

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSERP Summer '08		Sho Designation (ID.) 1H0802		STATION NO. 77														
CONSC CAST #	LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB ("C)	WET BULB ("C)	PRESSURE (mb)	SEA STATE * (deg)	WIND DIRN. (kts)	WIND SPD. * (kts)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID						
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	*	*	*	*	*	*							
	87	56.50	18	N	17	02	4.	59	w	18	JUL	08	09	04	7.2	.	11	271	18	100N PRIB		
SBE 9+			FLUOR S/N																			
PRESS SN			SBE43-Oxy (prime)																			
PRI TEMP SN			SBE43-Oxy (sec)																			
SEC TEMP SN			Transmissometer																			
PRI COND SN			PAR S/N																			
SEC COND SN			O2 Tmp Sensor No.																			
NIS	DEPTH	Roset.		Hydro Team-PMEL						Tom W	Grebme	Masha	Sambrotto	Harvey	Moran/	Shull	Stoecker	Pat		NIS		
No.	DESIRED	notes	SALT	NUTS	02-Btu	No	02 Temp	CHL.	Frac CHL.	DIC	018	Cooper	615N	02/Ac	Prod	DON	Lessard	Lomas	Ratton	µZoops	Th	No.
1	96			31																	1	
2	25			32																	2	
3	50			33																	3	
4	40			34																	4	
5	33			35																	5	
6	20			36																	6	
7	10			37																	7	
8	0			38	143																8	
9																					9	
10																					10	
11																					11	
12																					12	

REMARKS

EE / STD

MAX. DEPTH = 96 m

11.5

VESSEL USCG Heavy		CRUISE ID H10803		PROJECT & LEG BEST/BSERP_Summer '08		Ship Designation (I.D.) 1H0802		STATION NO. 79									
CONSC CAST #	DEG MIN	LATITUDE	DEG MIN	LONGITUDE	DAY	MO	YR	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE * (deg)	WIND DIRN. • (kts)	WIND SPD. • (kts)	CLOUD (amt) TYPE WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
SBE 9+				FLUOR SN													
PRESS SN				SBE43-Oxy (prime)													
PRI TEMP SN				SBE43-Oxy (sec)													
SEC TEMP SN				Transmitter													
PRI COND SN				PAR S/N													
SEC COND SN				O2 Trip Session No.													
NIS	DEPTH	Roset.	Hydro Team+PMEL					Tom W	Gretchen	Masha	Sambrotto	Harvey	Moran/	Shull	Stoecker	Pat	NIS
No	DESIRED	notes	SALT	NUTS	O2-BLNO	O2 Temp	CHL	Frac CHL	DIC	018	Cooper/SN	O2/Ar	Prod	DON	Lessard	Lomas	Radon
1	137			48													1
2	80			49													2
3	38		A19/50														3
4	30		A19/51														4
5	25		A19/52														5
6	20		A19/53														6
7	15		A19/54														7
8	10		A19/55														8
9	5		A19/56														9
10	5																10
11	5																11
12	0		A22/57														12

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSERP Summer '08		Ship Designation (I.D.) 1H0802		STATION NO. 80										
CONSC CAST #		LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	WIND	WIND	CLOUD (amt)	WEATHER	BOTTOM	STA. NAME/ID	
	DEG	MIN	DEG	MIN	DAY	MO	HR	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	DEPTH (m)	NP15.5
SBE 9+																		
PRESS S/N																		
PRI TEMP S/N																		
SEC TEMP S/N																		
PRI COND S/N																		
SEC COND S/N																		
NIS DEPTH	Roset.	Hydro Team-PMEI						Tom W	Grebme	Masha	Sambrutto	Harvey	Moran/	Shull	Stoecker	Pat	NIS	
No DESIRED notes	SALT	NUTS	O2-Btl.No	O2 Temp	CHL.	Frac CHL.	DIC	018	Cooper	02/Ar	Prod	DON	Lessard	Lomas	Radon	Woops	Th	No.
1 500	6/F	57	168															1
2 300	8/F	68	144															2
3 200	9/F	9	147															3
4 150	10/F	70	219															4
5 100	11/F	71																5
6 75		72																6
7 50		73																7
8 40		74																8
9 30		75																9
10 20		76																10
11 10		77																11
12 0		78																12

