 10				224 4
8		60									244 4	224 4	224 4	224
9	21.5	60		26	305	305		329		267 9				225 5
10		70										226 * 6	226 6	226
11	20.8	70		28	306	306		330		266 8				227 7
12		80									245 5	227 7	227 7	227
13	20.4	80		29	307	307		331		265 7				228 8
14	20.0	90		30	308	308		332		264 6				228 8
15	20.0	100		31	309	309		333		263 5				229 9
16		100									246 6	229 9	229 9	229
17	20.0	120		32	310	310		334		262 4				230 10
18		120									247 7	230 10	210 10	210
19	19.8	140		33	311	311		335		261 3				211
20		140									248 8	231 11	211 11	211
21	19.5	200		34	312	312		336		260 2	249 9			
22	19.1	500		35	313	313		337		259 1	250 * 10			
23	17.2	500		37	314	314		338			251 * 11			
24	14.2	700		38	315	315		339			252 * 12			
											253 * 13			
											254 * 14			
											255 * 15			
											256 * 16			
											257 * 17			
											258 * 18			
											259 * 19			
											260 * 20			
											261 * 21			
											262 * 22			
											263 * 23			
											264 * 24			
											265 * 25			
											266 * 26			
											267 * 27			
											268 * 28			
											269 * 29			
											270 * 30			
											271 * 31			
											272 * 32			
											273 * 33			
											274 * 34			
											275 * 35			
											276 * 36			
											277 * 37			
											278 * 38			
											279 * 39			
											280 * 40			
											281 * 41			
											282 * 42			
											283 * 43			
											284 * 44			
											285 * 45			
											286 * 46			
											287 * 47			
											288 * 48			
											289 * 49			
											290 * 50			

φ

37

38

KESEL #28L

Cruise: EDDIES		Leg: 1		Cast: CTD #22		Type: C1 SNEPLOT 1-#5 (0-700m)											
Date: 24 Dec 04		Time: 0732		Lat: 29 46.684		Long: 65 45.621											
Date: 24 Dec 04		Time: 0822		Lat: 29 46.191		Long: 65 44.701											
N #	Depth	Nielin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	Samplers:		Flow Cyt	N/P	Φ	
				O2	O2-2							POC/PON	HPLC				Chla
1	0	25.3			61	316	314		340		284-13	215L	232-1	*22			39
2	0		146/55								258-1	232-1	232-1	232			
3	20	25.0			62	317	317		341		283-12	254-2	233-2	233			
4	20		156								282-11	254-2	233-2	233			
5	40	22.3				318	318		342		282-11	254-2	233-2	233			
6	40		157								281-10	255-3	234-3	234			
7	50	21.9				319	319		343		281-10	255-4	235-4	235			
8	60		159								258-4	236-5	236	236			
9	60	21.6			65	320	320		344		280-4	237-6	237-6	237			
10	70	21.1			66	321	321		345		279-8	237-6	237-6	237			
11	80	21.0			67	322	322		346		278-8	237-6	237-6	237			
12	80		161			323	323		347		278-7	237-6	237-6	237			
13	80	20.7			68	324	324		348		278-7	237-6	237-6	237			
14	90	20.6			69	325	325		349		278-7	237-6	237-6	237			
15	100	20.8			69	324	324		348		276-6	238-8	239-8	239			40
16	100		163		-27						258-6	240-9	240-9	240			
17	120	20.9			70	325	325		349		275-4	240-9	240-9	240			
18	120		164								259-7	241-10	241-10	241			
19	140	20.2			70	326	326		350		274-3	241-10	241-10	241			
20	140		165		28						260-8	242-11	242-11	242			
21	200	20.4			72	327	327		351		273-2	242-11	242-11	242			
22	300	20.0			72	328	328		352		272-1	242-11	242-11	242			
23	500	18.3			74	329	329		353		264-12	242-11	242-11	242			
24	700	15.6			74	330	330		354		*3L	242-11	242-11	242			

N

Φ = Pump

24

Cruise: EDOSE		Leg: 1		Cast: CTD #27		Type: C1 Snpst. 1-#6 (0-700m)								
Date:		Time:		Lat:		Long:								
N #	Depth	Niskin Temp	Time: Oxygens		Lat: DIC/Aik	TOC/TON *D <sub>0.2</sub>	Salts	Long: Nuts	Bact	FRRF	POC/PON Vol=2L	HPLC Vol=4L	Chla *D <sub>0.2</sub>	Flow Cyt
			O <sub>2</sub>	O <sub>2</sub> , O <sub>2</sub>										
1	0	25.5		101	331	331		355		217-13			*23	
2	0										265 -1	243-1	243	
3	20	24.5		102	332	332		356		246-12				
4	20										266-2	244-2	244	
5	40	22.8		103	333	333		357		245-10				
6	40										267-3	245-3	245	
7	50	22.2		104	334	334		358		244-10				
8	60			<del>105</del>							268-4	246-4	246	
9	62	21.7		105	335	335		359		243-9				
10	70			<del>106</del>							269-5	247-5	247	
11	70	21.5		106	336	336		360		242-8				
12	80			<del>107</del>							264-5	249-7	249	
13	80	21.0		107	337	337		361		291-7				
14	90	20.8		108	338	338		362		290-6				
15	104	20.5		109	339	339		363		291-5				
16	100										270-6	251-9	251	
17	120	20.1		110	340	340		364		288-14				
18	120										271-7	252-10	252	
19	140	20.0		111	341	341		365		289-3				
20	140										272-8	253-11	253	
21	200	19.6		112	342	342		366		286-2	273-9			
22	300	19.2		113	343	343		367		285-1	274-10			
23	500	17.8		114	344	344		368			275-11			
24	700	14.9		115	345	345		369			276-12			

N # 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24



Cruise: EPOIES		Leg: 1		Type: C1		SWASHOT 1-67 (0-700m)		79							
Date:	24 JUNE 2004	Time:	2120	Lat:	30° 08' 30" N	Long:	65° 20' 27" W	Samplers: PAUL ONGA KEVIN BEA KAGIL BILL							
Date:	24 JUNE 2004	Time:	2204	Lat:	30° 08' 01" N	Long:	65° 19' 68" W	POC/IRON	HPLC	Chia	Flow Cyt	S <sup>15</sup> N	N/P		
N #	Depth	Miskin Temp	Helium	O2	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	Vol= 2L	Vol= 4L			
1	0	26.3			346	346		370		310 13					
2	0		162					371		309 12	277 1	254 1	254 1	054	24
3	20	25.2			347	347		371		309 12	278 2	255 2	255 2	255	2
4	20							372		308 11	279 3	256 3	256 3	256	3
5	40	23.4	163		348	348		373		307 10	280 4	258 5	258 5	258	4
6	40							374		306 9	280 4	258 5	258 5	258	5
7	50	22.4			349	349		375		305 8	281 5	260 7	260 7	260	6
8	60							376		304 7	281 5	260 7	260 7	260	7
9	60	21.5			350	350		377		305 6	282 6	261 8	261 8	261	8
10	70							378		302 5	282 6	262 9	262 9	262	9
11	70	21.1			351	351		379		301 4	283 7	263 10	263 10	263	10
12	80		164					380		300 3	283 7	263 10	263 10	263	11
13	80	20.8			352	352		381		299 2	284 8	264 11	264 11	264	12
14	90	20.9			353	353		382		298 1	285 9	264 11	264 11	264	13
15	100	20.4			354	354		383		288 12	287 11	264 11	264 11	264	14
16	100		165					384		288 12	288 12	264 11	264 11	264	15
17	120	20.3			355	355									
18	120														
19	140	20.1			356	356									
20	140		166												
21	200	20.1	167		357	357									
22	200	19.8	169		358	358									
23	600	17.9	170		359	359									
24	700	15.0			360	360									

of Acebone.

