

Cruise: EDDIES				Leg: 2		Cast: #1		Type: CTD (0-700m)		Station #241								
Date: 26 Jul 04				Time: 0833		Lat: 30 40.45		Long: 65 20.29		Samplers: o15, Bag, Max, Bill, Nathan								
Date: 26 Jul 04				Time: 0928		Lat: 30 40.43		Long: 65 19.85										
N #	Depth	Niskin Temp	Hellum	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol= 4L	Chla	Flow Cyt	N/P		
				O2 ₁	O2 ₂ , O2 ₃													
1	0	27.7		101		1	1		1	1	13					1		
2	0											1	1	1	1			
3	20	27.4		102		2	2		2	2	12					2		
4	20											2	2	2	2			
5	40	25.8		103		3	3		3	3	10					3		
6	40											3	3	3	3			
* 7	60	24.2		104		4 4	4		4	4	10					4	Ventage Leaky	From Both
8	60	24.3		104		4						4	4	4	4			
9	70	23.3		105		5	5		5	5	8					5		
10	70											5	5	5	5			
11	80	22.1		106		6	6		6	6	98					6		
12	80											6.5	6	6	6			
13	90	21.4		107		7	7		7	7	67		7	7	7	7		
14	100											6+						
15	100	21.0		108		8	8		8	8	66		8	8	8	8		
16	110	20.7		109		9	9		9	9	5		9	9	9	9		
17	120	20.4		110		10	10		10	9	4					10		
18	120											7	10	10	10			
19	140	20.0		111		11	11		11	10	3					11		
20	140											8	11	11	11			
21	200	18.9		112		12	12	Y1	12	11	2	9				12		
22	300	18.1		113		13	13	Y2	13	12	1	10*				13		
23	500	16.5		114		14	14	Y3	14			11*				14		
24	700	13.1		115			15	Y4	15			12*				15		
												x=3L						

+ POC filter 6 was torn and had air bubble

* Leaker

Cruise: EDDIES		Leg: 02		Cast: 02		Type: CTD (0-700m) Station #242										
Date: 26 Jul 2004		Time: 1211		Lat: 30° 40.96		Long: 65° 07.50		Samplers:								
Date: 26 Jul 2004		Time: 1259		Lat: 30° 41.69		Long: 65° 06.27		Viv, Paul, Naomi, Valery, Olga								
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TN	Salts	Nuts	Bact	FRFR	POC/PON	HPLC	Chla	Flow Cyt	2N ¹⁵
				O ₂	O ₂ , O ₃											
1	0	27.7		701		15	16		16		26-13					*1
2	0											13-1	12-1	12-1	12	
3	20	27.0		702		16	17		17		25-12					
4	20											14-2	13-2	13-2	13	
5	40	24.9		703		17	18*		18		24-11					
6	40											15-3	14-3	14-3	14	
7	60	22.5		704		18	19		19		23-10					
8	60											16-4	15-4	15-4	15	
9	70	22.5		705		19	20		20		22-9					
10	70												16-5	16-5	16	
11	80	22.1		706		20	21		21		21-8					
12	80											17-5	17-6	17-6	17	
13	90	21.6		707		21	22		22		20-7		18-7	18-7	18	
14	100											18-6	19-8	19-8	19	
15	100	21.5		708		22	23		23		19-6					
16	110	21.5		709		23	24		24		18-5		20-9	20-9	20	
17	120	21.0		710		24	25		25		17-4					
18	120											19-7	21-10	21-10	21	
19	140	20.9		711		25	26		26		16-3					
20	140											20-8	22-11	22-11	22	
21	200	20.2		712		26	27		27		15-2	21-9				
22	300	18.9		713		27	28		28		14-1	22-10*				
23	500	17.3		714		28	29		29			23-11*				
24	700	14.1		715			30		30			24-12*				
												*- 32				

bottle # 12 accidentally dripped @ 90m instead of 80m
 Sample 7 HPLC only 262
 POC sample 22 - filter torn
 DIC sample 18 bottle broke

Cruise: EDDIES		Leg: 02		Cast: 03		Type: (0-700m) Station 266											
Date: 26 July 2004		Time: 1902		Lat: 30° 51.68		Long: 65° 20.70		Samplers: Viv, Olga, Bea, Max, Cabell, Bill									
Date: 26 July 2004		Time: 1946		Lat: 30° 51.74		Long: 65° 20.67											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRFR	POC/PON	HPLC	Chla	Flow Cyt	N/P	25N
				O2	O2												
1	0	28.2		21		29	31		31		39					1	*2
2	0											25-1	23-1	23-1	23		
3	20	27.4		22		30	32		32		38					2	
4	20		156									26-2	24-2	24-2	24		
5	40	25.5		23		31	33 *2		33		37					3	
6	40		197									27-3	25-3	25-3	25		
7	60	23.9		24		32	34		34		36					4	
8	60		158		-92							28-4	26-4	26-4	26		
9	70	22.7		25		33	35		35		35					5	
10	70		159										27-5	27-5	27		
11	80	22.1		26		34	36		36		34					6	
12	80		160									29-5	28-6	28-6	28		
* 13	90	21.5	161	27		35	37		37		33		29-7	29-7	29	7	
14	100		162		93							30-6	30-8	30-8	30		
15	100	21.1		28		36	38		38		32					8	
* 16	110	24.0	163	29		37	39		39		31		31-9	31-9	31	9	
17	120	24.0		30		38	40		40		30					10	
18	120		164									31-7	32-10	32-10	32		
19	140	20.6		31		39	41		41		29					11	
20	140		165		94							32-8	33-11	33-11	33		
* 21	200	19.5	167	32	95	40	42		42		28	33-9				12	
* 22	300	18.5	169	33	96	41	43		43		27	34-10*				13	
* 23	500	16.3	173	34	E ¹⁰⁰ 97	42	44		44			35-11*				14	
* 24	700	13.6	171	35	98		45		45			36-12*				15	
↑												*=38					

He
and
or
in same
bottle

He & 3H canceled.
#17 is leaking from the bottle.

Cruise: EDDIES		Leg: 02		Cast: 04		Type: (0-700m) Station 240											
Date: 26 July 2004		Time: 2122		Lat: 30° 40.67		Long: 65° 32.90		Samplers: Viv, Bea Cabell, Bill, Olga, Max									
Date: 26 July 2004		Time: 2200		Lat: 30° 40.47		Long: 65° 32.91											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol=28	HPLC Vol=48	Chla	Flow Cyt	N/D	15N
				O2 ₁	O2 ₂ , O2 ₃												
1	0	20.2		41		43	46		46		52					1	*3
2	0	27.5										37-1	34-1	34-1	34		
3	20	13.7		42		44	47		47		51					2	
4	20											38-2	35-2	35-2	35		
5	40	24.5		43		45	48*3		48		50					3	
6	40											39-3	36-3	36-3	36		
7	60	22.4		44		46	49		49		49					4	
8	60											40-4	37-4	37-4	37		
9	70	21.9		45		47	50		50		48					5	
10	70												38-5	38-5	38		
11	80	21.3		49		48	51		51		47					6	
12	80											41-5	39-6	39-6	39		
13	90	20.9		50		49	52		52		46		40-8	40-7	40	7	
14	100											42-6	40-8	40-7	40	7	
15	100	20.8		51		50	53		53		45					8	
16	110	20.7		52		51	54		54		44		42-9	42-9	42		
17	120	20.5		53		52	55		55		43						
18	120											43-7	42-10	42-10	42	43	
19	140	20.2		54		53	56		56		42						
20	140											44-8	43-11	43-11	43	44	
21	200	19.6		55		54	57		57		41	45-9					
22	300	19.0		56		55	58		58		40	46*-10					
23	500	16.6		57		56	59		59			47*-11					
24	700	13.7		58			60		60			48*-12					
												*=38					

Cruise: EDDIES			Leg: 02		Cast: 05		Type: (0-700m) Station 216										
Date: 26 Jul 04			Time: 2340		Lat: 30 30.06		Long: 65 20.27		Samplers: Naorij Paul, Valerie, Nathan								
Date: 27 Jul 04			Time: 0029		Lat: 30-30.21		Long: 65 20.32										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol=288	HPLC Vol=488	Chla	Flow Cyt	215N	
				O2	O2, O2												
1	0	27.8		601		57	601		601		65						*4
2	0											49-1	45-1	45-1	450		
3	20	26.6		602		58	602		602		64						
4	20											50-2	46-2	46-2	46		
5	40	24.5		603		59	603*4		603		63						
6	40											51-3	47-3	47-3	47		
7	60	22.6		604		60	604		604		62						
8	60											52-4	48-4	48-4	48		
9	70	22.0		605		61	605		605		61						
10	70												49-5	49-5	49		
11	80	21.4		606		62	606		606		60						
12	80											53-5	50-6	50-6	50		
13	90	21.4		607		63	607		607		59			51-7	51-7	51	
14	100											54-6	52-8	52-8	52		
15	100	21.2		608		64	608		608		58						
16	110	20.8		609		65	609		609		57			53-9	53-9	53	
17	120	20.7		70		66	670		70		56						
18	120											55-7	54-10	54-10	54		
19	140	20.6		71		67	71		71		55						
20	140											56-8	55-11	55-11	55		
21	200	20.2		72		68	72		72		54	57-9					
22	300	20.2		73		69	73		73		53	58-10*					
23	500	17.3		74		70	74		74			59-11*					
24	700	15.0		75			75		75			60-12*					
												*=38					

Cruise: <u>EMSTES</u>				Leg: <u>2</u>		Cast: <u>CTD #7</u>				Type: <u>CTD (0-700)</u> Station# <u>239</u>								
Date: <u>27 Jul 04</u>				Time: <u>0729</u>		Lat: <u>30 40.86</u>		Long: <u>65 45.87</u>		Samplers: <u>Ben, Olse, Max, Bill, Nathan</u>								
Date: <u>27 Jul 04</u>				Time: <u>0818</u>		Lat: <u>30 40.91</u>		Long: <u>65 45.61</u>										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON *00P	Salts	Nuts	Bact	FRFR	POC/PON	HPLC	Chla	Flow Cyt	*δ ¹⁵ N		
				Vol=2L	Vol=4L													
1	0	27.8		101		74	76		76		78					*5		
2	0											61 -1	56 -1	56 -1	56			
3	20	27.4		102		75	77		77		77							
4	20											62 -2	57 -2	57 -2	57			
5	40	25.0		103		78	78 *5		78		76							
6	40											63 -3	58 -3	58 -3	58			
7	60	21.9		104		74	79		79		75							
8	60											64 -4	59 -4	59 -4	59			
9	70	21.3		105		75	80		80		74							
10	70												60 -5	60 -5	60			
11	80	20.8		106		76	81		81		73							
12	80											65 -5	61 -6	61 -6	61			
13	90	20.6		107		77	82		82		72 *1		62 -7	62 -7	62			
14	100											66 -6	63 -8	63 -8	63			
15	100	20.3		108		78	83		83		71 *4							
16	110	20.2		109		79	84		84		70 *5		64 -9	64 -9	64			
17	120	20.2		110		80	85		85		69 *4							
18	120											67 -7	65 -10	65 -10	65			
19	140	19.8		111		81	86		86		68 *3							
20	140											68 -8	66 -11	66 -11	66			
21	200	19.5		112		82	87	Y5	87		67 *1	69 -9						
22	300	19.0		113		83	88	Y6	88		66 *	70 *-10						
23	500	17.0		114		84	89	Y7	89			71 *-11						
24	700	13.8		115			90	Y8	90			72 *-12						
												*=3L						

Cruise: EDDIES			Leg: 02	Cast: 08 09	Type: CTD Cast (0-700m) Stn. 187												
Date: 27 July 2004			Time: 1341	Lat: 30°19.25	Long: 106°10.77	Samplers: Viv, Naomi, Paul, Valery, Olga, Sarah, Joe, Bea											
Date: 27 July 2004			Time: 1425	Lat: 30°19.43	Long: 106°10.96												
N #	Depth	Nskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON *DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2%	HPLC Vol= 4%	Chla	Flow Cyt	δ ¹⁵ N	
				O ₂	O ₂ , O ₂												
1	0	28.2	←	41		100	106		106		104	85				*7	
2	0											85-1	78-1	78-1	79		
3	20	27.9		42		101	107		107		103	86					
4	20											86-2	79-2	79-2	80		
5	40	23.2		43		102	108*7		108		102	87					
6	40											87-3	80-3	80-3	81		
7	60	21.7		44		103	109		109		101						
8	60											88-4	81-4	81-4	82		
9	70	22.0		45		104	110		110		100						
10	70												82-5	82-5	83		
11	80	21.6		46		105	111		111		99						
12	80											89-5	83-6	83-6	84		
13	90	21.2		47		106	112		112		98		84-7	84-7	85		
14	100											90-6	85-8	85-8	86		
15	100	20.9		48		107	113		113		97						
16	110	20.9		49		108	114		114		96		86-9	86-9	87		
17	120	20.9		50		109	115		115		95						
18	120											91-7	87-10	87-10	88		
19	140	20.8		51		110	116		116		94						
20	140											92-8	88-11	88-11	89		
21	200	20.3		52		111	117		117		93	93-9					
22	300	20.9		53		112	118		118		92	94*10					
23	500	18.2		54		113	119		119			95*11					
24	700	16.5		55			120		120			96*12					
												*= 3%					

Cruise: EDDIES			Leg: 02		Cast: 10			Type: CTD Cast (0-700m) Station 189									
Date: 27 July 2004			Time: 1648		Lat: 30° 19.20		Long: 30° 19.6		Samplers: Viv, Tom, Sarah, Joe, Paul								
Date: 27 July 2004			Time: 1736		Lat: 65° 48.62		Long: 65° 45.5										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	δ ¹⁵ N
				O ₂	O ₂ , O ₂												
1	0	28.1		21		114	121	121	13	117						1	*8
2	0										97-1	89-1	89-1	90			
3	20	27.8		22		115	122	122	14	116						2	
4	20										98-2	90-2	90-2	91			
5	40	24.9		23		116	123*8	123	15	115						3	
6	40										99-3	91-3	91-3	92			
7	60	22.6		24		117	124	124	16	114						4	
8	60										100-4	92-4	92-4	93			
9	70	21.5		25		118	125	125	17	113						5	
10	70											93-5	93-5	94			
11	80	21.2		26		119	126	126	18	112						6	
12	80										101-5	94-6	94-6	95			
13	90	20.7		37		120	127	127	19	111		95-7	95-7	96		7	
14	100										102-6	96-8	96-8	97			
15	100	20.5		28		121	128	128	20	110						8	
16	110	20.5		29		122	129	129		109		97-9*	97-9	98		9	
17	120	20.4		30		123	130	130	21	108						10	
18	120										103-7	98-10	98-10	99			
19	140	20.4		31		124	131	131	22	107						11	
20	140										104-8	99-11	99-11	100			
21	200	20.2		32		125	132	132	23	106	105-9					12	
22	300	19.6		33		126	133	133	24	105	106-10*					13	
23	500	19.2		34		127	134	134			107-11*					14	
24	700	15.0		35			135	135			108-12*					15	
											*=38						

*only
got 3L.