NP15.5

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSIERP_Summer 08		Ship Designation (I.D.) 1H0802		STATION NO. 83											
CONSC CAST #	LATITUDE	DEG	MIN	DEG	MIN	DAY	MO	YR	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	WIND DIRN.	WIND SPD.	CLOUD (amt)	BOTTOM DEPTH	WEATHER	STA. NAME/D
									HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(kts)	*	*	(m)
0975659.23	N	17017.39	W	19	JUL	08	1839	6.0	12	30013								67N71.1	
SBE 9+																			
PRESS SN																			
PRI TEMP SN																			
SEC TEMP SN																			
PRI COND SN																			
SEC COND SN																			
NIS DEPTH	Roset.	Hydro Team-FMEL																	
No.	DESIRED	notes	SALT	NUTS	O2-Btl No	O2 Temp	CHL.	Frac CHL.	DIC	018	Grebme	Masha	Sambrotto	Harvey	Moran'	Shull	Stoecker	Pat	NIS
1	66	18/1	1	* 0.9	1	6.19													
2	50		2																1
3	40		3																2
4	30		4																3
5	20		5																4
6	10	19/1	6																5
7	0		7																6
8																			7
9																			8
10																			9
11																			10
12																			11
																			12

FLUOR S/N

SBE43-Oxy (prime)

SBE43-Oxy (sec)

Transmissometer

PAR S/N

0.2 Tmp Sensor No.

REMARKS

STD

MAX DEPTH = 66 m

VESSEL USCG Healy	CRUISE ID H10803	PROJECT & LEG BEST/BSIERP_Summer 08						Ship Designation (I.D.) 1H0802				STATION NO. 84									
		CONSC CAST #	DEG LATITUDE	DEG MIN	DEG LONGITUDE	MIN	DAY	MO	YR	HR	MIN	DRY BULB ("C)	WET BULB ("C)	PRESSURE (mb)	SEA STATE	WIND DIRN.	WIND SPD. (kts)	CLOUD (amb TYPE WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
0985634.10N	17240.37W	20 JUL 08	0550	8.7	8.0	1346	270128	153L51-4													
SBE 9+																					
PRESS SN																					
PRI TEMP SN																					
SEC TEMP SN																					
PRI COND SN																					
SEC COND SN																					
NIS	DEPTH	ROSET.	Hydro Team-PMEL						TOM W	Grebene	Masha	Sambrotto	Harvey	Moran'	Shull	Stoecker	Pat		NIS		
No	DESIRED	notes	SALT	NUTS	02-BH1N	02 Temp	CHL.	Frac CHL.	DIC	018	Cooper	NSN	O2/Far	Prod	DON	Lessard	Lomas	Radon	#Loops	Th	No
1	148		8	97																1	
2	100		9																	2	
3	75		10																	3	
4	50		11																	4	
5	40		12																	5	
6	30		13																	6	
7	20		14																	7	
8	10																			8	
9	10		15																	9	
10	0		16	202																10	
11																				11	
12																				12	

End at 0609

Logging down

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSEIERP_Summer '08		Ship Designation (I.D.) 1H0802		STATION NO. 85													
CONSC CAST #		LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	WIND	WIND	CLOUD (amt	BOTTOM	WEATHER	ST. A. NAME/ID				
	DEG	MIN		DEG	MIN	DAY	MO	YR	HR.	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)	
099	S	64	1.71	N	173	12.74	W	20	JUL	08	09.61	8.8	.	14	270	22	.	155	S1-S		
SBE 9+											FLUOR S/N										
PRESS SN											SBE-3-Oxy (prime)										
PRI TEMP SN											SBE-3-Oxy (sec)										
SEC TEMP SN											Transmissometer										
PRI COND SN											PAR S/N										
SEC COND SN											O2 Tmp Sensor No.										
NIS	DEPTH	Hydro Team-PMEI				Tom W		Grebme	Masha	Sambrotto	Harvey	Moran/	Shull	Stoecker	Pat		NIS				
No	DESIRED	notes	SALT	NUTS	02-BLNO	02 Temp	CHL.	Frac CHL.	DIC	018	Cooper	015N	02/Ar	Prod	DON	Lessard	Lomas	Radon	µZoops	Th	No.
1	155		20	F	17	117															1
2	125		18		18	118															2
3	100		19		178																3
4	75		20																		4
5	50		21																		5
6	40		22																		6
7	30		23																		7
8	20		24																		8
9	10		-																		9
10	10	21	F	25	243																10
11	0		26																		11
12																					12

It is leaky.