370ml  
15 1/2 ml

Cruise: EDDIES		Leg: 1		Cast: CTD # 30		Type: Snapshot #8 (0-700m)								
Date: 25 Nov 04		Time: 0002		Lat: 30 8 34		Long: 64 55 03								
Date: 25 Nov 04		Time: 6049		Lat: 30 8 510		Long: 64 59 19								
N #	Depth	Niskin Temp	Helium		DIC/AIK	TOC/TN	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt
			Oxygens	O2, O2										
1	0	25.8			361	361		385	152	323-13				*25
2	0										289 -1	254 -1	254 -1	254
3	20	24.9			362	362		386	153	322-12				
4	20										290 -2	255 -2	255 -2	255
5	40	22.5			363	363	*25	387	154	321-11				
6	40										291 -3	256 -3	256 -3	256
7	50	21.7			364	364		388		320-10				
8	60										292 -4	257 -4	257	257
9	60	21.5			365	365		389	155	319-9				
10	70										293 -5	258 -5	258	258
11	70	21.0			366	366		390	156	318-8				
12	80										294 -6	259 -6	259	259
13	80	20.9			367	367		391	157	317-7				
14	90	20.7			368	368		392	158	316-6				
15	100	20.4			369	369		393	159	315-5				
16	100										294 -6	260 -6	260	260
17	120	20.1			370	370		394	160	314-4				
18	120										295 -7	261 -7	261	261
19	140	19.9			371	371		395	161	313-3				
20	140										296 -8	262 -8	262	262
21	200	19.6			372	372		396	162	312-2				
22	300	19.0			373	373		397	163	311-1				
23	500	19.2			374	374		398			297 *10			
24	700	19.8			375	375		399			298 *11			
											299 *12			
											300 *12			
											*=3L			

Samplers: Niskin, Tom, Uster, C-Soft, Dronis

Chl a switch led 2-11-04

Cruise: EDDIES		Leg: 1	Cast: CTD # 31		Type: C	Samplers: Gill, C&S, G, Green, Sand, N. Nelson										
Date: 26 Jun 04	Time: 0240	Lat: 30° 8.400	Long: 64° 29.940	Lat: 30° 8.650	Long: 64° 29.160	POC/PON	HPIC	Chla	Flow Cyt							
Date: 28 Jun 04	Time: 0326	Lat: 30° 8.650	Long: 64° 29.160	Lat: 30° 8.650	Long: 64° 29.160	Vol=2L	Vol=4L	S&W								
N #	Depth	Niskin Temp	Heilum	O <sub>2</sub>	-O <sub>2</sub> -O <sub>2</sub>	DIC/AIK	TOC/TRON	*26	Salts	Nuts	Bact	FRRF	POC/PON	HPIC	Chla	Flow Cyt
1	0	25.6		1		376	376			400	164	336-13			26	
2	0		146		E104-17								301-1	276-1	276-1	276
3	20	24.9		2		377	377			401	165	335-12				
4	20												302-2	277-2	277-2	277
5	40	23.1		3		378	378	*26		402	166	334-11				
6	40		155										303-3	278-3	278-3	278
7	50	20.9		4		379	379			403		333-10				
8	60												304-4	280-4	280-4	280
9	60	20.4		5		380	380			404	167	332-9				
10	70													281-6	281-6	281
11	70	19.7		6		381	381			405	168	331-8				
12	80		156										205-6	282-7	282-7	282
13	80	20.2		7		382	382			406	169	330-7				
14	90	20.1		8		383	383			407	170	329-6				
15	100	20.0		9		384	384			408	171	328-5				
16	100		147										305-6	284-9	284-9	284
17	120	19.8			*26	385	385			409	172	327-4				
18	120												307-7	285-10	285-10	285
19	140	19.6		11		386	386			410	173	326-3				
20	140		158										308-8	286-11	286-11	286
21	200	19.4		12		387	387			411	174	325-2				
22	300	18.9		13		388	388			412	175	324-1				
23	400	16.9		14		389	389			413			311-11			
24	700	13.5		15		390	390			414			312-12			

\* 300L  
N/A & 35L

N# 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: <u>EMOPS</u>		Leg: <u>1</u>		Cast: <u>CST # 32</u>		Type: <u>C1</u>		Samplers: <u>S1-P5-H-T # 10</u>							
Date: <u>25 June 04</u>		Time: <u>5:10</u>		Lat: <u>30 8.490</u>		Long: <u>64 4.720</u>		Ankyl, BSL, Sacc, Green, Nitlen							
Date: <u>25 June 04</u>		Time: <u>6:27</u>		Lat: <u>30 9.180</u>		Long: <u>64 4.910</u>									
N #	Depth	Miskin Temp	Helium	Oxygens		DIC/Alk	TOC/TN	Salts	Nutr	Beer	FRRF	POC/PON	HPLC	Chla	Flow Cyt
				O2	O2, O2										
1	0	26.0			21	391	391		415	392	13				
2	0					<del>391</del>									
3	20	24.8			22	392	392		416	392	12				
4	20					<del>392</del>									
5	40	25.1			23	393	393		417	393	11				
6	40					<del>393</del>									
7	50	22.4			24	394	394		418	394	10				
8	60														
9	60	21.9			25	395	395		419	395	9				
10	70														
11	70	21.5			26	396	396		420	396	8				
12	80														
13	80	21.0			<del>27</del>	397	397		421	397	7				
14	90	20.9			28	398	398		422	398	6				
15	100	20.6			29	399	399		423	399	5				
16	100														
17	120	20.4			30	400	400		424	400	4				
18	120														
19	140	20.1			31	401	401		425	399	3				
20	140														
21	200	19.8			32	402	402		426	398	2				
22	300	19.4			33	403	403		427	397	1				
23	500	17.6			34	404	404		428						
24	700	14.9			35	405	405		429						

2





Cruise: E101ES				Leg: 1	Cast: C10# 34				Type: C1 S9-056-T (0-700)						
Date: 25 June 04				Time: 1118	Lat: 30 29.910				Long: 64 29.480						
Date: 25 June 04				Time: 1206	Lat: 30 29.761				Long: 64 29.420						
N #	Depth	Niskin Temp	Heilum	Oxygens		DIC/AIK	TOC/TN	Salts	Nuts	Bact	FRRF	Samplers:		Chla	Flow Cyt
				O2	O2, O2							POC/FON	HPIC		
1	0	25.7				421	421		445		375-13			*29	
2	0	24.7				422	422		446		374-12				309
3	20	24.7				422	422		446		374-12				
4	20	22.3				422	422		447		372-11				
5	40	21.4				424	424		448		372-11				
6	40	21.4				424	424		448		372-11				
7	50	20.8				425	425		449		371-10				
8	60	20.4				426	426		450		370-10				
9	70	20.3				427	427		451		369-10				
10	80	20.2				428	428		452		368-10				
11	90	20.0				429	429		453		367-10				
12	100	19.9				430	430		454		366-10				
13	110	19.7				431	431		455		365-10				
14	120	19.5				432	432		456		364-10				
15	130	19.0				433	433		457		363-10				
16	140	17.2				434	434		458		362-10				
17	150	13.6				435	435		459		361-10				
18	160														
19	170														
20	180														
21	190														
22	200														
23	210														
24	220														