Cruise: EDDIES			Leg: 02		Cast: 11		Type: CTD Cast (0-700m) Station 191									
Date: 27 Oct 2004			Time: 1954		Lat: 30° 19.23		Long: 65° 20.24		Samplers: Cabell, Bea, Max, Olga, Biele, Viv							
Date: 27 Oct 2004			Time: 2037		Lat: 30° 19.50		Long: 65° 20.09									
N #	Depth	Niskin Temp	Helium		DIC/Alk	TOC/TON *DOP	Salts	Nuts	Bact	FRFR	POC/PON Vol=28	HPLC Vol=48	Chla	Flow Cyt	$\delta^{15}N$	N&P
			Oxygens													
			O ₂	O ₂ , O _{2s}												
1	0	27.6			101	128	136	136		130					*9	1
2	0										109-1	100-1	100-1	101		
3	20	27.2			102	129	137	137		129						2
4	20										110-2	101-2	101-2	102		
5	40	23.1			103	130	138*	138		128						3
6	40										111-3	102-3	102-3	103		
7	60	21.7			104	131	139	139		127						4
8	60										112-4	103-4	103-4	104		
9	70	21.0			105	132	140	140		126						5
10	70											104-5	104-5	105		
11	80	20.3			106	133	141	141		125						6
12	80										113-5	105-6	105-6	106		
13	90	20.5			107	134	142	142		124		106-7	106-7	107		7
14	100										114-6	107-8	107-8	108		
15	100	20.5			108	135	143	143		123						8
16	110	20.7			109	136	144	144		122		108-9	108-9*	109		9
17	120	20.5			110	137	145	145		121						10
18	120										115-7	109-10	109-10	110		
19	140	20.0			111	138	146	146		120						11
20	140										116-8	110-11	110-11	111		
21	160	19.6			112	139	147	147		119	117-9					12
22	180	19.7			113	140	148	148		118	118-10*					13
23	200	17.6			114	141	149	149			119-11*					14
24	200	14.4			115		150	150			120-12*					15
											*=38					

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Raining!
Cleared up after DIC's taken.

~~38~~

Cruise: EDDIES		Leg: 02		Cast: * 12		Type: CTD Cast (0-700m) Station 193										
Date: 27 July 2004		Time: 2247		Lat: 30 19.17		Long: 64 55.12		Samplers: Bill, Nancy, Valery, Nathan								
Date: 27 Jul 04		Time: 2331		Lat: 30 19.73		Long: 64 54.99										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	¹⁵ N
				O2 ₁	O2 ₂	TOC	*DOP						Vol=28	Vol=48		
1	0	27.7		701		142	151		151	25	143	*		111-1		*10
2	0											121-1	111-1	111-1 111-2	✓	
3	20	27.5		702		143	152		152	26	142					
4	20											122-2	112-2	112-2	112	
5	40	25.3		703		144	153		153	27	141					
6	40											123-3	113-3	113-3	113	
7	60	22.4		704		145	154		154	28	140					
8	60											124-4	114-4	114-4	114	
9	70	21.7		705		146	155		155	29	139					
10	70												115-5	115-5	115	
11	80	21.3		706		147	156		156	30	138					
12	80											125-5	116-6	116-6	116	
13	90	20.9		707		148	157		157	31	137		117-7	117-7	117	
14	100											126-6	118-8	118-8	118	
15	100	20.8		708		149	158		158	32	136					
16	110			709		150	159		159		135		119-9	119-9	119	
17	120	20.6		710		151	160		160	33	134					
18	120											127-7	120-10	120-10	120	
19	140	20.5		711		152	161		161	34	133					
20	140											128-8	121-11	121-11	121	
21	200	20.0		712		153	162		162	35	132	129-9				
22	300	20.2 19.9		713		154	163		163	36	131	130-10*				
23	500	18.0		714		155	164		164			131-11*				
24	700	16.0		715			165		165			132-12*				
												*=38				

Cruise: EDDIES		Leg: 2		Cast: 14		Type: CTD (0-700m)		Station 245									
Date: 28 July 04		Time: 0426		Lat: 30 40.91		Long: 64 38.02		Samplers: Tom, Sarah, Soc, Nathan									
Date: 28 Jul 04		Time: 0512		Lat: 30 41.43		Long: 64 30.47											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol= 4L	Chla	Flow Cyt	SIN	
				O2 ₁	O2 ₂ , O2 ₃												
1	0	27.9		21		170	181		181		169						183
2	0											145-1	133-1	133-1	133		
3	20	27.7		22		171	182		182		168						
4	20											146-2	134-2	134-2	134		
5	40	24.5		23		172	183 ^{#12}		183		167						
6	40											147-3	135-3	135-3	135		
7	60	22.3		24		173	184		184		166						
8	60											148-4	136-4	136-4	136		
9	70	21.5		25		174	185		185		165						
10	70												137-5	137-5	137		
11	80	21.0		26		175	186		186		164						
12	80											149-5	138-6	138-6	138		
13	90	20.6		27		176	187		187		163		139-7	139-7	139		
14	100											150-6	140-8	140-8	140		
15	100	20.6		28		177	188		188		162						
16	110	20.5		29		178	189		189		161		141-9	141-9	141		
17	120	20.1		30		179	190		190		160						
18	120											151-7	142-10	142-10	142		
19	140	19.9		31		180	191		191		159						
20	140											152-8	143-11	143-11	143		
21	200	19.6		32		181	192		192		158	153-9					
22	300	19.1		33		182	193		193		157	154*-10					
23	500	17.5		34		183	194		194			155*-11					
24	700	14.6		35			195		195			156*-12					
												#3L					

Cruise: EDDIES			Leg: 2	Cast: 15			Type: CTD (0-700m)	Station 243									
Date: 28 Jul 04			Time: 0526	Lat: 30 40.91			Long: 64 30.02			Samplers: Bac, B:ll, Ols, N:han, Mgx							
Date: 28 Jul 04			Time: 0512	Lat: 30 41.31			Long: 64 30.47										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol=2L	HPLC Vol=4L	Chla	Flow Cyt	Stn	
				O2 ₁	O2 ₂ , O2 ₃												
1	0	27.6		101		184	196		196		182						12
2	0											157 - 1	144 - 1	144 - 1	144		
3	20	27.5		102		185	197		197		181						
4	20											158 - 2	145 - 2	145 - 2	145		
5	40	24.0		103		186	*13 198		198		180						
6	40											159 - 3	146 - 3	146 - 3	146		
7	60	22.0		104		187	199		199		179						
8	60											160 - 4	147 - 4	147 - 4	147		
9	70	21.4		105		188	200		200		178						
10	70												148 - 5	148 - 5	148		
11	80	21.0		106		189	201		201		177						
12	80											161 - 5	149 - 6	149 - 6	149		
13	90	20.9		107		190	202		202		176			150 - 7	150 - 7	150	
14	100											162 - 6	151 - 8	151 - 8	151		
15	100	20.8		108		191	203		203		175						
16	110	20.6		109		192	204		204		174			152 - 9	152 - 9	152	
17	120	20.5		110		193	205		205		173						
18	120											163 - 7	153 - 10	153 - 10	153		
19	140	20.4		111		194	206		206		172						
20	140											164 - 8	154 - 11	154 - 11	154		
21	200	19.9		112		195	207	196	207		171	165 - 9					
22	300	19.3		113		196	208	196	208		170	166 * - 10					
23	500	17.5		114		197	209	197	209			167 * - 11					
24	700	14.7		115		198	210	198	210			168 * - 12					
												*3L					


 Maybe 165 - 10 166 I'm not completely sure.

Cruise: EDDIES			Leg: 2		Cast: 16		Type: CTD (0-700) Station 295										
Date: 28 July 2004			Time: 1054		Lat: 31° 02.49		Long: 104° 29.97		Samplers: Naomi, Paul, Valery, Viv								
Date: 28 July 2004			Time: 1139		Lat: 31° 03.26		Long: 104° 30.35										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRFR	POC/PON Vol= 2L	HPLC Vol= 4L	Chla	Flow Cyt	Stn	M/P
				O ₂	O ₂ , O ₂												
1	0	27.7		701		199	211.		211		195					13	1
2	0	27.6										169-1	155-1	155	155		
3	20	24.3	27.6	702		200	212.		212		194						2
4	20											170-2	156-2	156	156		
5	40	← 24.3		703		201	213.4		213		193						3
6	40											171-3	157-3	157	157		
7	60	22.0		704		202	214		214		192						4
8	60											172-4	158-4	158	158		
9	70	21.4		705		203	215.		215		191						5
10	70												159-5	159	159		
11	80	20.9		707		204	216.		216		190					3L	6
12	80			706								173-5	160-6	160	160		
13	90	20.9		707		205	217.		217		189		161-7	161	161		7
14	100											174-6	162-8	162	162		
15	100	20.7		708		206	218.		218		188						8
16	110	20.8		709		207	219.		219		187		163-9	163	163		9
17	120	20.2		710		208	220.		220		186						10
18	120											175-7	164-10	164	164		
19	140	19.8		711		209	221		221		185						11
20	140	19.8										176-8	165-11	165	165		
21	200	19.5		712		210	222	Y89	222		184	177-9					12
22	300	19.1		713		211	223	Y910	223		183	178-10					13
23	500	17.1		714		212	224	Y811	224			179-11					14
24	700	14.1		715			225.	Y912	225			180-12					15
												73L					

E2-155
165

Cruise: EDDIES			Leg: 02		Cast: CTD Cast # 17				Type: (0-700m) Station 093							
Date: 28 July 2004			Time: 1354		Lat: 31°02.55		Long: 64°55.27		Samplers: Viv, Naomi, Paul, Valery, Sarah, Joe, Cabell, Tom							
Date: 28 July 2004			Time: 1436		Lat: 31°02.96		Long: 64°55.74									
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	δ15N
				O2 ₁	O2 ₂ , O2 ₃											
1	0	28.0		41		213	226		226	37	208					*14
2	0											181-1	166-1	166-1	166	
3	20	27.8		42		214	227		227	38	207					
4	20											182-2	167-2	167-2	167	
5	40	24.9		43		215	228*5		228	39	206					
6	40											183-3	168-3	168-3	168	
7	60	22.2		44		216	229		229	40	205					
8	60											184-4	168-4	169-4	169	
9	70	21.6		45		217	230		230	41	204					
10	70											185-5	170-5	170-5	170	
11	80	21.1		46		218	231		231	42	203					
12	80											185-5	170-6	171-6	171	
13	90	20.8		47		219	232		232	43	202		172-7	172-7	172	
14	100											186-6	173-8	173-8	173	
15	100	20.5		48		220	233		233	44	201					
16	110	20.3		49		221	234		234		200		174-9	174-9	174	
17	120	20.2		50		222	235		235	45	199					
18	120											187-7	175-10	175-10	175	
19	140	20.0		51		223	236		236	46	198					
20	140											188-8	176-11	176-11	176	
21	200	19.8		52		224	237		237	47	197	189-9				
22	300	19.2		53		225	238		238	48	196	190-10*				
23	500	17.1		54		226	239		239			191-11*				
24	700	14.0		55			240		240			192-12*				
												*=38				

Cruise: EDDIES			Leg: 02		Cast: 18		Type: STD cast (0-700m) Station 222 291											
Date: 28 July 2004			Time: 1648		Lat: 31° 02.51 31° 02.51		Long: 65° 20.33		Samplers:									
Date: 28 July 2004			Time: 1730		Lat: 31° 02.56		Long: 65° 21.50		Tom, Joe, Sarah, Viv, Cabell									
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON *DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol=28	HPLC Vol=48	Chla	Flow Cyt	N/P	0.15 N	
				O2 ₁	O2 ₂ , O2 ₃													
1	0	28.0		1		227	241		241		221					1	*15	
2	0											193-1	177-1	177-1	177			
3	20	27.9		2		228	242		242		220					2		
4	20											194-2	178-2	178-2	178			
5	40	25.4		3		229	243*16		243		219					3		
6	40											195-3	179-3	179-3	179			
7	60	22.4		4		230	244		244		218					4		
8	60											196-4	180-4	180-4	180			
9	70	21.4		5		231	245		245		217					5		
10	70												181-5	181-5	181			
11	80	20.9		6		232	246		246		216					6		
12	80											197-5	182-6	182-6	182			
13	90	17.9		7		233	247		247		215		183-7	183-7	183	7		
14	100											198-6	184-8	184-8	184			
15	100	20.4		8		234	248		248		214					8		
16	110	20.3		9		235	249		249		213		185-9	185-9	185	9		
17	120	20.3		10		236	250		250		212					10		
18	120											199-7	186-10	186-10	186			
19	140	19.9		11		237	251		251		211					11		
20	140											200-8	187-11	187-11	187			
21	200	19.8		12		238	252		252		210	201-9				12		
22	300	18.9		13		239	253		253		209	202-10*				13		
23	500	16.9		14		240	254		254			203-11*				14		
24	700	13.6		15			255		255			204-12*				15		
												*=32						