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSSERP_Summer '08		Ship Designation (ID.) H10802		STATION NO. 86											
CONSC CAST #		LATITUDE		LONGITUDE		TIME (GMT)	DRY BULB (°C)	WET BULLB (°C)	PRESSURE (mb)	SEA STATE DIRN. (deg)	WIND DIRN. (kts)	WIND SPD. (kts)	CLOUD (amt) TYPE	BOTTOM DEPTH (m)	STA. NAME/ID				
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	*	*	*	*	*	*					
102	56	50	.92	N	173	18.	47	W	20	JUL	08	14	36	8.2	12	25330	174051-6		
SBE 9+																			
PRESS SN																			
PRI TEMP SN																			
SEC TEMP SN																			
PRI COND SN																			
SEC COND SN																			
NIS	DEPTH	Roset.				Hydro Team-PMEL				TOM W	Grebme	Masha	Sambrotto	Harvey	Moran/	Shull	Stoecker	Pat	
No.	DESIRED	notes	SALT	NUTS	02-BuNo	02 Temp	CHL	Frac CHL	DIC	018	Cooper/DSN	O2/Air	Prod	DON	Lessard	Lomas	Radon	μLoops	Th
1	100																		1
2	80																		2
3	60																		3
4	38																		4
5	25																		5
6	20																		6
7	15																		7
8	10																		8
9	5																		9
10	5																		10
11	5																		11
12	0																		12

#11 + #12 both leaky

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSSERP_Summer '08		Ship Designation (I.D.) H10802		STATION NO. 87								
CONSC CAST #	LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB ("C)	WET BULB ("C)	PRESSURE (mb)	SEA STATE VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt) TYPE	BOTTOM DEPTH	STA. NAME/ID	
	DEG	MIN	DEG	MIN	DAY	MO	HR	MIN	*	*	*	*	*	*	(m)	
103 58 25.00 N	174 27.10 W	21 J U L 08	03 17	8.1	8.1	108	28	509								
SBE 9+			FLUOR S/N													
PRESS SN			SBE3-Dry (prime)													
PRI TEMP SN			SBE43-Dry (sec)													
SEC TEMP SN			Transmissometer													
PRI COND SN			PAR S/N													
SEC COND SN			02 Trip Setson No.													
NIS	DEPTH	Hydro Team-PMEI					TOM W	Grebme	Masha	Sambarro	Harvey	Moran/	Shull	Stoecker	Pat	NIS
No.	DESIRED	notes	SALT	NUTS	O2-BuNo	O2 Temp	CHL.	Frac CHL.	DIC	018	Coope	61SN	024A	Prod	WATER TEMP	No.
1	170	22/k	47	19.9												1
2	150	23/F	48	16												2
3	160	24/F	49													3
4	75		50													4
5	60		51													5
6	50		52													6
7	45		53													7
8	30		54													8
9	25		55													9
10	20		56													10
11	10		Leaker													11
12	0		57													12