E1-309  
319

E1-309-319

307-319

Cruises: EDDIES		Leg: 1	Cast: CTD CNST	# 35	Type: C1	SUNSHOT 1-13	(0-700m)	111								
Date: 25-Febr-04		Time: 1415	Lat: 30 29.959	Long: 64 55.203	Samplers: PAUL BILL VALERY TOM. KABIL											
N	Depth	Miskin Temp	Helium	O2	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRF	POC/PON	HPLC	Chia	Flow Cyt	N/P	S <sup>15</sup> N
1	0	26.0	<del>146.155</del>	61	436	436		460	176	492.813	349	320	320 1		1	30
2	0		146.155	62	437	437		461	177	491.12	350	321	321 2		2	
3	20	25.2														
4	20		158					462	178	490.8	354	322	322 3		3	
5	40	23.6		63	438	438		463		488.10	352	323	323 4		4	
6	40		158		439	439		464	179	488.9	325	325 6	325 6		5	
7	50	22.5		64	440	440		465	180	488.8	353	326	326 7		6	
8	60		158		441	441		466	181	488.7	327	327 8	327 8		7	
9	60	21.9		65	442	442		467	182	488.6	328	328 9	328 9		8	
10	70		160		443	443		468	183	488.5	329	329 10	329 10		9	
11	70	21.5		66	444	444		469	184	488.4	330	330 11	330 11		10	
12	80		161		445	445		470	185	488.3	331	331 12	331 12		11	
13	90	20.9		67	446	446		471	186	488.2	332	332 13	332 13		12	
14	90	21.0		68	447	447		472	187	488.1	333	333 14	333 14		13	
15	100	20.8		69	448	448		473	188	488.0	334	334 15	334 15		14	
16	100		163		449	449		474	189	487.9	335	335 16	335 16		15	
17	120	20.5		70	446	446		475	190	487.8	336	336 17	336 17			
18	120		164		447	447		476	191	487.7	337	337 18	337 18			
19	140	20.3		71	448	448		477	192	487.6	338	338 19	338 19			
20	140		165		449	449		478	193	487.5	339	339 20	339 20			
21	200	19.9		72	447	447	P-13	479	194	487.4	340	340 21	340 21			
22	300	19.3		73	448	448	-14	472	187	488.1	358	358 22	358 22			
23	500	17.4		74	449	449	-15	473		359	359 23	359 23	359 23			
24	700	14.9		75	450	450	-16	474		360	360 24	360 24	360 24			



90m by mistake by CS





Cruiser: EDDIES		Leg: 1		Cast: CTD CAST H 38		Type: C1 - SNAP SHOT 1 (0-200m) INCUBATION.											
Date: 26 JUNE 2004		Time: 0112		Lat: 30.30.080		Long: 64.55.040											
Date: 26 JUNE 2004		Time: 0139		Lat: 30.30.260		Long: 64.54.530											
N #	Depth	Miskin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	Samplers:					
				O2 <sub>1</sub>	O2 <sub>2</sub> O2 <sub>3</sub>							POC/PON Vol=	HPLC Vol=	Chia	Flow Cyt	FRRF	4 liter polyo
1	0										4000ml					1	
2	0										"						
3	0										"						
4	0										"						
5	50										"					2	2
6	50										"						
7	50										"						
8	50										"						
9	90										"						
10	90										"						
11	90										"						
12	90										"						
13	90										"						
14	90										"						
15	90										"						
16	90										"						
17	90										"						
18	90										"						
19	90										"						
20	90										"					3	3
21	120										"						
22	120										"						
23	120										"						
24	120										"						

Cruise: EDDLES		Leg: 1	Cast: CTD CAST # 39	Type: C1	SAMP SMOOT 1-16		(10-ROOM)															
Date: 26 - Sun 04		Time: 2306	Lat: 30 51.470	Long: 65.451500	Samplers: Dennis, Bill, Valery, Paul, Nickolas, Kevin																	
N #	Depth	Niskin Temp	Helium	Oxygens		Lat:	DIC/AIK	TOC/TON	Salts	Long:	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	S <sup>15</sup> N			
				O2 <sub>1</sub>	O2 <sub>2</sub> O2 <sub>3</sub>															# DAP	Vol= 2L	Vol= 4L
1	0	26.2		101		482	482			505		427	13	385	1	353	1	353	1	353	1	33
2	0																					
3	20	24.4		102		483	483			506		426	12	386	2	354	2	354	2	354	2	
4	20																					
5	40	22.8		103		484	484	33		507		425	11	387	3	355	3	355	3	355	3	
6	40																					
7	50	21.3		104		485	485			508		424	10	388	4	356	4	356	4	356	4	
8	60																					
9	60	20.7		105		486	486			509		423	9	389	5	357	5	357	5	357	5	
10	70																					
11	70	20.4		106		487	487			510		422	8	390	6	358	6	358	6	358	6	
12	80																					
13	80	20.3		107		488	488			511		421	7	389	7	359	7	359	7	359	7	
14	90	20.1		108		489	489			512		420	6	390	8	360	8	360	8	360	8	
15	100	20.1		109		490	490			513		419	5	391	9	361	9	361	9	361	9	
16	100																					
17	120	19.8		110		491	491			514		418	4	391	10	362	10	362	10	362	10	
18	120																					
19	140	19.6		111		492	492			515		417	3	392	11	363	11	363	11	363	11	
20	140																					
21	200	19.4		112		493	493			516		416	2	393	12	363	12	363	12	363	12	
22	300	19.0		113		494	494			517		415	1	394	13	364	13	364	13	364	13	
23	500	17.1		114		495	495			518		414	0	395	14	365	14	365	14	365	14	
24	700	13.7		115		496	496			519		413	0	396	15	366	15	366	15	366	15	
		14.8																				

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Cruise: EANDIES										Leg: 1		Cast: CTD# 40		Type: C		Sampers: Daniels, Valery, Tom, Nelson, Bill		Date: 27 Jan 04		Time: 0146		Lat: 30 51.515		Long: 65 20.410		Type: C		Sampers: Daniels, Valery, Tom, Nelson, Bill								
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P																				
				O2	3H																												Lat	Long	Vol=2L	Vol=4L
1	0	26.1	158	701	158	499	498	498	520	188	440-13					1																				
2	0		158	701	158	499	498	498	520	188	440-13					1																				
3	20	24.3	158	702	158	499	499	499	521	189	437-12					2																				
4	20	21.9	155	703	155	500	500	500	522	190	438-11					3																				
5	40	21.0	155	704	155	501	501	501	523	191	437-10					4																				
6	40	21.0	155	704	155	501	501	501	523	191	437-10					4																				
7	50	21.0	155	704	155	501	501	501	523	191	437-10					4																				
8	60	20.7	157	705	157	502	502	502	524	191	436-11					5																				
9	60	20.7	157	705	157	502	502	502	524	191	436-11					5																				
10	70	20.3	156	706	156	503	503	503	525	192	435-11					6																				
11	70	20.3	156	706	156	503	503	503	525	192	435-11					6																				
12	80	20.2	156	707	156	504	504	504	526	193	434-7					7																				
13	80	19.9	157	708	157	505	505	505	527	194	433-6					8																				
14	90	19.8	157	709	157	506	506	506	528	195	432-5					9																				
15	100	19.6	157	710	157	507	507	507	529	196	431-4					10																				
16	100	19.6	157	710	157	507	507	507	529	196	431-4					10																				
17	120	19.4	158	711	158	508	508	508	530	197	430-3					11																				
18	120	19.4	158	711	158	508	508	508	530	197	430-3					11																				
19	140	19.2	159	712	159	509	509	509	531	198	429-2					12																				
20	140	19.2	159	712	159	509	509	509	531	198	429-2					12																				
21	200	18.6	160	713	160	510	510	510	532	199	428-1					13																				
22	200	18.6	160	713	160	510	510	510	532	199	428-1					13																				
23	300	16.6	161	714	161	511	511	511	533	200	427-1					14																				
24	300	16.6	161	714	161	511	511	511	533	200	427-1					14																				
25	300	16.6	161	714	161	511	511	511	533	200	427-1					14																				
26	300	16.6	161	714	161	511	511	511	533	200	427-1					14																				