* NOT Shaken or Sealed

* filter bell on floor

Cruise: EDDIES			Leg: 02	Cast: 19	Type: (0-700m) Station 289												
Date: 28 July 2004			Time: 1924	Lat: 31° 02' 39"	Long: 65° 45.71'	Samplers:											
Date: 28 July 2004			Time: 2007	Lat: 31° 02' 46"	Long: 65° 46.08'	Bill, Bea, Olga, Viv, Cabelli, Max											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON %DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol= 28	HPLC Vol= 48	Chla	Flow Cyt	P ¹⁵ N	N/P
				O ₂	O ₂ , O ₂												
1	0	28.0		61		241	256		256	49	234					*16	1
2	0											205-1	188-1	188-1	188		
3	20	27.3		62		242	257		257	50	233						2
4	20											206-2	189-2	189-2	189		
5	40	24.4		63		243	258#7		258	51	232						3
6	40											207-3	190-3	190-3	190		
7	60	22.3		64		244	259		259	52	231						4
8	60											208-4	191-4	191-4	191		
9	70	21.7		65		245	260		260	53	230						5
10	70												192-5	192-5	192		
11	80	21.2		66		246	261		261	54	229						6
12	80											209-5	193-6	193-6	193		
13	90	21.0		67		247	262		262	55	228		194-7	194-7	194		7
14	100											210-6	195-8	195-8	195		
15	100	20.6		68		248	263		263	56	227						8
16	110	20.5		69		249	264		264		226		196-9	196-9	196		9
17	120	20.4		70		250	265		265	57	225						10
18	120											211-7	197-10	197-10	197		
19	140	20.0		71		251	266		266	58	224						11
20	140											212-8	198-11	198-11	198		
21	200	19.4		72		252	267		267	59	223	213-9					12
22	300	19.3		73		253	268		268	60	222	214-10*					13
23	500	17.2		74		254	269		269			215-11*					14
24	700	13.8		75		255	270		270			216-12*					15
												*= 32					

Cruise: EDDIES			Leg: 02		Cast: 20		Type: (0-700m) Station 087										
Date: 28 July 2004			Time: 2221		Lat: 31 02.57		Long: 66 11 03		Samplers: Naini, Paul, Nathan,								
Date: 28 July 2004			Time: 2303		Lat:		Long:										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON *DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol=28	HPLC Vol=48	Chia	Flow Cyt	δ ¹⁵ N	N&P
				O ₂	O ₂ , O ₂												
1	0	27.7		21		255	271		271		247 [✓]					*17	1
2	0											217-1	199-1	199-1	199		
3	20	27.6		22		256	272		272		246 [✓]						2
4	20											218-2	200-2	200-2	200		
5	40	23.7		23		257	273*17		273		245 [✓]						3
6	40											219-3	201-3	201-3	201		*
7	60	22.3		24		258	274		274		244 [✓]						4
8	60											220-4	202-4	202-4	202		
9	70	21.8		25		259	275		275		243 [✓]						5
10	80												203-5	203-5	203		
11	80	21.2		26		260	276		276		242 [Ⓢ]						6
12	90	20.9		27 ³⁷		261	277		277		241 [Ⓢ]	221-5	204-6	204-6	204		
13	90	100		27		261	277		277		241	221-5	204-6	204-6	204		7
14	100										239 [Ⓢ]	222-6	206-8	206-8	206		
15	100	20.6		28		262	278		278		240 [Ⓢ]						8
16	110			28		262	278		278		240 [Ⓢ]		207-9	207-9	207		9
17	120	20.4		29		264	280		280		238 [Ⓢ]						10
18	120											223-7	208-10	208-10	208		
19	140	20.0		31		265	281		281		237 [Ⓢ]						11
20	140											224-8	209-11	209-11	209		
21	200	19.7		32		266	282		282		236 [Ⓢ]	225-9					12
22	300	19.4		33		267	283		283		235 [Ⓢ]	226-10*					13
23	500	17.6		34		268	284		284			227-11*					14
24	700	14.6		35			285		285			228-12*					15
												*=3X					

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Cruise: EDDIES				Leg: 2	Cast: 21	Type: CTD (0-700) STATION # 337										
Date: 28 July 04				Time: 0409	Lat: 31 24.25	Long: 66 10.89				Samplers: Tom, Josh, Mac, Nathan						
Date: 29 July 04				Time: 0455	Lat: 31 24.25	Long: 66 12.02										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON *DOP	*Salts NO ₃	*Nuts	Bact	FRRF	POC/PON Vol=2L	HPLC Vol=4L	Chla *85N	Flow Cyt	N/A
				O ₂	O ₂ , O ₂											
1	0	27.7		101		269	286	286		G1	260			*18		1
2	0											229-1	210-1	210-1	210	
3	20	27.3		102		270	287	287		G2	259					2
4	20											230-2	211-2	211-2	211	
5	40	23.6		103		271	288/299	288		G3	258					3
6	40											231-3	212-3	212-3	212	
7	60	21.7		104		272	289	289		G4	257					4
8	60											232-4	213-4	213-4	213	
9	70	21.3		105		273	290	290		G5	256					5
10	70												214-5	214-5	214	
11	80	20.8		106		274	291	291		G6	255					6
12	80											233-5	215-6	215-6	215	
13	90	20.6		107		275	292	292		G7	254		216-7	216-7	216	7
14	100											234-6	217-8	217-8	217	
15	100	20.3		108		276	293	293		G8	253					8
16	110	20.1		109		277	294	294			252		218-9	218-9	218	9
17	120	20.1		110		278	295	295		G9	251					10
18	120											235-7	219-10	219-10	219	
19	140	19.6		111		279	296	296		70	250					11
20	140											236-8	220-11	220-11	220	
21	200	19.6		112		280	297	297		71	249	237-9				12
22	300	19.4		113		281	298	298		72	248	238*10				13
23	500	17.9		114		282	299	299				239*11				14
24	700	15.1		115			300	300				240*12				15
												*3L				

Cruise: EDDIES			Leg: 2	Cast: 22	Type: CTD (0-700)	Station: 339										
Date: 29 Jul 04	Time: 0723	Lat: 31 23.99	Long: 65 45.64	Samplers:												
Date: 29 Jul 04	Time: 0808	Lat: 31 24.21	Long: 65 45.70	Beardtso, Mex, Bill Newton												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON *000	Salts	Nuts	Beet	PRRF	POC/PON Vol= 2L	HPLC Vol= 4L	Chia *15N	Flow Cyt	N/P
				O ₂	O ₂ , O ₂											
1	0	27.4		701		283	301		301	273				*19		1
2	0											241-1	221-1	221-1	221	
3	20	27.2		702		284	302		302	272						2
4	20											242-2	222-2	222-2	222	
5	40	23.5		703		285	303		303	271						3
6	40											243-3	223-3	223-3	223	
7	60	22.0		704		286	304		304	270						4
8	60											244-4	224-4	224-4	224	
9	80	21.6		705		287	305		305	269						5
10	80												225-5	225-5	225	
11	80	21.2		706		288	306		306	268		245-5	226-6	226-6	266	6
12	80											245-5	226-6	226-6	226	
13	90	20.9		707		289	307		307	267			227-7	227-7	227	7
14	100											246-6	228-8	228-8	228	
15	100	20.8		708		290	308		308	266						8
16	110	(+)		709		291	309		309	265			229-9	229-9	229	9
17	120	20.5		710		292	310		310	264						10
18	120											247-7	230-10	230-10	230	
19	140	20.2		711		293	311		311	263						11
20	140											248-8	231-11	231-11	231	
21	200	19.9		712		294	312		312	262		249-9				12
22	300	19.6		713		295	313		313	261		250-10				13
23	500	18.5		714		296	314		314			251-11				14
24	700	15.4		715			315		315			252-12				15
												*3L				

(+) No temp recorded - used 20.6 for titration

Cruise: <u>ENDICES</u>				Leg: <u>2</u>		Cast: <u>23</u>		Type: <u>CTD (0-700) Station 341</u>										
Date: <u>29 July 2004</u>				Time: <u>1006</u>		Lat: <u>31°23.99</u>		Long: <u>65°20.31</u>		Samplers: <u>Naomi, Paul, Valery, Viv</u>								
Date: <u>29 July 2004</u>				Time: <u>1108</u>		Lat: <u>31°24.21</u>		Long: <u>65°20.81</u>										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON *DOP	Salts	Nuts	Bact	FRFR	POC/PON Vol=2L	HPLC Vol=4L	Chla	Flow Cyt	N/P	Stn	
				O2	O2, O2s													
1	0	27.8		21		297	316		316		286						1	
2	0											253-1	232-1	232-1	232			2
3	20	27.6		22		298	317		317		285							
4	20											254-2	233-2	233-2	233			
5	40	27.3		23		299	318/*21		318		284							3
6	40											255-3	234-3	234-3	234			
7	60	21.8		24		300	319		319		283							4
8	60											256-4	235-4	235-4	235			
9	70	21.2		25		301	320		320		282							5
10	70												236-5	236-5	236			
11	80	21.0		26		302	321		321		281							6
12	80											257-5	237-6	237-6	237			
13	90	20.7		27		303	322		322		280							7
14	100											258-6	239-8	239-8	239			
15	100	20.4		28		304	323		323		279							8
16	110	20.3		29		305	324		324		278		240-9	240-9	240			9
17	120	20.2		30		306	325		325		277							10
18	120											259-7	241-10	241-10	241			
19	140	19.9		31		307	326		326		276							11
20	240											260-8	242-11	242-11	242			
21	200	19.5		32		308	327	Y13	327		275	261-9						12
22	300	19.2		33		309	328	Y14	328		274	262-10						13
23	500	17.8		34		310	329	Y15	329			263-11	⊕=3.5*					14
24	700	14.8		35			330	Y16	330			264-12						15
												*=3L						

Cruise: EDDIES			Leg: 02		Cast: 24		Type: (0-700m) Station 343										
Date: 29 July 2004			Time: 2251		Lat: 31 24.07		Long: 64 55.190		Samplers: Paul, Marco, Valery, Nathan								
Date: 29 July 2004			Time: 2335		Lat: 31 24.23		Long: 64 55.72										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON *DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol=28	HPLC Vol=48	Chla	Flow Cyt	N/P	δ ¹⁵ N
				O ₂	O ₂ , O ₂												
1	0	27.9		101		311	331		331		299					1	*21
2	0																
3	20	27.5		102		312	332		332		298	265-1	243-1	243-1	243	2	
4	20											266-2	244-2	244-2	244		
5	40	23.2		103		313	333		333		297	267-3	245-3	245-3	245	3	
6	40																
7	60	21.5		104		314	334		334		296	268-4	246-4	246-4	246	4	
8	60																
9	70	21.0		105		315	335		335		295					5	
10	70												247-5	247-5	247		
11	80	20.7		106		316	336		336		294					6	
12	80											269-5	248-6	248-6	248		
13	90	20.4		107		317	337		337		293		249-7	249-7	249	7	
14	100			108								270-6	250-8	250-8	250		
15	100	20.3		108		318	338		338		292					8	
16	110	20.2		109		319	339		339		291		251-9	251-9	251	9	
17	120	20.1		110		320	340		340		290					10	
18	120			111													
19	140	19.7		111		321	341		341		289	271-7	252-10	252-10	252	11	
20	140											272-8	253-11	253-11	253		
21	200	19.5		112		322	342		342		288	273-9				12	
22	300	19.1		113		323	343		343		287	274-10*				13	
23	500	17.6		114		324	344		344			275-11*				14	
24	700	14.4		115			345		345			276-12*				15	
												*=3%					

Cruise: <u>EDDIES</u>				Leg: <u>2</u>		Cast: <u>25</u>		Type: <u>CTD (0-700)</u>		Station # <u>345</u>		Samplers: <u>Naom, Paul, Valery</u> <u>Tom, Sarah, Foe, Casell</u> <u>Nathan</u>							
Date: <u>30 July 04</u>				Time: <u>0145</u>		Lat: <u>31 24 09</u>		Long: <u>64 30.00</u>											
Date: <u>30 July 04</u>				Time: <u>0231</u>		Lat: <u>31 24.46</u>		Long: <u>64 30.73</u>											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRFR	POC/PON	HPLC	Chla	Flow Cyt	N/P			
				O2 ₁	O2 ₂ , O2 ₃												Vol=2L	Vol=4L	
1	0	27.8		701		325	346		346	73	312			22					1
2	0											277-1	254-1	254-1	254				
3	20	27.6		702		326	347		347	74	311								2
4	20											278-2	255-2	255-2	255				
5	40	24.6		703		327	348	*23	348	75	310								3
6	40											279-3	256-3	256-3	256				
7	60	22.1		704		328	349		349	76	309								4
8	60											280-4	257-4	257-4	257				
9	70	21.5		705		329	350		350	77	308								5
10	70												258-5	258-5	258				
11	80	21.2		706		330	351		351	78	307								6
12	80											281-5	259-6	259-6	259				
13	90	20.8		707		331	352		352	79	306		260-7	260-7	260				7
14	100											282-6	260-8	261-8	261				
15	100	20.5		708		332	353		353	80	305								8
16	110	20.2		709		333	354		354		304		262-9	262-9	262				9
17	120	20.1		710		334	355		355	81	303								10
18	120											283-7	263-10	263-10	263				
19	140	20.0		711		335	356		356	82	302								11
20	140											284-8	264-11	264-11	264				
21	200	19.6		712		336	357		357	83	301	285-9							12
22	300	19.0		713		337	358		358	84	300	286-10							13
23	500	17.6		714		338	359		359			287-11							14
24	700	14.5		715			360		360			288-12							15
												*3L							