N#

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Cruise: EDOIES		Leg: 1		Cast: CTD #41		Type: C1		Samp: Sigsbee T-1-#18 (0-700m)		141			
Date: 27 Jun 04		Time: 0434		Lat: 30 51.663		Long: 64. 55.291		Samplers: Berg Green, Seath, Nicol, Williams					
Date: 27 Jun 04		Time: 0522		Lat: 30 51.790		Long: 64. 55.500							
N #	Depth	Niskin Temp	Helium		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON		Flow Cyt
			O2	O2, O2							Vol=2L	Vol=4L	
1	0	20.1			513	513		535	200	453-13			
2	0												
3	20	24.8			514	514			201	452-12	409 -1	375-1	375
4	20												
5	40	23.4			515	515			202	451-11	410 -2	376-2	376
6	40												
7	50	22.2			516	516				450 -10	411 -3	377-3	377
8	60												
9	60	21.3			517	517			203	449 -1	412 -4	378-4	378
10	70												
11	70	20.8			518	518			204	448 -2		379-5	379
12	80												
13	80	20.6			519	519			205	447 -1	413 -5	380-6	380
14	90	20.2			520	520			206	446 -6		381-7	381
15	100	20.1			521	521			207	445 -5		382-8	382
16	100												
17	100	19.8			522	522			208	444 -4	414 -6	383-9	383
18	120												
19	140	19.4			523	523			209	443 -3	415 -7	384-10	384
20	140												
21	200	18.9			524	524			210	442 -2	416 -8	385-11	385
22	300	18.1			525	525			211	441 -1	417 -9		
23	500	16.1			526	526					418 -10		
24	700	13.0			527	527					419 -11		
											420 -12		
											*3L		

Cruise: EDDIES		Log: 1	Cast: CTD #42	Type: C1 Snapshot 1-#19 (0-700m)	143											
Date: 27 Jun 04	Time: 0756	Lat: 30 51.614	Long: 64 30.074	Samplers: 0159, Kevin, Son, Andy, Nathan												
Date: 27 Jun 04	Time: 0813	Lat: 30 51.690	Long: 64 30.062													
N #	Depth	Niskin Temp	Hellum	O2	CH	DIC/AIK	TOC/TON	Salis	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P
1	0	26.1		1		528	588		550		466-12	421-1	382-1	386-1	384	1
2	0		162													
3	20	24.7		2	E105-53	529	529		551		465-12	422-2	387-2	387-2	387	2
4	20															
5	40	22.6		3		530	530		552		469-11	423-3	388-3	388-3	388	3
6	40		163													
7	50	22.0		4		531	531		553		463-10	424-4	389-4	389-4	389	4
8	60															
9	60	21.5		5		532	532		554		462-4	424-4	390-5	390-5	390	5
10	70															
11	70	21.2		6		533	533		555		461-4	425-5	392-1	392-1	392	6
12	80		164													
13	80	21.0		7		534	534		556		462-7	425-5	392-1	392-1	392	7
14	90	20.7		8		535	535		557		459-6	425-5	392-8	392-8	392	8
15	100	20.5		9		536	536		558		458-5	426-6	394-9	394-9	394	9
16	100		165													
17	120	20.2		10		537	537		559		457-4	427-7	395-10	395-10	395	10
18	120															
19	140	20.1		11		538	538		560		456-3	428-8	396-11	396-11	396	11
20	140		166													
21	200	19.9	167	12		539	539		561		455-2	429-9	397-12	397-12	397	12
22	300	19.5	169	13		540	540		562		454-1	430-10	398-13	398-13	398	13
23	600	17.9	170	14		541	541		563		453-12	431-11	399-14	399-14	399	14
24	700	14.1		15		542	542		564		452-12	432-12	400-15	400-15	400	15

Cruises: E001ES				Leg: 1		Cast: CTD # 43		Type: C1		Slope Plot 1 - #20 (0-700m)		145				
Date: 27-Sept-04				Time: 10:22		Lat: 30 51.506		Long: 64 4.719		Samplers: Kes, dls, T05, Kevin, Nathan						
N #	Depth	Miskin Temp	Helium	Time: 11:24		Lat: 30 51.372	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRAP	POC/PON	HPLC	Chia	Flow Cyt
				O2	O2, O2											
1	0	26.6				51.2	51.2			565	478-13	-12				
2	0												435-1	397-1	397-1	397
3	20	24.8				54.4	54.4			566	478-12	-11				
4	20												434-2	398-2	398-2	398
5	40	23.3				54.5	54.5			567	477-11	-10				
6	40												435-3	399-3	399-3	399
7	50	22.4				54.6	54.6			568	476-10	-9				
8	60												436-4	400-4	400-4	400
9	60	21.7				54.7	54.7			569	476-9	-8				
10	70													402-6	402-6	402
11	70	21.5				54.8	54.8			570	474-8	-7				
12	80												437-5	403-7	403-7	403
13	80	21.2				54.9	54.9			571	473-7	-6				
14	90	21.1				55.0	55.0			572	472-6	-5				
15	100	20.9				55.1	55.1			573	471-5	-4				
16	100												438-6	405-9	405-9	405
17	120	20.4				55.2	55.2			574	470-4	-4				
18	120												439-7	406-10	406-10	406
19	140	20.1				55.3	55.3			575	469-3	-3				
20	140												440-8	407-11	407-11	407
21	200	20.1				55.4	55.4			576	468-2	-2				
22	301	19.4				55.5	55.5			577	467-1	-1				
23	401	18.3				55.6	55.6			578			443-10			
24	700	15.7				55.7	55.7			579			444-12			