Cruise: EDDIES			Leg: 2	Cast: #27	Type: CTD (0-700) Station 137											
Date: 31 July 04			Time: 00:16	Lat: 29 57.46	Long: 66 10.78		Samplers: Ped, Naoni, Ualer, Neibu									
Date: 31 July 04			Time: 01:02	Lat: 29 57.77	Long: 66 57.77											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P
				O2	O2, O2											
1	0	27.5		101		339	361	361	361	85	325				*23	1
2	0			103								289-1	265-1	265-1	265	
3	20	27.3		102		340	362	362	362	86	324					2
4	20			102				*24				290*-2	266-2	266-2	266	
5	40	22.7		102		341	363	363	363	87	323					3
6	40											291-3	267-3	267-3	267	
7	60	21.3		104		342	364		364	88	322					4
8	60											292-4	268-4	268-4	268	
9	70	20.9		105		343	365		365	89	320					5
10	70												269-5	269-5	269	
11	80	20.6		107		344	366		366	90	320					6
12	80			108								293-5	270-6	270-6	270	
13	90	20.4		108		345	367		367	91	318		271-7	271-7	271	7
14	100			108								294-6	272-8	272-8	272	
15	100	20.2		108		346	368		368	92	318					8
16	110	20.2		109		347	369		369	93	317		278-9	273-9	273	9
17	120	20.0		110		348	370		370	93	316					10
18	120											295-7	274-10	274-10	274	
19	140	19.8		111		349	371		371	94	315					11
20	140											296-8	275-11	275-11	275	
21	200	19.4		112		350	372		372	95	314	297-9				12
22	300	19.0		113		351	373		373	96	313	298*-10				13
23	500	17.4		114		352	374		374			299*-11				14
24	700	14.2		115			375		375			300*-12				15
												x=3L				

dropped filter on plastic rack
(POC/PON 290)

Cruise: EDRIES			Leg: 2	Cast: 28	Type: CTD (0-700) Station 139												
Date: 31 July 2004			Time: 0706	Lat: 29°57.59	Long: 65°48.43	Samplers: Bill, Olsy, Max, Nathan											
Date: 31 July 2004			Time: 0750	Lat: 29°58.13	Long: 65°45.09												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON *NDOP	Salts	Nuts	Bact	FRRF	POC/PON Vol=2L	HPLC Vol=4L	Chla	Flow Cyt	MP	Stn
				O ₂	O ₂ , O ₃												
1	0	27.5		701		353	376		376		337					1	24
2	0											301-1	276-1	276-1	276		
3	20	27.1		702		354	377		377		338					2	
4	20											302-2	277-2	277-2	277		
5	40	23.7		703		355	378		378		337					3	
6	40											303-3	278-3	278-3	278		
7	60	22.0		704		356	379		379		336					4	
8	60											304-4	279-4	279-4	279		
9	70	21.7		705		357	380		380		335					5	
10	70												280-5	280-5	280		
11	80	21.4		706		358	381		381		334					6	
12	80											305-5	281-6	281-6	281		
13	90	20.9		707		359	382		382		333		282-7	282-7	282		7
14	100											306-6	283-8	283-8	283		
15	100			708		360	383		383		331					8	
16	110	20.5		709		361	384		384		330		284-9	284-9	284		9
17	120	20.4		710		362	385		385		329					10	
18	120											307-7	285-10	285-10	285		
19	140	20.0		711		363	386		386		328					11	
20	140											308-8	286-11	286-11	286		
21	200	19.8		712		364	387		387		327		309-9			12	
22	300	19.2		713		365	388		388		326		310-10			13	
23	500	17.5		714		366	389		389				311-11			14	
24	700	14.5		715			390		390				312-12			15	
												#3L					

#3L

Cruise: EDDIES		Leg: 2		Cast: 29		Type: CTD (0-700) Station 141												
Date: 31 July 2004		Time: 1003		Lat: 29°57.4S		Long: 05°20.28		Samplers:										
Date: 31 July 2004		Time: 1050		Lat: 29°58.06		Long: 05°19.75		Bill, Naomi, Paul, Max, Valery, Viv										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	S/W	
				O2 ₁	O2 ₂ , O2 ₃													Vol=2L
1	0	27.6		101		367	391		391		352					1	25	
2	0																	
3	20	27.6		102		368	392		392		351		313-1	287-1	287-1	287	2	
4	20																	
5	40	24.3		103		369	393	26	393		350		314-2	288-2	288-2	288	3	
6	40																	
7	60	22.6		104		370	394		394		349		315-3	289-3	289-3	289	4	
8	60																	
9	70	21.9		105		371	395		395		348					290-4	290	5
10	70													291-5	291-5	291		
11	80	21.5		106		372	396		396		347							6
12	80																	
13	90	21.2		107		373	397		397		346		317-5	292-6	292-6	292		
14	100													293-7	293-7	293		7
15	100	20.8		108		374	398		398		345		318-6	294-8	294-8	294		
16	110	20.6		109		375	399		399		344							8
17	120	20.5		110		376	398	405	398	405	343			295-9	295-9	295		9
18	120																	10
19	140	20.3		111		377	400		400		342		319-7	286-10	296-10	296		
20	140																	11
21	200	19.8		112		378	401	Y17	401		341		320-8	297-11	297-11	297		
22	300	19.3		113		379	402	Y18	402		340		321-9					12
23	500	17.7		114		380	403	Y19	403				322-10					13
24	700	14.2		115			404	Y20	404				323-11					14
													324-12					15
													X=3L					

Cruise: EDDIES		Leg: 02		Cast: 30		Type: (0-700m) Station 143											
Date: 31 July 2004		Time: 1311		Lat: 29°57.62		Long: 64°55.02		Samplers: Viv, Paul, Naomi, Valery, Olga, Sarah, Joe, Dennis									
Date: 31 July 2004		Time: 1355		Lat: 29°58.2		Long: 64°53.9											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N	δ ¹⁵ N
				O ₂	O ₂ , O ₂												
1	0	28.1		1		381	406	406			305					1	*26
2	0																
3	20	27.9		2		382	407	407			304	325-1	298-1	298-1	298	2	
4	20																
5	40	25.8		3		383	408	408			303	326-2	299-2	299-2	299	3	
6	40																
7	60	23.4		4		384	409	409			302	327-3	300-3	300-3	300	4	
8	60																
9	70	22.8		5		385	410	410			301	328-4	301-4	301-4	301	5	
10	70																
11	80	22.4		6		386	411	411			300		302-5	302-5	302	6	
12	80																
13	90	22.2		7		387	412	412			359	309-5	303-6	303-6	303	7	
14	100			8									304-7	304-7	304		
15	100	21.9		8		388	413	413			358	330-6	305-8	305-8	305	8	
16	110	21.4		9		389	414	414			357		306-9	306-9	306	9	
17	120	21.2		10		390	415	415			356					10	
18	120																
19	140	20.7		11		391	416	416			355	331-7	307-10	307-10	307	11	
20	140																
21	200	20.3		12		392	417	417			354	332-8	308-11	308-11	308	12	
22	300	19.5		13		393	418	418			353	333-9				13	
23	500	18.0		14		394	419	419				334-10*				14	
24	700	14.9		15			420	420				335-11*				15	
												336-12*					
												*= 38					

Cruise: EDDIES		Leg: 02		Cast: 31		Type: (0-700m) Station 145												
Date: 31 July 2004		Time: 1633		Lat: 29° 57.688		Long: 64° 29.90		Samplers:										
Date: 31 July 2004		Time: 1717		Lat: 29° 58.61		Long: 64° 29.16		Sarah, Tom, Viv, Joe										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts DOP	Nuts	Bact	FRRF	POC/PON Vol=28	HPLC Vol=48	Chla	Flow Cyt	DIS N		
				O2	O2, O2													
1	0	27.8	701	701		409 395	421	28	421	97	378	337						*27
2	0											337-1	309-1	309-1	309			
3	20	27.5	702	702		396	422	29	422	98	377							
4	20											338-2	310 -2	310-2	310			
5	40	25.6	703	703		397	423	30	423	99	376							
6	40											339-3	311 -3	311-3	311			
7	60	23.9	704	704		398	424	31	424	100	375							
8	60											340-4	312 -4	312-4	312			
9	70	23.6	705	705		399	425		425	101	374							
10	70												313-5	313-5	313			
11	80	23.3	706	706		400	426	32	426	102	373							
12	80											341-5	314 -6	314-6	314			
13	90	23.1	707	707		401	427		427	103	372		315 -7	315-7	315			
14	100											342-6	316-8	316-8	316			
15	100	22.5	708	708		402	428	33	428	104	371							
16	110	21.9	709	709		403	429		429		370		317-9	317-9	317			
17	120	21.4	710	710		404	430	34	430	105	369							
18	120											343-7	318-10	318-10	318			
19	140		711	711		405	431	35	431	106	368							
20	140	20.9										344-8	319-11	319-11	319			
21	200	20.1	712	712		406	432	36	432	107	367	345-9						
22	300	19.5	713	713		407	433	37	433	108	366	346-10*						
23	500	18.4	714	714		408	434	38	434			347-11*						
24	700	15.6	715	715		409	435	39	435			348-12*						
												*=3%						

*3%

Cruise: EDDIES		Leg: 02		Cast: 33		Type: (0-700m) Station 395											
Date: 1 Aug 2004		Time: 1512		Lat: 31° 45.76		Long: 104° 29.88		Samplers: Sarah, Joe, Tom, Viv									
Date: 1 Aug 2004		Time: 1557		Lat: 31° 46.46		Long: 104° 29.6											
N #	Depth	Niskin Temp	Hellum	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	DISN	N/P
				02 ₁	02 ₂ 02 ₃							Vol=04	Vol=48				
1	0	27.8		101		424	451	451			404					*29	1
2	0											361-1	331-1	331-1	331		
3	20	27.4		102		425	452	452			403						2
4	20											362-2	332-2	332-2	332		
5	40	24.3		103		426	453	453			402						3
6	40											363-3	333-3	333-3	333		
7	60	22.2		104		427	454	454			401						4
8	60											364-4	334-4	334-4	334		
9	70	21.6		105		428	455	455			400						5
10	70												335-5	335-5	335		
11	80	21.3		106		429	456	456			399						6
12	80											365-5	336-6	336-6	336		
13	90	21.0		107		430	457	457			398		337-7	337-7	337		7
14	100											366-6	338-8	338-8	338		
15	100	20.7		108		431	458	458			397	397					8
16	110	20.5		109		432	459	459			396	396	339-9	339-9	339		9
17	120	20.4		110		433	460	460			395						10
18	120											397					
19	140	20.0		111		434	461	460			394	398	340-10	340-10	340		11
20	140											398	341-11	341-11	341		
21	300	19.6		112		435	462	421	462		393	369-9					12
22	300	19.2		113		436	463	422	463		392	370-10*					13
23	500	17.8		114		437	464	423	464			371-11*					14
24	700	16.7		115			465	424	465			372-12*					15
												*=38					

Cruise: EDDIES		Leg: 02		Cast: 34		Type: (0-700m) Station 393													
Date: 1 August 2004		Time: 2044		Lat: 31 45.78		Long: 64 55.13		Samplers: Sea, Olga, B.H., Max, U.V											
Date: 1 August 2004		Time: 2125		Lat: 31 45.82		Long: 64 55.02													
N #	Depth	Nskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	213 N	N/P		
				O2 ₁	O2 ₂ , O2 ₃														*DOP
1	0	27.4		1		438	466		466		417					*30	1		
2	0											373-1	342-1	342-1	342				
3	20	27.3		2		439	467		467		416						2		
4	20											374-2	343-2	343-2	343				
5	40	25.2		3		440	468 *53		468		415						3		
6	40											375-3	344-3	344-3	344				
7	60	23.3		4		441	469		469		414						4		
8	60											376-4	345-4	345-4	345				
9	70	22.8		5		442	470		470		413						5		
10	70												346-5	346-5	346				
11	80	22.4		6		443	471		471		412						6		
12	80											377-5	347-6	347-6	347				
13	90	22.1		7		444	472		472		411		348-7	348-7	348		7		
14	100											378-6	349-8	349-8	349				
15	100	21.7		8		445	473		473		410						8		
16	110	21.4		9		446	474		474		409		350-9	350-9	350		9		
17	120	21.0		10		447	475		475		408						10		
18	120											379-7	351-10	351-10	351				
19	140	20.3		11		448	476		476		407						11		
20	140											380-8	352-11	352-11	352				
21	200	19.0		12		449	477		477		406	381-9					12		
22	300	18.5		13		450	478		478		405	382-10*					13		
23	500	16.8		14		451	479		479			383-11*					14		
24	700	14.3		15			480		480			384-12*					15		
												*=38							

Cruise: EDDIES		Leg: 2		Cast: # 25		Type: CTD(CO-700) Station 391											
Date: 1 Aug 04		Time: 2326		Lat: 31 45.80		Long: 65 20.39		Samplers: Naomi, Paul, Ualey, Nathan									
Date: 2 Aug 04		Time: 0012		Lat: 31 45.74		Long: 65 20.91											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol=2L	HPLC Vol=4L	Chla	Flow Cyt	SP	FNU
				O2 ₁	O2 ₂												
1	0	27.2		701		452	481		481	109	430					1	31
2	0											385-1	353-2	353-1	353		
3	20	27.2		702		453	482		482	110	429					2	
4	20											386-2	354-2	354-2	354		
5	40	24.5		703		454	482		483	111	428					3	
6	40											387-3	355-3	355-3	355		
7	60	21.9		704		455	484		484	112	427					4	
8	60											388-4	356-4	356-4	356		
9	70	21.4		705		456	485		485	113	426					5	
10	70												357-5	357-5	357		
11	80	20.9		706		457	486		486	114	425					6	
12	80											389-5	358-6	358-6	358		
13	90	20.6		707		458	487		487	115	424			359-7	359-7	359	7
14	100											390-6	360-8	360-8	360		
15	100	20.2		708		459	488		488	116	423					8	
16	110	20.0		709		460	489		489		422			361-9	361-9	361	9
17	120	19.9		710		461	490		490	117	421					10	
18	120											391-7	362-10	362-10	362		
19	140	19.6		711		462	491		491	118	420					11	
20	140											392-8	363-11	363-11	363		
21	200	19.3		712		463	492		492	119	419			393-9		12	
22	300	19.0		713		464	493		493	120	418			394-10		13	
23	500	17.9		714		465	494		494					395-11		14	
24	700	15.0		715			495		495					396-12		15	
												*3L					

#359-7 ran out
only filled 3/3

++ Filter ripped

Cruise: EDDIES			Leg: 2		Cast: 37		Type: CTD (0-700m) Station 389										
Date: 02 AUG 04			Time: 0552		Lat: 31 45.730		Long: 65 45.640		Samplers: Nathan, Bill, Bea, Olga								
Date: 02 AUG 04			Time: 0637		Lat: 31 45.090		Long: 65 45.99										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol= 4L	Chla	Flow Cyt	M/P	S/W
				O2 ₁	O2 ₂ , O2 ₃												
1	0	26.9		101		466	496		496		443					1	32
2	0											397-1	364-1	364-1	364		
3	20	26.9		102		467	497		497		442					2	
4	20											398-2	365-2	365-2	365		
5	40	23.7		103		468	498		498		441					3	
6	40											399-3	366-3	366-3	366		
7	60	22.0		104		469	499		499		440					4	
8	60											400-4	367-4	367-4	367		
9	70	21.8		105		470	500		500		439					5	
10	70												368-5	368-5	368		
11	80	21.3		106		471	501		501		438					6	
12	80											401-5	369-6	369-6	369		
13	90	20.9		107		472	502		502		437		370-7	370-7	370	7	
14	100											402-6	371-8	371-8	371		
15	100	20.8		108		473	503		503		436					8	
16	110	20.6		109		474	504		504		435		372-9	372-9	372	9	
17	120	20.2		110		475	505		505		434					10	
18	120											403-7	373-10	373-10	373		
19	140	20.0		111		476	506		506		433					11	
20	140											404-8	374-11	374-11	374		
21	200	19.7		112		477	507		507		432	405-9				12	
22	300	19.4		113		478	508		508		431	406-10				13	
23	500	18.1		114		479	509		509			407-11				14	
24	700	15.4		115			510		510			408-12				15	
												*3L					

Cruise: E007ES		Leg: 2		Cast: 38		Type: CTD (0-700m) Station 387												
Date: 2 August 2004		Time: 0839		Lat: 31° 45.71		Long: 166° 10.92		Samplers: Bill, Bea, Olga, Nathan, Max										
Date: 2 August 2004		Time: 0908		Lat: 31° 45.73		Long: 166° 10.77												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON *DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol= 4 L	Chla	Flow Cyt	MP	S ₁₅ N	
				O ₂	O ₂ , O ₂													
1	0	27.1		1		480	511		511		457					1	33	
2	0																	
3	20	26.7		2		481	512		512		456					2		
4	20																	
5	40	23.8		3		482	513		513		454					3		
6	40																	
7	60	22.5		4		483	514		514		453					4		
8	60																	
9	70	21.8		5		484	515		515		452					5		
10	70																	
11	80	21.5		6		485	516		516		451					6		
12	80																	
13	90	21.0		7		486	517		517		450					7		
14	100																	
15	100	21.3		8		487	518		518		449					8		
16	110	20.9		9		488	519		519		448					9		
17	120	20.7		10		489	520		520		447					10		
18	120																	
19	140	20.3		11		490	521		521		446					11		
20	140																	
21	200	19.6		12		491	522		522		445					12		
22	300	19.5		13		492	523		523		444					13		
23	500	18.8		14		493	524		524		443					14		
24	700	15.6		15		494	525		525		442					15		
											*3L							

Cruise: EDDIES			Leg: 02		Cast: 39		Type: (0-700m) Station 368										
Date: 2 August 2004			Time: 2031		Lat: 31°34.9		Long: 64°55.2		Samplers: Bill, Max, Bea, Olga, Viv								
Date: 2 August 2004			Time: 2118		Lat: 31°35.1		Long: 64°55.26										
N #	Depth	Nlskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON *DOP	Salts	Nuts	Bact	FRFR	POC/PON Vol= 24	HPLC Vol= 48	Chla	Flow Cyt	Dis N	N/P
				O2	O2, O2												
1	0	27.0		101		494 494	526		526		470					*34	1
2	0																
3	20	27.0		102		481 481	527		527		469	421-1	386-1	386-1	386		
4	20											422-2	387-2	387-2	387		2
5	40	24.7		103		496	528		528		468						3
6	40											423-3	388-3	388-3	388		
7	60	22.2		104		497	529		529		467						4
8	60											424-4	389-4	389-4	389		
9	70	21.7		105		498	530		530		466						5
10	70												390-5	390-5	390		
11	80	21.2		106		499	531		531		465						6
12	80											425-5	391-6	391-6	391		
13	90	20.8		107		500	532		532		464		392-7	392-7	392		7
14	100											426-6	393-8	393-8	393		
15	100	20.6		108		501	533		533		463						8
16	110	20.4		109		502	534		534		462		394-9	394-9	394		9
17	120	20.4		110		503	535		535		461						10
18	120											427-7	395-10	395-10	395		
19	140	20.3		111		504	536		536		460						11
20	140											428-8	396-11	396-11	396		
21	200	19.2		112		505	537	Y25	537		459	429-9					12
22	300	19.5		113		506	538	Y26	538		458	430-10*					13
23	500	17.9		114		507	539	Y27	539			431-11*					14
24	700	14.9		115		508	540	Y28	540			432-12*					15
												*=38					

filter 422 bell on floor
→ throw out

Cruise: EDDIE		Leg: 2		Cast: 41		Type: CTD (0-700m) Station 418												
Date: 3 AUG 04		Time: 0059		Lat: 31 56.49		Long: 54 55.26		Samplers: Paul, Naomi, Valery, Nathan										
Date: 3 AUG 04		Time: 0147		Lat: 31 57.09		Long: 54 55.51												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	SARS	Matter	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	Stn	POC/PON
				O2	O2, O2													
1	0	27.8		1		522	556	556			496					1	36	
2	0											445-1	408-1	408-1	408			445
3	20	27.2		2		523	557	557			495				2			
4	20											446-2	409-2	409-2	409			446
5	40	24.1		3		524	558	558			494				3			
6	40											447-3	410-3	410-3	410			447
7	60	22.2		4		525	559	559			493				4			
8	60											448-4	411-4	411-4	411			448
9	70	21.6		5		526	560	560			492				5			
10	70												412-5	412-5	412			
11	80	21.1		6		527	561	561			491				6			
12	80											449-5	413-6	413-6	413			449
13	90	20.8		7		528	562	562			490		414-7	414-7	414	7		
14	100											450-6	415-8	415-8	415			450
15	100	20.6		8		529	563	563			489				8			
16	110	20.4		9		530	564	564			488		416-9	416-9	416	9		
17	120	20.2		10		531	565	565			487				10			
18	120											451-7	417-10	417-10	417			451
19	140	19.8		11		532	566	566			486				11			
20	140											451-8	418-11	418-11	418			452
21	200	19.5		12		533	567	567			485	452-9			12			453
22	300	19.0		13		534	568	568			484	453-10			13			454*
23	500	17.5		14		535	569	569				454-11			14			455*
24	700	14.7		15			570	570				455-12			15			456*
												*3L						3L

242 L (414-7)

Cruise: EDDIES				Leg: 2		Cast: 42		Type: CTD (0-700) Station 392										
Date: 3 Aug 2004				Time: 0316		Lat: 31°45.73		Long: 65°7.74		Samplers:								
Date: 3 Aug 2004				Time: 0403		Lat: 31°48.96		Long: 65°7.85										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	-Sars	Nuts	-Sest	FRRF	POC/PON	HPLC	Chla	Flow Cyt	OK	Sig	Pac/Pon
				O2	O2-O2													
1	0	27.3		62	34	536		571	571		509						37	
2	0		146, 155		518, 79							456-1	419-1	419-1	419			457
3	20	27.3		61		537		572	572		508							
4	20		156									457-2	420-2	420-2	420			458
5	40	25.4		63		538		573	573	60	507							
6	40		157									458-3	420-3	421-3	421			459
7	60	23.3		64		539		574	574		506							
8	60		158		100							459-4	422-4	422-4	422			460
9	70	22.8		65		540		575	575		505							
10	70		159										423-5	423-5	423			
11	80	22.4		66		541		576	576		504							
12	80		160	67								460-5	424-6	424-6	424			461
13	90	22.1	161			542		577	577		503		425-7	425-7	425			
14	100		162		101							461-6	426-8	426-8	426			462
15	100	21.8		68		543		578	578		502							
16	110	21.6	163	69		544		579	579		501		427-9	427-9	427			
17	120	21.2		70		545	546	580	580		500							
18	120		164									462-7	428-10	428-10	428			463
19	140	20.5		71		546		581	581		499							
20	140		165		102							463-8	429-11	429-11	429			464
21	200	19.5	166	72	103	547		582	582		498	464-9						465
22	300	18.7	167	73	104	548		583	583		497	465-10						466*
23	500	17.1	169	74	105	549		584	584			466-11						467*
24	700	14.4	170	75	106	550		585	585			467-12						468*
												43L	+ 312L					43L

* 3,75L

Cruise: EDDIES		Leg: 2		Cast: 43		Type: CTD (0-700m) STATION ## 385											
Date: 3 AUG 2004		Time: 1053		Lat: 31° 48.72		Long: 166° 36.06				Samplers: Naomi Paul, Valery, Viv							
Date: 3 AUG 2004		Time: 1131		Lat: 31° 46.19		Long: 166° 36.08											
N #	Depth	Niskin Temp	Heilum	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PDN	HPLC	Chia	Flow Cyt	SIS	POC/PDN
				O2 ₁	O2 ₂ , O2 ₃							Vol= 2L	Vol= 4L				
1	0	27.0		101		550	586		586		522					38	
2	0											468-1	430-1	430-1	430		469
3	20	26.5		102		551	587		587		521						
4	20											469-2	431-2	431-2	431		470
5	40	23.7		103		552	588		588		520						
6	40											470-3	432-3	432-3	432		471
7	60	21.6		104		553	589		589		519						
8	60											471-4	433-4	433-4	433		472
9	70	21.2		105		554	590		590		518						
10	70												434-5	434-5	434		
11	80	20.8		106		555	591		591		517						
12	80											472-5	435-6	435-6	435		473
13	90	20.6		107		556	592		592		516		436-7	436-7	436		
14	100											473-6	437-8	437-8	437		474
15	100	20.4		108		557	593		593		515						
16	110	20.3		109		558	594		594		514		438-9	438-9	438		
17	120	20.2		110		559	595		595		513						
18	120											474-7	439-10	439-10	439		475
19	140	19.9		111		560	596		596		512						
20	140											475-8	440-11	440-11	440		476
21	200	19.5		112		561	597	I1	597		511	476-9					477
22	300	19.1		113		562	598	I2	598		510	477-10					478*
23	500	17.8		114		563	599	I3	599			478-11					479*
24	700	14.9		115			600	I4	600			479-12					480*
												*3L					*3L

Cruise: EDDIES			Leg: 02		Cast: 44		Type: (0-700m) Station 335											
Date: 03 Aug 2004			Time: 1346		Lat: 31° 24.12		Long: 140° 36.09			Samplers: Naomi, Paul, Valery, Viv, Sarah, Tom, Joe								
Date: 03 Aug 2004			Time: 1425		Lat: 31° 24.13		Long: 140° 36.04											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol= 20	HPLC Vol= 40	Chla	Flow Cyt	215N	N/P	Poc/Pc
				O2 ₁	O2 ₂ , O2 ₃													
1	0	26.9		701		564	601		601		535					*39	1	
2	0											480-1	441-1	441-1	441			481
3	20	26.7		702		565	602		602		534						2	
4	20											481-2	442-2	442-2	442			482
5	40	23.8		703		566	603*62		603		533						3	
6	40											482-3	443-3	443-3	443		4	483
7	60	22.3		704		567	604		604		532						4	
8	60											483-4	444-4	444-4	444			484
9	70	21.6		705		568	605		605		531						5	
10	70												445-5	445-5	445			
11	80	21.2		706		569	606		606		530						6	
12	80											484-5	446-6	446-6	446			485
13	90	20.9		707		570	607		607		529			447-7	447-7	447	7	
14	100											485-6	448-8	448-8	448			486
15	100	20.6		708		571	608		608		528						8	
16	110	20.4		709		572	609		609		527			449-9	449-9	449	9	
17	120	20.3		710		573	610		610		526						10	
18	120											486-7	450-10	450-10	450			487
19	130 140	20.0		711		574	611		611		525						11	
20	140 150											487-8	451-11	451-11	451			488
21	200	19.6		712		575	612		612		524	488-9					12	489
22	300	19.3		713		576	613		613		523	489-10*					13	490*
23	500	18.0		714		577	614		614			490-11*					14	491*
24	700	15.2		715			615		615			491-12*					15	492*
												*= 32						*3L