Cruise: EDDIES		Leg: 1	Cast: 21	CTD CAST #	45	Type: C1	SAMENOT 1-22	(0-300m)	173							
Date: 27	Sur 04	Time: 1720	Lat: 21	13.250	Long: 64	29.970	Samplers: PHUL	SARGE	SNEAR	DEWUS	H481L					
N #	Depth	Miskin Temp	Helium	O2, O2, O2	DIC/AIK	* DOIP	Salts	Nuts	Bact	FRRF	POC/PON	HP/LC	Chia	Flow Cyt	MHP	S <sup>15</sup> N
1	0	26.5		101	573			595		305 13	457 1	419 1	419 1	419		39
2	0															
3	20	25.2		102	574			596		504 12	458 2	420 2	420 2	420		
4	20															
5	40	22.4		103	575			597		503 11	459 3	421 3	421 3	421		
6	40															
7	50	22.0		104	576			598		502 10	460 4	422 4	423 5	423		
8	60															
9	60	21.5		105	577			599		501 9	460 4	423 5	423 5	423		
10	70															
11	70	21.2		106	578			600		500 8	461 5	425 7	425 7	425		
12	80															
13	80	21.3		107	579			601		499 7	461 5	425 7	425 7	425		
14	90	21.0		108	580			602		498 6	462 6	426 8	426 8	426		
15	100	20.7		109	581			603		497 5	462 6	427 9	427 9	427		
16	100															
17	120	21.0		110	582			604		496 4	463 7	428 10	428 10	428		
18	120															
19	140	20.9		111	583			605		495 3	464 8	429 11	429 11	429		
20	140															
21	200	20.0		112	584			606		494 2	465 9	429 11	429 11	429		
22	300	19.7		113	585			607		493 1	466 10	429 11	429 11	429		
23	500	17.9		114	586			608			467 11	429 11	429 11	429		
24	700	15.1		115	587			609			468 12	429 11	429 11	429		

Cruise: EDDIES		Log: 1	Cast: CTD CRST # 46	Type: C1 SNAPSHOT 1-23 (0-700M)	Samplers: PAUL KEVIN BEN CLM KARIL															
Date: 27 Jun 84	Time: 1942	Lat: 31 12.200	Long: 64 55.240					171												
Date: 27 Jun 84	Time: 2024	Lat: 31 13.223	Long: 64 55.240																	
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Long: Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	S <sup>15</sup> N			
				O2	O2, O2													* DOF	Vol= 2L	Vol= 4L
1	0	26.4				588	588		610	212	518	13					1	40		
2	0												469	1	430	1	430	1	430	
3	20	25.2				589	589		611	213	517	12						2		
4	20												430	2	431	2	431	2	431	
5	40	23.4				590	590		612	214	516	11						3		
6	40												431	3	432	3	432	3	432	
7	50	22.8				591	591		613		515	10			433	3	433	4	433	
8	60												432	4	434	5	434	5	434	
9	60	21.6				592	592		614	215	514	9						5		
10	70														435	6	435	6	435	
11	70	21.6				593	593		615	216	513	8						6		
12	80												433	5	436	7	436	7	436	
13	80	21.1				594	594		616	217	512	7						7		
14	90	20.9				595	595		617	218	511	6			437	8	437	8	437	
15	100	20.7				596	596		618	219	510	5						9		
16	100												434	6	438	9	438	9	438	
17	120	20.4				597	597		619	220	504	4						10		
18	120												435	7	439	10	439	10	439	
19	140	20.6				598	598		620	221	508	3						11		
20	140												436	8	440	11	440	11	440	
21	200	20.0				599	599		621	222	507	2			440	11	440	12		
22	300	19.7				600	600		622	223	506	1			438	10	438	13		
23	500	18.3				601	601		623				439	11				14		
24	700	14.8				602	602		624				480	12				15		
													* 3L							

Cruires: EDDIES Leg: 1 Cast: CTD CAST # 47 Type: C1 SNAPSHOT 1-24 (0-700m) 169

Date: 27-Jan-04 Time: 2330 Lat: 31 13.11 Long: 65 20.40 Samplers: P, S, T, M, V, C, Y

Date: 27-Jan-04 Time: 2330 Lat: 31 13.73 Long: 65 20.320

N #	Depth	Niskin Temp	Helium	Oxygens		Lat	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	S <sup>15</sup> N
				O2 <sub>1</sub>	O2 <sub>2</sub> O2 <sub>3</sub>												
1	0	26.6				603	603		625		531	13					41
2	0																
3	20	27.6				604	604		626		520	12					
4	20																
5	40	23.0				605	605		627		529	11					
6	40																
7	50	22.0				606	606		628		528	10					
8	60																
9	60	21.1				607	607		629		527	9					
10	70																
11	70	21.0				608	608		630		526	8					
12	80																
13	80	20.8				609	609		631		525	7					
14	90	20.7				610	610		632		524	6					
15	100	20.6				611	611		633		523	5					
16	100																
17	120	20.2				602	612		634		522	4					
18	120																
19	140	20.1				613	613		635		521	3					
20	140																
21	200	19.6				614	614		636		520	2					
22	300	19.6				615	615		637		519	1					
23	500	17.7				616	616		638								
24	700	14.8				617	617		639								

\* 3L

Cruise: E00 JES		Leg: 1		Cast: CTD cast # 48		Type: C1 snaphot 1-#25 (0-700)		Station: N. In. Cas. 11, Valley, Kevin, N. 11		171						
Date: 28 Jun 04		Time: 0200		Lat: 13 31.179		Long: 65 45.744		Samplers: N. In. Cas. 11, Valley, Kevin, N. 11								
Date: 28 Jun 04		Time: 0206		Lat: 13 13.977		Long: 65 45.866										
N #	Depth	Miskin Temp	Hellum	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRFR	POC/PON	HPLC	Chla	Flow Cyt	W/P
				O2	92-92											
1	0	26.2	16.2		34	618	618									
2	0															
3	20	24.8				619	619									
4	20															
5	40	22.2				620	620									
6	40		16.3													
7	50	21.3				621	621									
8	60															
9	60	20.9				622	622									
10	70															
11	70	20.6				623	623									
12	80		16.4													
13	80	20.3				624	624									
14	90	20.2				625	625									
15	100	20.0				626	626									
16	100		16.5													
17	200	19.8				627	627									
18	200															
19	140	19.7				628	628									
20	140		16.6													
21	200	19.4				629	629									
22	300	19.2				630	630									
23	500	17.3				631	631									
24	700	14.2				632	632									





Cruise: EN01E5				Leg: 1		Cast: CTD #44		Type: C1 Snap Shot 1 - # 26 (0-700m)		272					
Date: 28 Jun 04				Time: 0742		Lat: 31 13.150		Long: 66 10.793		Samplers: N. Loran, Beas, 0130, Kevin					
Date: 28 Jun 04				Time: 0830		Lat: 31 12.760		Long: 66 10.793		Vol= 2L					
N #	Depth	Miskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nus	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt
				O2	O2, O2s										
1	0	26.3			101	633	633		655		557-12				
2	0										<del>557-12</del>	505-1	462-1	462-1	462
3	20	24.8			102	634	634		656		556-13				
4	20											506-2	464-2	464-2	464
5	40	23.6			103	635	625	413	657		555-11				
6	40											507-3	465-2	465-2	465
7	50	22.5			104	636	636		658		554-10				
8	60											508-4	466-4	466-4	466
9	60	22.0			105	637	637		659		553-9		467-5	467-5	467
10	70												468-6	468-6	468
11	70	21.9			106	638	638		660		552-8				
12	80											509-5	469-7	469-7	469
13	80	21.5			107	639	639		661		551-7				
14	90	21.3			108	640	640		662		550-6		470-8	470-8	470
15	100	20.9			109	641	641		663		549-5				
16	100											510-6	471-9	471-9	471
17	120	20.3			110	642	642		664		548-4				
18	120											511-7	472-10	472-10	472
19	140	20.0			111	643	643		665		547-3				
20	140											512-8	473-11	473-11	473
21	160	19.8			112	644	644		666		546-2				
22	300	19.2			113	645	645		667		545-1				
23	500	17.3			114	646	646		668		544-1				
24	700	15.9			115	647	647		669		543-1				