Cruise: EDDIES		Leg: 02		Cast: 45		Type: (0-700m) Station 085												
Date: 3 August 2004		Time: 1646		Lat: 31° 02' 51"		Long: 166° 36' 11"		Samplers: Sarah, Tom, Viv, Joe										
Date: 3 August 2004		Time: 1729		Lat: 31° 02' 20"		Long: 166° 36' 30"												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	dis	N/P	
				O2	O2, O2s													
1	0	27.5		601		578	606		606		548	499				*40	1	
2	0	28.0										492-1	452-1	452-1	452			493
3	20	27.2		602		579	607		607		547						2	
4	20											493-2	453-2	453-2	453			494
5	40	24.4		603		580	608*63		608		546						3	
6	40											494-3	454-3	454-3	454			495
7	60	22.6		604		581	609		609		545						4	
8	60											495-4	455-4	455-4	455			496
9	70	22.0		605		582	620		620		544						5	
10	70												456-5	456-5	456			
11	80	21.4		606		583	621		621		543						6	
12	80											496-5	457-6	457-6	457			497
13	90	21.0		607		584	622		622		542		458-7	458-7	458		7	
14	100											497-6	459-8	459-8	459			498
15	100	20.7		608		585	623		623		541						8	
16	100	20.5		609		586	624		624		540		460-9	460-9	460			9
17	120	20.5		70		587	625		625		539						10	
18	100											498-7	461-10	461-10	461			499
19	140	20.4		81		588	626		626		538						11	
20	140											499-8	462-11	462-11	462			500
21	200	19.7		72		589	627		627		537	500-9					12	501
22	300	19.5		73		590	628		628		536	501-10*					13	502*
23	500	18.0		74		591	629		629			502-11*					14	503*
24	700	14.6		75			630		630			503-12*					15	504*
												*=3L						*3L

Cruise: EDDIES			Leg: 02		Cast: 46		Type: Cast (0-700m) Station 235												
Date: 3 August 2004			Time: 1954		Lat: 30°40.84		Long: 160°35.90		Samplers: Bill, Bea, Max, Olga, Viv										
Date: 3 August 2004			Time: 2037		Lat: 30°40.86		Long: 160°35.11												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	PQC/PON	HPLC	Chla	Flow Cyt	a ₁₅ N	N/P	Poc/Pow	
				O ₂	O ₂ , O ₂														*DDP
1	0	27.5		101		592	631		631	121	561					*41	1		
2	0											504-1	463-1	463-1	463			505	
3	20	27.1		102		593	632		632	122	560						2		
4	20											505-2	464-2	464-2	464			506	
5	40	24.6		103		594	633	*64	633	123	559						3		
6	40											506-3	465-3	465-3	465			507	
7	60	22.2		104		595	634		634	124	558						4		
8	60											507-4	466-4	466-4	466			508	
9	70	21.7		105		596	635		635	125	557						5		
10	70												467-5	467-5	467				
11	80	21.4		106		597	636		636	126	556						6		
12	80																		
13	90	21.0		107		598	637		637	127	555	508-5	468-6	468-6	468		7	509	
14	100											509-6	470-8	470-8	470			510	
15	100	20.9		108		599	638		638	128	554						8		
16	110	20.8		109		600	639		639		553		471-9	471-9	471		9		
17	120	20.4		110		601	640		640	129	552						10		
18	120																		
19	140	20.1		111		602	641		641	130	551	510-7	472-10	472-10	472		11	511	
20	140																		
21	200	19.8		112		603	642		642	131	550	511-8	473-11	473-11	473		12	512	
22	300	19.6		113		604	643		643	132	549	512-9					13	513	
23	500	17.9		114		605	644		644			513-10*					14	514*	
24	700	14.6		115			645		645			514-11*					15	515*	
												515-12*							516*
												*=38							*36

Cruise: EGGIES			Leg: 2	Cast: 48	Type: CTN(0-700) Station # 135												
Date: 4 Aug 04			Time: 0438	Lat: 29 57.61	Long: 66 36.15	Samplers: Tom, Max, Josh, Nathan											
Date: 4 Aug 04			Time: 0525	Lat: 29 57.26	Long: 66 36.76												
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol=2L	HPLC Vol=4L	Chia	Flow Cyt	N/A	SISN
				O2 ₁	O2 ₂ , O2 ₃												
1	0	27.1		61		620	661		661		587					1	43
2	0											528-1	485-1	485-1	485		
3	20	26.7		62		621	662		662		586					2	
4	20											530-2	486-2	486-2	486		
5	40	22.9		63		622	663		663		585					3	
6	40											530-3	487-3	487-3	487		
7	60	21.6		64		623	664		664		584					4	
8	60											530-4	488-4	488-4	488		
9	70	21.0		65		624	665		665		583					5	
10	70												489-5	489-5	489		
11	80	20.8		66		625	666		666		582					6	
12	80											532-5	490-6	490-6	490		
13	90	20.6		67		626	667		667		581		491-7	491-7	491		7
14	100											534-6	492-8	492-8	492		
15	100	20.4		68		627	668		668		580					8	
16	110	20.2		69		628	669		669		579		493-9	493-9	493		9
17	120	20.0		70		629	670		670		578					10	
18	120											535-7	494-10	494-10	494		
19	140	19.8		81		630	671		671		577					11	
20	140											536-8	495-11	495-11	495		
21	200	19.6		72		631	672		672		576	537-9				12	
22	300	19.2		73		632	673		673		575	538-10				13	
23	500	18.1		74		633	674		674			539-11				14	
24	700	14.9		75			675		675			540-12				15	
												53L	53L				

Cruise: EDDIES			Leg: 02		Cast: 49		Type: (0-700m) Eddy Center Station 239												
Date: 4 Aug 2004			Time: 1402		Lat: 30°41.12		Long: 08°45.27		Samplers:										
Date: 4 Aug 2004			Time: 1443		Lat: 30°41.6 S		Long: 08°44.7 S		Naomi, Paul, Valery, Tom, Joe, Sarah, Viv										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	O ₁₅	DOP	NH ₄	N/D
				O ₂	02														
1	0	28.0		701		634	676		676		600					*44	68	1	1
2	0		155		E108 107							541-1	496-1	496-1	496				
3	20	27.8		702		635	677		677		599						69	2	2
4	20		156									542-2	497-2	497-2	497				
5	40	27.2		703		636	678		678		598						70	3	3
6	40		157									543-3	498-3	498-3	498				
7	60	24.7		704		637	679		679		597						71	4	4
8	60		158		108							544-4	499-4	499-4	499			72	5
9	70	23.5		705		638	680		680		596							72	5
10	70		159										500-5	500-5	500				
11	80	22.9		706		639	681		681		595						72	5	6
12	80		160									545-5	501-6	501-6	501				
13	90	22.0	161	707		640	682		682		594		502-7	502-7	502		74	7	7
14	100		162		E109 109							546-6	503-8	503-8	503				
15	100	21.5		708		641	683		683		593						73	86	7
16	110	21.4	163	709		642	684		684		592		504-9	504-9	504		76	8	9
17	120	21.2		710		643	685		685		591						74	107	10
18	120		164									547-7	505-10	505-10	505				
19	140	20.8		711		644	686		686		590						75	118	11
20	140		165		110							548-8	506-11	506-11	506				
21	200	19.7	166	712	111	645	687	I5	687		589	549-9 ^A					76	129	12
22	300	19.2	167	713	112	646	688	I6	688		588	550-10 ^B					77	1310	13
23	500	16.6	169	714	113	647	689	I7	689			551-11*					78	1411	14
24	700	13.9	170	715	114	690	690	I8	690			552-12*					79	1512	15
												* = 3L							

⊕ = 1.2L ^{3.5L}
 ⊖ = 3.5L
 POC-549
 bottle 7

Cruise: <u>EDDIES</u>				Leg: <u>2</u>		Cast: <u>51</u>		Type: <u>CTD (0-700)</u> Station #									
Date: <u>06 Aug 04</u>				Time: <u>0535</u>		Lat: <u>31°21.45</u>		Long: <u>05°45.72</u>		Samplers: <u>Nathan Tom, Sarah, Joe, Bill</u>							
Date: <u>06 Aug 04</u>				Time: <u>0622</u>		Lat: <u>31°21.45</u>		Long: <u>05°45.47</u>									
N #	Depth	Niskin Temp	Heilum	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	SIS ₂₀	N/P
				O ₂	O₂												
					<u>3H</u>							Vol= 2L	Vol= 4L				
1	0	27.2		701		648	691		691		613						
2	0	27.2	<u>16, 155</u>	701												<u>4/8</u>	<u>1</u>
3	20	27.1		702		649	692		692		612	553 -1	507 -1	507 -1	507		
4	20	27.1	<u>156</u>									554 -2	508 -2	508 -2	508		<u>2</u>
5	40	25.4		703		650	692	<u>*80</u>	693		611						<u>3</u>
6	40	22.5	<u>157</u>									555 -3	509 -3	509 -3	509		
7	60	21.6		704		651	694		694		610						<u>4</u>
8	60	<u>21.4</u>	<u>158</u>		<u>809-15</u>							556 -4	510 -4	510 -4	510		
9	70	21.0		705		652	695		695		609						<u>5</u>
10	70		<u>159</u>														
11	80	<u>20.8</u>		706		653	696		696		608		511 -5	511 -5	511		<u>6</u>
12	80		<u>160</u>									557 -5	512 -6	512 -6	512		
13	90	20.4	<u>161</u>	707		654	697		697		607		513 -7	513 -7	513		<u>7</u>
14	100		<u>162</u>		<u>116</u>							558 -5	514 -8	514 -8	514		
15	100	20.2		708		655	698		698		606						<u>8</u>
16	110	20.1	<u>163</u>	709		656	699		699		605	<u>26</u>	515 -9	515 -9	515		<u>9</u>
17	120	20.1		710		657	700		700		604						<u>10</u>
18	120	20.0	<u>164</u>									559 -7	516 -10	516 -10	516		
19	140	19.8		711		658	701		701		603						<u>11</u>
20	140		<u>165</u>		<u>117</u>							560 -8	517 -11	517 -11	517		
21	200	19.0	<u>166</u>	712	<u>118</u>	659	702		702		602						<u>12</u>
22	300	19.3	<u>167</u>	713	<u>119</u>	660	703		703		601	561 -9					
23	500	17.9	<u>169</u>	714	<u>110-120</u>	661	704		704			562 -10					<u>13</u>
24	700	15.9	<u>170</u>	715	<u>121</u>		705		705			563 -11					<u>14</u>
												564 -12					<u>15</u>
											<u>*22</u>						

9=350.

10=350

Cruise: EDDIES			Leg: 2		Cast: 52		Type: CTD(0-700) Station # 1256 (Cold core ring center)											
Date: 8-AUG-04			Time: 8:11		Lat: 31 46.41		Long: 62 11.45		Samplers: Bill, Olga, D.A., Max, Nathan									
Date: 8-AUG-01			Time: 9:00		Lat: 31 56.16		Long: 62 12.09											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	-Bact FRAP	-FRAP	POC/PON Vol= 2L	HPLC Vol= 4L	Chia	Flow Cyt	NH ₄	N/P	
				O ₂	O ₂ , O ₂													
1	0	27.3		101		662	706		706	626	625							
2	0											565-1	518-1	518-1	518	13	1	
3	20	27.2		102		663	707		707	625	624					14	2	
4	20											566-2	519-2	519-2	519			
5	40	27.1		103		664	708		708	624	623					15	3	
6	40											567-3	520-3	520-3	520			
7	60	23.7		104		665	709		709	623	622					16	4	
8	60											568-4	521-4	521-4	521			
9	70	22.5		105		666	710		710	622	621						5	
10	70												522-5	522-5	522			
11	80	21.4		106		667	711		711	621	620					18	6	
12	80											569-5	523-6	523-6	523			
13	90	20.0		107		668	712		712	620	619		524-7	524-7	524		7	
14	100											570-6	525-8	525-8	525			
15	100	19.2		108		669	713		713	619	618					19	8	
16	110	18.7		109		670	714		714	618	617		526-9	526-9	526		9	
17	120	18.5		110		671	715		715	617	616						10	
18	120											571-7	527-10	527-10	527	20		
19	140	18.3		111		672	716		716	616	615						11	
20	140											572-8	528-11	528-11	528	21		
21	200	17.5		112		673	717		717	615	614	573-9				22	12	
22	300	16.2		113		674	718		718	614	613	574-10				23	13	
23	500	14.6		114		675	719		719			575-11				24	14	
24	700	11.9		115			720		720			576-12				25	15	
												577-13						