Cruise: EDDIES				Leg: 1024		Cast: # CTD # 50		Type: SALSALOT 1 # 27		265						
Date: 28 Feb 04				Time: 0442		Lat: 30 51.546		Long: 66 10.913		Samplers: SALSALOT 1 # 27						
Date: 28 Feb 04				Time: 0930		Lat: 30 50.830		Long: 66 11.020								
N #	Depth	Miskin Temp	Helium	Time: 0930		DIC/ALK	TOC/TN	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P
				Oxygens	11/17											
1	0	26.1		701		648	648				520-13					1
2	0															
3	20	24.9		702		649	649				517-1	474-1	474-1			2
4	20															
5	40	22.4		703		650	650				518-2	475-2	475-2			3
6	40															
7	50	21.5		704		651	651				519-3	476-3	476-3			4
8	60															
9	60	20.6		705		652	652				520-4	477-4	477-4			5
10	70															
11	70	20.3		706		653	653				521-5	478-5	478-5			6
12	80															
13	80	20.2		707		654	654				521-5	480-7	480-7			7
14	90	20.2		708		655	655				521-5	480-7	480-7			8
15	100	20.0		709		656	656				521-5	481-8	481-8			9
16	100															
17	120	19.9		710		657	657				521-6	482-9	482-9			10
18	120															
19	140	19.8		711		658	658				521-7	483-10	483-10			11
20	140															
21	220	19.8		712		659	659	P-21			521-8	484-11	484-11			12
22	300	19.6		713		660	660	-22			521-9					13
23	620	18.3		714		661	661	-23			521-10					14
24	700	15.8		715		662	662	-24			521-11					15

Cruise:	EODIES	Leg:	1	Cast:	CTD CWT #	51	Type:	C1	SAMPLERS:	PAUL VALLEY TOM BEY DENNIS	257				
Date:	28 Jun 04	Time:	1324	Lat:	30 29.750	Long:	66.1075	Sampler:							
Date:	28 Jun 04	Time:	1407	Lat:	30 29.350	Long:	66.1075	Sampler:							
N #	Depth	Miskin Temp	Helium	Time: 1407 Oxygens	DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol= 4L	Chia	Flow Cyt	S <sup>15</sup> N
				O <sub>2</sub>	* DOF										
1	0	26.5		21	663	663		685		583 15					45
2	0										534 1	485 1	485 1		485
3	20	24.9		22	664	664		686		582 12					
4	20										530 2	485 2	485 2		485
5	40	22.3		23	665	665	45	687		581 11					
6	40										521 3	487 3	487 3		487
7	50	21.4		24	666	666		688		580 10	488 4	488 4	488 4		488
8	60										532 4	489 5	489 5		489
9	60	20.8		25	667	667		689		579 9					
10	70											4810 6	4810 6		490
11	70	20.8		26	668	668		690		578 8					
12	80										533 5	491 7	491 7		491
13	80	20.4		37	669	669		691		577 7					
14	90	20.2		28	670	670		692		576 6					
15	100	20.0		29	671	671		693		575 5					
16	100										534 6	492 9	492 9		493
17	120	20.0		30	672	672		694		574 4					
18	120										535 7	494 10	494 10		494
19	140	19.9		31	673	673		695		573 3					
20	140										536 8	495 11	495 11		495
21	200	19.8		32	674	674		696		572 2	537 9				
22	300	19.1		33	675	675		697		571 1	538 10				
23	500	18.0		34	676	676		698			539 11				
24	700	14.6		35	677	677		699			540 12				
											* 3L				

15  
 4-8  
 5-12  
 2-7  
 4-7  
 5-8  
 7-12  
 S=7  
 4=5  
 Miskin  
 7 (4) 7  
 8 (5) 4  
 12 (7) 5  
 Samp<sup>12</sup> bottles  
 swapped in filter  
 reus so count  
 shear #s remaining  
 intact.  
 DJM.

Cruise: EDDIES			Leg: 1		Cast: CTD CAST #		Type: C1		SAMPLER: 1 - 29 (0-700m)		Samplers: PAUL GRACE SARANT BILL MICHAEL										
Date: 28 Jun 04			Time: 1630		Lat: 30 07.960		Long: 66 10.880														
Date: 28 Jun 04			Time: 1704		Lat: 30 07.960		Long: 66 10.770														
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON		HPLC		Chia	Flow Cyt	N/P	S <sup>15</sup> N		
				O2	O2, O2							Vol= 2L	Vol= 4L								
1	0	27.1			61	678	678		700		576	13	5		496	1	446	1	496	1	46
2	0														541	1	496	1	446	1	
3	20	24.9			62	679	679		701		595	12			542	2	497	2	497	2	2
4	20																				
5	40	23.0			63	680	680	46	702		594	11			543	3	498	3	498	3	3
6	40														543	10	499	4	499	4	4
7	50	22.5			64	681	681		703		593	10			544	4	500	5	500	5	4
8	60																				
9	60	22.0			65	682	682		704		592	9									5
10	70																				
11	70	21.6			66	683	683		705		611	8			501	6	501	6	500	6	6
12	80														545	5	502	7	502	7	
13	80	21.3			67	684	684		706		590	7									7
14	90	20.9			68	685	685		707		589	6									8
15	100	20.8			69	686	686		708		588	5									9
16	100														542	6	504	9	504	9	504
17	120	20.4			70	687	687		709		587	4									10
18	120														547	7	505	10	505	10	505
19	140	20.3			71	688	688		710		586	3									11
20	140														548	8	506	11	506	11	506
21	200	19.9			72	689	689		711		585	2			549	9					12
22	300	19.2			73	690	690		712		584	1			550	10					13
23	500	18.2			74	691	691		713		581	11			551	11					14
24	700	14.9			75	692	692		714		552	12			552	12					15

ENTERED

Cruises: EDDIES			Leg: 1	Cast: CTB CAST	ST: S3	Type: C1	SAMPLERS: PAUL KEVIN BEA ORGA BILL		241								
Date: 28 Feb 04	Time: 1922	Lat: 29 46.780	Long: 66 10.930	Date: 28 Feb 04	Time: 2006	Lat: 29 47.100	Long: 66 11.018										
N #	Depth	Miskin Temp	Helium	O2	O2, O2	DIC/ALK	TOC/TN	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	SISN	N/P
1	0	27.9		1		693	693		715		669 13					47	1
2	0											553 1	507 1	507 1	507		2
3	20	25.0		2		694	694		716		608 12						
4	20											554 2	508 2	508 2	508		
5	40	24.2		3		695	695		717		667 11						3
6	40											555 3	509 3	509 3	509		
7	50	23.3		4		696	696		718		606 10		510 4	510 4	510		4
8	60											556 4	511 5	511 5	511		
9	60	22.4		5		697	697		719		605 9						5
10	70												512 6	512 6	512		
11	70	22.0		6		698	698		720		604 8						6
12	80											557 5	513 7	513 7	513		
13	80	21.8		7		699	699		721		603 7						7
14	90	21.5		8		700	700		722		602 6		514 8	514 8	514		8
15	100	21.2		9		701	701		723		601 5						9
16	100											558 6	515 9	515 9	515		
17	120	20.8		10		702	702		724		600 4						10
18	120											559 7	516 10	516 10	516		
19	140	20.5		11		703	703		725		599 3						11
20	140											560 8	517 11	517 11	517		
21	200	19.9		12		704	704		726		598 2		561 9				12
22	300	20.0		13		705	705		727		597 1		562 10*				13
23	500	18.2		14		706	706		728				563 11*				14
24	700	15.3		15		707	707		729				564 12*				15
													*3L				