Cruise: EDDIES		Leg: 2		Cast: 54		Type: CTD (0-700m) Station# 1065						C2				
Date: 09 Aug. 04		Time: 0721		Lat: 30 30.01		Long: 60 17.74		Samplers: Bill, Brn. Olga Max, No. Lee								
Date: 09 Aug. 04		Time: 0806		Lat: 30 29.99		Long: 60 17.80										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/AIK	TOC/TON	Salts	Nuts	Bact	FRFP	POC/PON Vol=2L	HPLC Vol= 4L	Chla	Flow Cyt	N/P
				O2 ₁	O2 ₂ , O2 ₃											
1	0	27.5		101		678	721		721	133	638					
2	0											577-1	529-1	529-1	529	1
3	20	27.4		102		678	722		722	134	637					2
4	20											578-2	530-2	530-2	530	
5	40	25.1		103		679	723		723	135	636					3
6	40											579-3	531-3	531-3	531	
7	60	22.9		104		680	724		724	136	635					4
8	60											580-4	532-4	532-4	532	
9	70	21.5		105		681	725		725	137	634					5
10	70												533-5	533-5	533	
11	80	20.9		106		682	726		726	138	633					6
12	80											581-5	534-6	534-6	534	
13	90	20.4		107		683	727		727	139	632		535-7	535-7	535	7
14	100	20.0		108								582-6	536-8	536-8	536	
15	100			108		684	728		728	140	631					8
16	110	19.9		109		685	729		729				537-9	537-9	537	9
17	120	19.2		110		686	730		730	141	630					10
18	120											583-7	538-10	538-10	538	
19	140	19.7		111		687	731		731	142	629					11
20	140											584-8	539-11	539-11	539	
21	200	19.3		112		688	732	I9	732	143	628	585-9				12
22	300	18.6		113		689	733	I10	733	144	627	586-10				13
23	500	16.8		114		690	734	I11	734			587-11				14
24	700	14.0		115			735	I12	735			588-12				15
												#3L				

Cruise: ED01ES		Leg: 2		Cast: 55		Type: CTD(0-700) Station# 1064						C2				
Date: 9 Aug 2004		Time: 0932		Lat: 30°29.95		Long: 60°30.30		Samplers:								
Date: 9 Aug 2004		Time: 1021		Lat: 30°30.02		Long: 60°30.39		Nathan, Bea, Olga, Bill, Max, Paul, Naomi, Valery, Viv								
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TN	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	
				O2	SP-02											Vol= 2L
					24			00p								
1	0	27.2		701		G91	736	82	736		651				1	
2	0		146,155		E110-122						589-1	540-1	540-1	540		
3	20	27.3		702		G92	737	83	737		650				2	
4	20		156								590-2	541-2	541-2	541		
5	40	25.0		703		G93	738	84	738		649				3	
6	40		157								591-3	542-3	542-3	542		
7	60	23.0		704		G94	739	85	739		648				4	
8	60		158		123						592-4	543-4	543-4	543		
9	70	22.3		705		G95	740		740		647				5	
10	70		159									544-5	544-5	544		
11	80	20.9		706		G96	741	86	741		646				6	
12	80		160								593-5	545-6	545-6	545		
13	90	20.5	161	707		G97	742		742		645		546-7	546-7	546	7
14	100		162		124						594-6	547-8	547-8	547		
15	100	19.9		708		G98	743	87	743		644				8	
16	110	19.7	163	709		G99	744		744		643		548-9	548-9	548	9
17	120	19.6		710		G99 700	745	88	745		642				10	
18	120		164								595-7	549-10	549-10	549		
19	140	19.4		711		700	746	89	746		641				11	
20	140		165		125						596-8	550-11	550-11	550		
21	200	19.3	166	712	126	702	747	90	747		640				12	
22	300	18.5	167	713	127	703	748	91	748		639				13	
23	500	17.1	169	714	128	704	749	92	749						14	
24	700	13.7	170	715	129		750	93	750						15	
											*=3L					

⊗ = 3.25d

Cruise: EDDIES			Leg: 02		Cast: 56		Type: (D-700m) Station # 1040										
Date: 9 Aug 2004			Time: 1200		Lat: 30° 19.18		Long: 60° 17.55		Samplers: Naomi, Paul, Valery, Viv								
Date: 9 Aug 2004			Time: 1242		Lat: 30° 19.13		Long: 60° 17.24										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	NH4
				O2	O2, O2												
1	0	27.7		61		705	751		751		604					1	26
2	0																
3	20	27.5		62		706	752		752		603	601-1	551-1	551-1	551	2	27
4	20																
5	40	24.8		63		707	753*94		753		602	602-2	552-2	552-2	552	3	28
6	40																
7	60	22.1		64		708	754		754		601	603-3	553-3	553-3	553	4	29
8	60																
9	70	21.2		65		709	755		755		600	604-4	554-4	554-4	554	5	
10	70																
11	80	20.5		66		710	756		756		659	555-5	555-5	555		6	30
12	80											605-5	556-6	556-6	556		
13	90	20.3		67		711	757		757		658	557-7	557-7	557		7	
14	100											606-6	558-8	558-8	558		
15	100	20.2		68		712	758		758		657					8	31
16	110	20.2		69		713	759		759		656	559-9	559-9	559		9	
17	120	18.9		70		714	760		760		655					10	32
18	120																
19	140	19.9		81		715	761		761		654	607-7	560-10	560-10	560	11	33
20	140																
21	200	19.2		72		716	762		762		653	608-8	561-11	561-11	561	12	34
22	300	18.9		73		717	763		763		652	609-9				13	35
23	500	16.5		74		718	764		764			610-10*				14	36
24	700	13.6		75			765		765			612-12*				15	37
												*=38					

3/42

Cruise: EDDIES		Leg: D2		Cast: GD cast # 57		Type: (0-700m) Station 1066										
Date: 9 Aug 2004		Time: 1737		Lat: 30°30.0S		Long: 160°04.87		Samplers:								
Date: 9 Aug 2004		Time: 1816		Lat: 30°30.32S		Long: 160°04.478		Tom, Viv, Dennis, Olga, Bea, Bill								
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P
				O2	O2, O2											
1	0	27.9		101		719	766	766	765 ⁷⁴⁵	677	613-1					1
2	0	27.4									613-1*	562-1	562-1	562		
3	20	27.6		102		720	767	767	666	676	614					2
4	20										614-2	563-2	563-2	563		
5	40	25.1		103		721	768*95	768	667	675	615					3
6	40										615-3	564-3	564-3	564		
7	60	22.4		104		722	769	769	668	674	616					4
8	60										616-4	565-4	565-4	565		
9	70	21.6		105		723	770	770	669	673	617					5
10	70											566-5	566-5	566		
11	80	21.0		106		724	770	771	670	672	618					6
12	80										617-5	567-6	567-6	567		
13	90	20.8		107		725	771	772	671	671		568-7	568-7	568		7
14	100										618-6	569-8	569-8	569		
15	100	20.6		108		726	771	773	672	670						8
16	110	20.2		109		727		774	669	669		570-9	570-9	570		9
17	120	20.0		110		728	772	775	673	668						10
18	120										619-7	571-10	571-10	571		
19	140	19.8		111		729	773	776	674	667						11
20	140										620-8	572-11	572-11	572		
21	200	19.5		112		730	774	776	675	666	621-9					12
22	300	19.0		113		731	775	778	676	665	622-10*					13
23	500	16.9		114		732	776	778			623-11*					14
24	700	13.3		115			777	780			624-12*					15
											* = 3%					

⊕ filter bell on floor; thrown out

Cruise: EDDIES			Leg: 02	Cast: 58	Type: (0-700m) Station 1067														
Date: 9 Aug 2004			Time: 1938	Lat: 30 30.03	Long: 59° 52.41	Samplers: Bea, Bill, Naomi, Viv, Max, Paul, Olga													
Date: 9 Aug 2004			Time: 2018	Lat: 30° 30.02	Long: 59° 52.48														
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON *DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol=2L	HPLC Vol=4L	Chla	Flow Cyt	N P			
				O2 ₁	O2 ₂ , O2 ₃														
1	0	28.0		1		733	778		781		689								1
2	0											625-1	573-1	573-1	573				2
3	20	27.6		2		734	779		782		688								2
4	20											626-2	574-2	574-2	574				3
5	40	24.9		3		735	780*		783		687								3
6	40											627-3	575-3	575-3	575				4
7	60	22.2		4		736	781		784		686								4
8	60											628-4	576-4	576-4	576				5
9	70	21.4		5		737			785		685								5
10	70												577-5	577-5	577				6
11	80	20.9		6		738	782		786		684								6
12	80											629-5	578-6	578-6	578				7
13	90	20.6		7		739			787		683		579-7	579-7	579				7
14	100											630-6	580-8	580-8	580				8
15	100	20.5		8		740	783		788		682								8
16	110	20.5		9		741			789		681		581-9	581-9	581				9
17	120	20.2		10		742	784		790		680								10
18	120												631-7	582-10	582-10	582			11
19	140	19.9		11		743	785		791		679								11
20	140											632-8	583-11	583-11	583				12
21	200	19.4		12		744	786		792		678	633-9							12
22	300	18.8		13		745	787		793		677	634-10*							13
23	500	16.9		14		746	788		794			635-11*							14
24	700	13.6		15			789		795			636-12*							15
												*=3L							

Cruise: EDDIES		Leg: 02		Cast: 59		Type: (0-700m) Station 1069											
Date: 9 Aug 2004		Time: 2223		Lat: 30 29.0		Long: 59 27.02		Samplers: Paul, Naarij, Valery, Nathan									
Date: 9 Aug 2004		Time: 2308		Lat: 30.29.17		Long: 59 27.13											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TN	-Batts DOP	Nuts	Bact	FRRF	POC/PON Vol=20L	HPLC Vol=4L	Chla	Flow Cyt	N /P	NH4
				O2	O2, O2												
1	0	28.1		701		747	790	97	796		702					1	38
2	0											637-1	584-1	584-1	584		
3	20	27.4		702		748	791	98	797		701					2	39
4	20											638-2	585-2	585-2	585		
5	40	24.5		703		749	792	99	798		700					3	40
6	40											639-3	586-3	586-3	586		
7	60	22.1		704		750	793	100	799		699					4	41
8	60											640-4	587-4	587-4	587		
9	70	21.2		705		751		100 800			698					5	42
10	70												588-5	588-5	588		
11	80	21.0		706		752	794	101 801			697					6	43 42
12	80											641-5	589-6	589-6	589		
13	90	20.6		707		753		103 802			696		590-7	590-7	590	7	44
14	100											642-6	591-8	591-8	591		
15	100	20.4		708		754	795	102 803			695					8	45 43
16	110	20.2		709		755		105 804			694		592-9	592-9	592	9	
17	120	20.0		710		756	796	106 805			693					10	44
18	120											643-7	593-10	593-10	593		
19	140	19.8		711		757	797	107 806			692					11	45
20	140											644-8	594-11	594-11	594		
21	200	19.3		712		758	798	108 807			691	645-9				12	46
22	300	18.8		713		759	799	109 808			690	646-10*				13	47
23	500	17.0		714		760	800	107	809			647-11*				14	48
24	700	13.9		715			801	108	810			648-12*				15	49
												*=3L					

Cruise: EDDIES		Leg: 2		Cast: 60		Type: CTD (0-700) Station # 1117										C2	
Date: 10 Aug 04		Time: 0628		Lat: 30 51.65		Long: 59 52.45		Samplers: Obg, Ben, Max, Bill, Nathan									
Date: 10 Aug 04		Time: 0716		Lat: 30 51.64		Long: 59 52.42											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol= 4L	Chla	Flow Cyt	N/P	
				O2 ₁	O2 ₂ O2 ₃												
1	0	27.2		101		761	802		811	157	715					1	
2	0											649-1	595-1	595-1	595		
3	20	27.2		102		762	803		812	158	714					2	
4	20											650-2	596-2	596-2	596		
5	40	24.5		103		763	801 109		813	159	713					3	
6	40											651-3	597-3	597-3	597		
7	60	22.3		104		764	805		814	160	712					4	
8	60											652-4	598-4	598-4	598		
9	70	21.7		105		765			815	161	711					5	
10	70												599-5	599-5	599		
11	80	21.1		106		766	806		816	162	710					6	
12	80											653-5	600-6	600-6	600		
13	90	20.8		107		767			817	163	709	654	601-7	601-7	601	7	
14	100											654-6	602-8	602-8	602		
15	100	20.5		108		768	807		818	164	708					8	
16	110	20.4		109		WB2-1			819		707		603-9	603-9	603	9	
17	120	20.2		110 110		WB-2	808		820	165	706					10	
18	120											655-7	604-10	604-10	604		
19	140	19.0		111		WB-3	809		821	166	705					11	
20	140											656-8	605-11	605-11	605		
21	200	19.5		112		-4	810		822	167	704	657-9				12	
22	300	19.3		112		-5	811		823	168	703	658-10				13	
23	500	17.1		111		6	812		824			659-11				14	
24	700	13.8		115		-6	813		825			660-12				15	
												3L					

Cruise: EDDIES		Leg: 2		Cast: G1		Type: CTD(0-700) Station # 1090		C2								
Date: 10 Aug 2004		Time: 0937		Lat: 30°40.71		Long: 60°17.74		Samplers:								
Date: 10 Aug 2004		Time: 1029		Lat: 30°40.80		Long: 60°17.69		Nathan, Bill, Max, Bea, Olga, Viv, Naomi, Valery, Paul								
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TEMP/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	M/P
				O2 ₁	O2 ₂ , O2 ₃											
1	0	27.2		701		WS2-7			826		728					1
2	0											G61-1	G06-1	G06-1	G06	
3	20	27.2		702		-8			827		727					2
4	20											G62-2	G07-2	G07-2	G07	
5	40	24.0		703		-9	110		828		726					3
6	40											G63-3	G08-3	G08-3	G08	4
7	60	21.9		704		-10			829		725					4
8	60											G64-4	G09-4	G09-4	G09	
9	70	21.1		705		-11			830		724					5
10	70												G10-5	G10-5	G10	
11	80	20.7		706		-12			831		723					6
12	80											G65-5	G11-6	G11-6	G11	
13	90	20.3		707		-13			832		722		G12-7	G12-7	G12	7
14	100											G66-6	G13-8	G13-8	G13	
15	100	20.0		708		-14			833		721					8
16	110	19.9		709		-15			834		720		G14-9	G14-9	G14	9
17	120	19.8		716		-16			835		719					10
18	120											G67-7	G15-10	G15-10	G15	
19	140	19.6		711		-17			836		718					11
20	40											G68-8	G16-11	G16-11	G16	
21	200	19.5		712		-18		I13	837		717	G69-9				12
22	300	18.9		713		-19		I14	838		716	G70-10				13
23	600	17.0		714		-20		I15	839			G71-11				14
24	700	13.7		715		-21		I16	840			G72-12				15
												*=3L				