N# 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: EDDIES		Leg: 1		Cast: CTD CAST # 54		Type: C1 SWAPSHOT 1-31 (0-700m)		Date: 28 Jun 04		Time: 2253		Lat: 29 46.734		Long: 66 36.06		Samplers: S11, P1, T07 S-2, 019a		239	
N #	Depth	Niskin Temp	Helium	Oxygens	O2, O2, O2,	DIC/AIK	TOC/TON	Sails	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	S <sup>15</sup> N	N/P		
										Vol= 2L		Vol= 4L							
1	0	27.4		45		708	708		730		622.13					48.	1		
2	0											565.1	518.1	518.1	518		2		
3	20	25.4		46		709	709		731		621.12								
4	20											566.2	519.2	519.2	519		3		
5	40	24.7		47		710	710.8		732		620.11								
6	40											567.3	520.3	520.3	520		4		
7	50	23.0		48		711	711		733		619.10	521.4	521.4	521			4		
8	60											568.4	522.5	522.5	522		5		
9	60	22.0		49		712	712		734		618.9						5		
10	70												523.6	523.6	523		6		
11	70	21.8		50		713	713		735		617.8								
12	80											569.5	524.7	524.7	524		7		
13	80	21.7		<del>51</del> 52		714	714		736		616.7								
14	90	21.5		52		715	715		737		615.6		525.8	525.8	525		8		
15	100	21.2		53		716	716		738		614.5						9		
16	100											570.6	526.9	526.9	526		10		
17	120	20.6		54		717	717		739		613.4								
18	120											571.7	527.10	527.10	527		11		
19	140	20.3		55		718	718		740		612.3								
20	140											572.8	528.11	528.11	528		12		
21	200	19.8		56		719	719		741		611.2	573.9					13		
22	300	19.3		57		720	720		742		610.1	574.10					14		
23	500	17.8		58		721	721		743		575.11						15		
24	700	14.8				722	722		744		576.12								
													577.13						

Cruses: EDDIES			Leg: 1		Cast: CTD CAST # 55		Type: CI		INTERCAL WITH WEATHERBAND (0-700m) 1-32 111											
Date: 29 JUNE 2004			Time: 1409		Lat: 30° 29.81' N		Long: 64° 55.24' W		Samplers: FUL BILC TOM VREERY OLGA DENNIS.											
N #	Depth	Niskin Temp	Helium		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON		HPLC		Chla		Flow Cyt	N/P	S <sup>15</sup> N	
			O <sub>2</sub>	O <sub>2</sub> , O <sub>2</sub>							Vol= 2L	Vol= 4L								
1	0	27.9			723			745		634	13								1	49.
2	0																			
3	20	25.5			702			724		633	12								2	
4	20																			
5	40	24.8			703			725		632	11								3	
6	40																			
7	50	23.3			704			726		631	10								4	
8	60																			
9	60	22.5			705			727		630	9								5	
10	70																			
11	70	22.0			706			728		629	8								6	
12	80	<del>21.9</del>																		
13	80	21.9			707			729		628	7								7	
14	90	21.9			708			730		628	6								8	
15	100	21.3			709			731		627	5								9	
16	100																			
17	120	21.5			710			732		626	4								10	
18	120																			
19	140	20.7			711			733		625	3								11	
20	140																			
21	200	19.9			712			734		624	2								12	
22	300	18.1			713			735		623	1								13	
23	500	16.1			714			736		587	11*								14	
24	700	13.5			715			737		588	12*								15	

Wetland  
numbers  
key with  
(151)





Cruise: EOD145			Leg: 1			Cast: CT0 (AST 57)			Type: C1 SNRP SHOT 1-32			(0-700m)			257					
Date: 30 JUNE 2004			Time: 1920			Lat: 30° 30.03' N			Long: 66° 10.85' W			Samplers: PAUL KEVIN RILL OLSA BEA.								
Date: 30 JUNE 2004			Time: 2006			Lat: 30° 30.24' N			Long: 66° 10.72' W											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON		HPLC		Chia	Flow Cyt	N/P	S <sup>15</sup> N	
				O2 <sub>1</sub>	O2 <sub>2</sub>							Vol= 2L	Vol= 4L							
1	0	27.8				738	738		760	224	647	13						1	50	
2	0	24.5											589	1	540	1	540	1	540	
3	20	24.5				739	739		761	225	646	12						2		
4	20												590	2	541	2	544	2	541	
5	40	22.2				740	740		762	226	645	11						3		
6	40												591	3	542	3	542	3	542	
7	50	21.5				741	741		763		644	10						4		
8	60												592	4	543	4	543	4	543	
9	60	20.9				742	742		764	227	643	9						5		
10	70																			
11	70	20.7				743	743		765	228	642	8						6		
12	80												593	5	546	7	546	7	546	
13	80	20.6				744	744		766	229	641	7						7		
14	90	20.4				745	745		767	230	640	6						8		
15	100	20.3				746	746		768	231	639	5						9		
16	100												594	6	548	9	548	9	548	
17	120	20.1				747	747		769	232	638	4						10		
18	120												595	7	549	10	549	10	549	
19	140	19.8				748	748		770	233	637	3						11		
20	140												596	8	550	11	550	11	550	
21	200	19.6				749	749		771	234	636	2						12		
22	300	19.4				750	750		772	235	635	1						13		
23	500	18.0				751	751		773				599	11*				14		
24	700	14.8				752	752		774				600	12*				15		

Volume not measured.

40 bottles  
in 140 L.

Cruise: EDDIES		Log: 1		Cast: 30 30.040		Type: CI		SNAP SHOT 1-33		(0-700m)		107						
Date: 20 Jan 04		Time: 2216		Lat: 30 30.140		Long: 65 45.740		Samplers: Paul, Deo obs Kevin Paul's Mom										
Date: 20 Jan 04		Time: 2304		Lat: 30 30.140		Long: 65 45.830												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON		HPIC	Chla	Flow Cyt	N/P	S <sup>5</sup> N
				O <sub>2</sub>	O <sub>2</sub>							Vol= 2L	Vol= 4L					
1	0	27.4		1		753	753		775		660 15						1	51
2	0		162		69						601 1	551 1	551 1					
3	20	24.6		2		754	754		776		659 12						2	
4	20										<del>601</del> 2	552 2	552 2					
5	40	22.3		3		754	755*51		777		658 11						3	
6	40		163								603 3	553 3	553 3					
7	50	21.9		4		756	756		778		657 10		554 4	554 4	554 4		4	
8	60										604 4	555 5	555 5					
9	60	21.0		5		757	757		779		656 9						5	
10	70												556 7	556 7				
11	70	20.7		6		758	758		780		655 8						6	
12	80		164		70						605 5	557 7	557 7					
13	80	20.6		7		759	759		781		654 7						7	
14	90	20.5		8		760	760		782		653 6		558 8	558 8			8	
15	100	20.4		9		761	761		783		652 5						9	
16	100		165								606 6	559 9	559 9					
17	120	20.2			#10	762	762		784		651 4						10	
18	120											607 7	560 10	560 10				
19	140	19.9		11		763	763		785		650 3						11	
20	140		166		71						608 8	561 11	561 11					
21	200	19.7		12		764	764		786		649 2	609 9					12	
22	300	19.3		13		765	765		787		648 1	610 10*					13	
23	500	17.5		14		766	766		788		611 11*						14	
24	700	14.3		15		767	767		789		612 12*						15	