Bea
is not a
Bully

⊕ = 2.75x

Cruise: EDDIES			Leg: 02		Cast: 62		Type: (0-700m) Station 115											
Date: 10 Aug 2004			Time: 1144		Lat: 30° 51.57		Long: 60° 17.84		Samplers:									
Date: 10 Aug 2004			Time: 1223		Lat: 30° 51.97		Long: 60° 17.72		Naomi, Paul, Valery, Viv									
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON *DOP	Salts	Nuts	Bact	FRRF	POC/PON Vol=38	HPLC Vol=48	Chla	Flow Cyt	N/P	NCP FRRF	
				O ₂	O ₂ , O ₂													
1	0	27.3			1		62-21	814		842		62-74					1	
2	0											673-1	617-1	617-1	617			
3	20	27.2			2		22	815		843		62-76					2	*
4	20											674-2	618-2	618-2	618			
5	40	23.9			3		23	816*110		844		62-79					3	
6	40											675-3	619-3	619-3	619			
7	60	21.7			4		24	817		845		62-78					4	
8	60											676-4	620-4	620-4	620			
9	70	20.9			5		25			846		62-77					5	
10	70												621-5	621-5	621			
11	80	20.6			6		26	818		847		62-76					6	
12	80											677-5	622-6	622-6	622			
13	90	20.3			7		27			848		62-75	623-7	623-7	623			
14	100											678-6	624-8	624-8	624			
15	100	20.0			8		28	819		849		62-74		222			8	*
16	110	20.0			9		29			850		62-73	625-9	625-9	625			
17	120	19.8			10		30	820		851		62-72					10	
18	120											679-7	626-10	626-10	626			
19	140	19.5			11		31	821		852		62-71					11	
20	140											680-8	627-11	627-11	627			
21	200	19.3			12		32	822	I-13	853		62-70	628-9				12	
22	300	19.6			13		33	823	-14	854		62-70	629-10*				13	
23	500	16.6			14		34	824	-15	855			623-11*				14	
24	700	13.5			15			825	-10	856			624-12*				15	
													*=38					

2.52

Cruise: EDDIES		Leg: 02		Cast: 63		Type: (0-700m) Station 113												
Date: 10 Aug 2004		Time: 1445		Lat: 30°51.5		Long: 60°42.8		Samplers:										
Date: 10 Aug 2004		Time: 1627		Lat: 30°51.3		Long: 60°42.69		Viv, Tom, Sarah										
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P		
				O2 ₁	O2 ₂ , O2 ₃													
1	0	27.1		61		682-35	826		857	169	754							1
2	0											685-1	628-1	628-1	628			
3	20	27.2		62		-36	827		858	170	753							2
4	20											686-2	629-2	629-2	629			
5	40	24.0		63		-37	828*12		859	171	752							3
6	40											687-3	630-3	630-3	630			
7	60	22.0		64		-38	829		860	172	751							4
8	60											688-4	631-4	631-4	631			
9	70	21.3		65		-39			861	173	750							5
10	70												632-5	632-5	632			
11	80	20.8		66		-40	830		862	174	749							6
12	80											689-5	633-6	633-6	633			
13	90	20.5		67 72		-41			863	175	748			634-7	634-7	634		7
14	100	20.2					831					690-6	635-8	635-8	635			
15	100	20.2		68		-42			864	176	747							8
16	110	20.3		69		-43			865		746			636-9	636-9	636		9
17	120	20.0		70		-44	832		866	177	745							10
18	120											691-7	637-10	637-10	637			
19	140	19.8		81 81		-45	833		867	178	744							11
20	140											692-8	638-11	638-11	638			
21	200	19.5		72 67		-46	834		868	179	743	693-9						12
22	300	18.9		73		-47	835		869	180	742	694-10*						13
23	500	16.9		74		-48	836		870			695-11*						14
24	700	13.5		75		49	837		871			696-12*						15
												* = 32						

Cruise: EDDIES				Leg: 02		Cast: 64			Type: (0-700m) Station 1063										
Date: 10 Aug 2004				Time: 1730		Lat: 30°29.90		Long: 00°42.93		Samplers: Sarah, Tom, Viv, Joe, Olga, Bill, Bea									
Date: 10 Aug 2004				Time: 1812		Lat: 30°29.08		Long: 00°42.70											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TEMP	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P			
				O ₂	O ₂ , O ₂														POC/PON
1	0	27.6		101		49			872		767								1
2	0											697-1	639-1	639-1	639				
3	20	22.4		102		50			873		766								2
4	20											698-2	640-2	640-2	640				
5	40	24.8		103		51	113		874		765								3
6	40											699-3	641-3	641-3	641				
7	60	21.5		104		52			875		764								4
8	60											700-4	642-4	642-4	642				
9	70	22.9		105		53			876		763								5
10	70												643-5	643-5	643				
11	80	20.4		106		54			877		762								6
12	80											701-5	644-6	644-6	644				
13	90	20.1		107		55			878		761		645-7	645-7	645				7
14	100											702-6	646-8	646-8	646				
15	100	19.9		108		56			879		760								8
16	110	19.8		109		57			880		759		647-9	647-9	647				9
17	120	19.6		110		58			881		758								10
18	120											703-7	648-10	648-10	648				
19	140	19.5		116		59			882		757								11
20	140											704-8	649-11	649-11	649				
21	200	19.1		112		60			883		756		705-9						12
22	300	18.6		113		61			884		755		706-10*						13
23	500	16.9		114		62			885				707-11*						14
24	700	13.3		115					886				708-12*						15
													*= 38						

Cruise: EDDIES		Leg: 02		Cast: 65		Type: (0-700m) Station 1013										
Date: 10 Aug 2004		Time: 2046		Lat: 30° 07.96		Long: 60° 42.9		Samplers: Bill, Bea, Viv, Olga, Max								
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Alk	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chia	Flow Cyt	N/P
				02,	02, 02,											
1	0	27.6		21		682-63	838		886	181	780					1
2	0											709-1	650-1	650-1	650	
3	20	27.0		22		64	839		887	182	779					2
4	20											710-2	651-2	651-2	651	
5	40	27.7		23		65	840*114		888	183	778					3
* 6	40											711-3	652-3	652-3	652	
7	60	23.0		24		66	841		889	184	777					4
8	60											712-4	653-4	653-4	653	
9	70	21.9		25		67			890	185	776					5
10	70												654-5	654-5	654	
11	80	21.5		26		68	842		891	186	775					6
12	80											713-5	655-6	655-6	655	
13	90	21.0		27		69			892	187	774		656-7	656-7	656	7
14	100											714-6	657-8	657-8	657	
15	100	20.6		28		70	843		893	188	773					8
16	110	20.5		29		71			894		772		658-9	658-9	658	9
17	120	20.3		30		72	844		895	189	771					10
18	120											715-7	659-10	659-10	659	
19	140	19.9		31		73	845		896	190	770					11
20	140											716-8	660-11	660-11	660	
21	200	19.5		32		74	846		897	191	769	717-9				12
22	300	19.2		33		75	847		898	192	768	718-10*				13
23	500	17.5		34		76	848		899			719-11*				14
24	700	14.3		35			849		900			720-12*				15
												* = 3L				

* Vent open

Cruise: EDDIES		Leg: 02		Cast: 66		Type: (0-700m) Station 1015														
Date: 10 Aug 2004		Time: 2254		Lat: 30 08.51		Long: 60 17.63		Samplers: Nassim Paul, Valery, Nathan												
Date: 10 Aug 2004		Time: 2338		Lat: 30 08.60		Long: 60 16.79														
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON *Pop	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol= 4L	Chla	Flow Cyt	N/P	NH ₄	HPLC	Chla	Flowc
				O ₂	O ₂ , O ₂															
						WR2-														
1	0	27.4		701		77	850		901		793					1	50			
2	0											721-1	721-1	721-1	721			GG1	GG1	GG1
3	20	27.4		702		78	851		902		792					2	51			
4	20											722-2	722-2	722-2	722			GG2	GG2	GG2
5	40	24.0		703		79	852 ^{1/15}		903		791					3	52			
6	40											723-3	723-3	723-3	723			GG3	GG3	GG3
7	60	22.1		704		80	853		904		790					4	53			
8	60											724-4	724-4	724-4	724			GG4	GG4	GG4
9	70	21.4		705		81			905		789					5				
10	70											725-5	725-5	725				GG5	GG5	GG5
11	80	21.0		706		82	854		906		788				switched	6	54			
12	80											725-5	726-6	726-6	726			GG6	GG6	GG6
13	90	20.5		707 707		83			907		787					7		GG7	GG7	GG7
14	100											726-6	728-8	728-8	728			GG8	GG8	GG8
15	100	20.2		708 707		84	855		908		786				3.5L	8	55			
16	110	20.0		709		85			909		785		729-9	729-9	729			GG9	GG9	GG9
17	120	19.9		710 710		86	856		910		784					10	56			
18	120											727-7	730-10	730-10	730			GG10	GG10	GG10
19	140	19.6		711		87	857		911		783					11	57			
20	140											728-8	731-11	731-11	731			GG11	GG11	GG11
21	200	19.2		712		88	858		912		782		729-9			12	58			
22	300	19.0		713		89	859		913		781		730-10			13	59			
23	500	16.8		714		90	860		914				731-11			14	60			
24	700	13.6		715			861		915				732-12			15	61			
												#3L								

* che
* HPLC

* 3 1/2 L

Cruise: ENDTES		Leg: 2		Cast: 67		Type: CTD (0-700)		Station# 1017		C2						
Date: 11 Aug 04		Time: 0405		Lat: 30 08.38		Long: 59 52.46		Samplers: Naomi JDM, Bill, Nathan								
Date: 11 Aug 04		Time: 0449		Lat: 30 08.28		Long: 59 52.14										
N #	Depth	Niskin Temp	Heilum	Oxygens		DIC/Aik	TOC/TON #D01	Salts	Nuts	Bact	FRRF	POC/PON Vol= 2L	HPLC Vol=4L	Chla	Flow Cyt	N/P
				O2	O2, O2											
1	0	27.2		1		91	862		916	193	806					1
2	0											733-1	672-1	672-1	672	
3	20	27.4		2		92	863		917	194	805					2
4	20											734-2	673-2	673-2	673	
5	40	24.2		3		93	864	#116	918	195	804					3
6	40											735-3	674-3	674-3	674	
7	60	22.8		4		94	865		919	196	803					4
8	60											736-4	675-4	675-4	675	
9	80	22.0		5		95			920	197	802					5
10	80												676-5	676-5	676	
11	80	21.5		6		96	866		921	198	801					6
12	80											737-5	677-6	677-6	677	
13	90	21.3		7		97			922	199	800		678-7	678-7	678	7
14	100											738-6	679-8	679-8	679	
15	100	21.1		8		98	867		923	200	798					8
16	110	21.0		9		99			924		798		680-9	680-9	680	9
17	120	20.6		10		100	868		925	201	797					10
18	126											739-7	681-10	681-10	681	
19	140	20.2		11		101	869		926	202	796					11
20	40											740-8	682-11	682-11	682	
21	200	19.9		12		102	870		927	203	795	741-9				12
22	300	19.2		13		103	871		928	204	794	742-10				13
23	500	17.0		14		104	872		929			743-11				14
24	700	14.5		15			873		930			744-12				15
												43L				

Cruise: EDDIES		Leg: 02		Cast: 08		Type: (0-700m) Station 1061											
Date: 11 Aug 2004		Time: 1947		Lat: 30°29.92		Long: 61°08.18		Samplers: Viv, Bill, Bea, Olga, Tom, Max, Valery									
Date: 11 Aug 2004		Time: 2024		Lat: 30°29.91		Long: 61°08.15											
N #	Depth	Niskin Temp	Helium	Oxygens		DIC/Aik	TOC/TON	Salts	Nuts	Bact	FRRF	POC/PON	HPLC	Chla	Flow Cyt	N/P	NH4
				O2	O2, O2												
1	0	27.4		701		105	874		931		819					1	62
2	0											745-1	683-1	683-1	683		
3	20	27.0		702		106	875		932		818				2	63	
4	20											746-2	684-2	684-2	684		
5	40	24.6		703		107	876	17	933		817						64
6	40											747-3	685-3	685-3	685		
7	60	22.6		704		108	877		934		816				3	65	
8	60											748-4	686-4	686-4	686		
9	70	21.9		705		109			935		815						
10	70											687-5	687-5	687			
11	80	21.5		706		110	878		936		814						66
12	80											749-5	688-6	688-6	688		
13	90	21.1		707		111			937		813		689-7	689-7	689	4	
14	100											750-6	690-8	690-8	690		
15	100	20.7		708		112	879		938		812					5	67
16	110	20.6		709		113			939		811		691-9	691-9	691	6	
17	120	20.4		710		114	880		940		810					7	68
18	120											751-7	692-10	692-10	692		
19	140	20.1		711		115	881		941		809					8	69
20	140											752-8	693-11	693-11	693		
21	200	19.2		712		116	882	I17	942		808	753-9				9	70
22	300	19.3		713		117	883	I18	943		807	754-10*				10	71
23	500	17.6		714		118	884	I19	944			755-11*				11	72
24	700	14.3		715			885	I20	945			756-12*				12	73
												*=3%					