N# 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: ED07ES		Leg: 1		Cast: 59		Type: Sloop Shot - #34 (O-7000)		109									
Date: 01 Jul 04		Time: 01:06		Lat: 30 20.027		Long: 65 20.373		Samplers: Tom, Valis, Dennis, Bill, Nelson									
Date: 01 Jul 04		Time: 01:50		Lat: 30 29.750		Long: 65 20.330											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/ALK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPIC	Chia	Flow Cyt	SRN	NRP
				O2	3H												
1	0	22.3			61				790	236	673-13						1
2	0		116						791	237	672-12	G13-1	562-1	562-3	562		2
3	20	252							791								2
4	20								792	238	671-11	G14-2	563-2	563-3	563		3
5	40	230							792								3
6	40		155						793	<del>239</del>	670-10	G15-3	564-3	564-4	564		4
7	50	219							794			G16-4	565-4	565-5	565		4
8	50								794	237	669-9		566-5	566-5	566		5
9	60	21.5							795	240	668-8		567-6	567-6	567		6
10	70	21.8							796	241	667-7	G17-5	568-7	568-7	568		7
11	70		156						797								7
12	80	20.7							797	242	666-6		569-8	569-8	569		8
13	80								798	243	665-5		570-9	570-9	570		9
14	90	20.6							799	244	664-11	G18-6	571-10	571-10	571		10
15	100	20.1							800	245	663-3	G19-7	572-11	572-11	572		11
16	100		157						801	246	662-2	G20-8	573-12	573-12	573		12
17	120	19.8							802	247	661-1	G21-9	574-13	574-13	574		13
18	120								803								14
19	140	19.9							804								15
20	140		158														15
21	200	18.5	159														15
22	300	17.8	160														15
23	500	15.8	161														15
24	700	12.5															15

N# 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: EDA01ES		Leg: 1		Type: Sigsbee 1 - #35 (0-700m)		Cast: CTD # 60		Type: Sigsbee 1 - #35 (0-700m)									
Date: 01 Jul 04		Time: 0455		Lat: 30 30.096		Long: 64 55.208		Samplers: Greer, Sorely, Bill, Michael, Nathan									
Date: 01 Jul 04		Time: 0545		Lat: 30 30.100		Long: 64 55.230		POC/PON HPLC Chla Flow Cyt									
N #	Depth	Niskin Temp	Helium	O2		DIC/AIK	TOC/TN	Salts	Nuts	Bact	FRIF	Vol=		Chla	Flow Cyt	N/P	Sigsbee
				02	71							Vol=	Vol=				
1	0	27.5		701					805		66-13					1	*53
2	0		162163		1101.71				806		65-12					2	
3	20	25.1		702					807		64-11					3	
4	20	24.4	164						808		63-10					4	
5	40	24.4	165						809		62-9					5	
6	40	24.4	165						810		61-8					6	
7	50	22.7	166	704					811		60-7					7	
8	60	21.5	167						812		59-6					8	
9	60	21.5	169	705					813		58-5					9	
10	70		169						814		57-4					10	
11	70	21.0	170						815		56-3					11	
12	80	20.7	170						816		55-2					12	
13	80	20.7	171	707					817		54-1					13	
14	90	20.6	171	708					818		53-10					14	
15	100	20.5	172	709					819		52-11					15	
16	100	20.2	172						820		51-10					16	
17	120	20.2	173	710					821		50-9					17	
18	120		173						822		49-8					18	
19	140	20.0	174	711					823		48-7					19	
20	140		174						824		47-6					20	
21	200	19.8	175	712					825		46-5					21	
22	300	19.3	176	713					826		45-4					22	
23	500	17.0	177	714					827		44-3					23	
24	700	13.9	178	715					828		43-2					24	

N # 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: EDDIES		Leg: 1	Cast: STD # 61	Type: C1	Samp.: 1-# 60 (0-700m)		Niche, Ben, Olga, Kevin, Bill				113	
Date:	Time:	Lat:	Long:	Depth:	Temp:	Salinity:	Stn:	Depth:	Temp:	Salinity:	Stn:	
N #	Depth	Temp	Heilm	Oxygens	O2	DO2	DO2	DO2	DO2	DO2	DO2	
1	0	27.6		101	34		800	249	699-13		1	35
2	0		146				800	249	699-12		2	
3	20	25.0		102			800	250	699-11		3	
4	20						800	250	699-11		3	
5	40	22.7		103			800	250	699-11		3	
6	40		155				800	250	699-11		3	
7	50	22.1		104			801	251	696-13		4	
8	60						801	251	696-13		4	
9	60	21.6		105			802	251	695-14		5	
10	70						802	251	695-14		5	
11	70	21.1		106			803	252	694-18		6	
12	80		156				803	252	694-18		6	
13	80	20.9		107			804	258	693-17		7	
14	90	20.5		108			805	259	692-6		8	
15	100	20.4		109			806	255	691-5		9	
16	100		157				807	256	690-4		10	
17	126	20.1		110			807	256	690-4		10	
18	126						807	256	690-4		10	
19	140	19.9		111			808	257	689-3		11	
20	140		158				808	257	689-3		11	
21	200	19.7		112			809	258	688-2		12	
22	300	19.2		113			810	259	687-1		13	
23	500	17.5		114			811	259	687-1		14	
24	700	14.2		115			812	259	687-1		15	

Cruise: EDOOTES		Leg: 1		Cast: <del>ED</del> STD # G2		Type: C1 Sarg 14, 71 - # G1 (0-7000)		115								
Date:		Time:		Lat:		Long:		Samplers:								
N #	Depth	Niskin Temp	Helium	Time: Oxygens		DIC/Alk	TOC/TN	Salts	Long: Nuis	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P
				O2	O2, O2											
1	0	27.5														
2	0															
3	20	24.9														
4	20															
5	40	24.1														
6	40															
7	50	22.6														
8	60															
9	60	21.9														
10	70															
11	70	21.5														
12	80															
13	80	21.0														
14	90	20.8														
15	100	20.7														
16	100															
17	120	20.5														
18	20															
19	40	20.2														
20	140															
21	200	19.9														
22	200	19.5														
23	500	17.8														
24	700	14.6														

N# 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Cruise: ED01ES		Leg: 1		Cast: CTD #63		Type: In-situ Cast									
Date: 02 Jul 04		Time: 0303		Lat: 30 51.576		Long: 65 20.177									
Date: 02 Jul 04		Time: 0332		Lat: 30 51.38		Long: 65 20.610									
N #	Depth	Niskin Temp	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	Beta
			O2 <sub>1</sub>	O2 <sub>2</sub>							Vol=	Vol=			
1	0														✓
2	0														✓
3	0														✓
4	0														✓
5	25						851			2					✓
6	25														✓
7	25														✓
8	25									3					✓
9	45						852								✓
10	45														✓
11	45														✓
12	45									4					✓
13	65						853								✓
14	65														✓
15	65														✓
16	90														✓
17	90														
18	115														
19	115						854			5					✓
20	115														✓
21	115														✓
22	115														✓
23	120														
24	120														

Samplers: Res, Michel