60m / 30m / 0m — Biologics

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSSERP_Summer '08		Ship Designation (I.D.) 1H0802		STATION NO. 859												
CONSC CAST #	LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB	WET BULL	PRESSURE	SEA STATE	WIND	WIND	CLOUD (amt)	BOTTOM	WEATHER	STA. NAME/ID				
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	DIRN.	(deg)	(kts)	*	*	(m)
107 57 49.70 N	174 59.55 W	21	JUL 08	1507	8.7	.	10	255	11										1714-46	
SBE 9+			FLUOR S/N																	
PRESS SN			SBE 43-Oxy (prime)																	
PRI TEMP SN			SBE 43-Oxy (sec)																	
SEC TEMP SN			Transmissometer																	
PRI COND SN			PAR S/N																	
SEC COND SN			O2 Temp Sensor No.																	
NIS	DEPTH	Reset,	Hydro Team-PMEL					Tom W	Gebrem	Masha	Sambrutto	Harvey	Moran/	Shull	Stoecker	Pat				
No.	DESIRED	notes	SALT	NUTS	02-BTL No	02 Temp	CHL.	Frac CHL.	DIC	018	Cooper	61SN	02/Az	Prod	DON	Lessard	Lomas	Radon	μLoops	Th
1	51		A11/1	A12/2																1
2	53		A13/3	A14/4																2
3	27																			3
4	20		A15/5	A16/6																4
5	13																			5
6	7																			6
7	7																			7
8	7																			8
9	7																			9
10	7																			10
11	7			X12/7																11
12	D																			12

Good Bio optics 6/30/08

VESSEL USCG Healy		CRUISE ID H10803		PROJECT & LEG BEST/BSEERP Summer '08		Ship Designation (I.D.) H10802		STATION NO. 89								
CONSC CAST #	LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB ("C)	WET BULB ("C)	PRESSURE (mb)	SEA STATE VISIBILITY	WIND DIRN.	WIND SPD. (kts)	CLOUD (amt) TYPE	BOTTOM DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN	DAY	MO	HR	MIN	*	*	(deg)	(kts)	*	*		
109	57	46	.7	6	N	174	56	21	J	U	L	08	1	844	S. 7	
SBE 9+									FLUOR S/N							
PRESS SN									SBE-3-Oxy (prime)							
PRI TEMP SN									SBE43-Oxy (sec)							
SEC TEMP SN									Transmissometer							
PRI COND SN									PAR S/N							
SEC COND SN									O2 Tmp Sensor No.							
NIS	DEPTH	Roset.		Hydro Team-PMEI					TOM W	Grebme	Masha	Sambrotto	Harvey	Moran/	Shull	
No.	DESIR ED	notes	SALT	NUTS	02-BBL No	02 Temp	CHL.	Frac CHL.	DIC	018	Cooper	61SN	02/AR	Prod	DON	Lessard
1	2241		7/A	82/83	219											
2	2000		8/A	84/85	144											1
3	1700		9/A	86/87	122											2
4	1400		10/A	88/89	175											3
5	1200		11/A	80/91	174											4
6	1000		12/A	92/93	176											5
7	800		13/A	94/95	181											6
8	600		14/A	96/97	193											7
9	450		15/A	98/99	202											8
10	300		16/A	100/101	190											9
11	200		16/A	103/103	195											10
12	150															11
																12

All depths :- 0dm (60m) - Biophysics


~~~~~X AL

| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BESTRP_Summer '08 |          |            |      | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>02 |                         |                        |                       |                     |                        |               |       |       |        |    |     |
|----------------------|---------|---------------------|-----------------|-----------------------------------------|----------|------------|------|-----------------------------------|------------------|-------------------|-------------------------|------------------------|-----------------------|---------------------|------------------------|---------------|-------|-------|--------|----|-----|
| CONSC<br>CAST #      |         | LATITUDE            |                 | LONGITUDE                               |          | TIME (GMT) |      | DRY BULB<br>(°C)                  | WET BULB<br>(°C) | PRESSURE<br>(mb)  | SEA STATE<br>VISIBILITY | WIND<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME /ID |       |       |        |    |     |
|                      | DEG     | MIN                 |                 | DEG                                     | MIN      | DAY        | MO   | HR                                | MIN              | *                 | *                       | *                      | *                     | *                   | *                      |               |       |       |        |    |     |
| 1                    | 12      | 58                  | 59.52           | N                                       | 173      | 59.14      | W    | 22                                | JUL              | 08                | 11                      | 33                     | 77.7                  | .                   | 08                     | 266           | 7     |       |        |    |     |
| SBE 9+               |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        |    |     |
| PRESS SN             |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        |    |     |
| PRI TEMP SN          |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        |    |     |
| SEC TEMP SN          |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        |    |     |
| PRI COND SN          |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        |    |     |
| SEC COND SN          |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        |    |     |
| NIS                  | DEPTH   | ROSET.              | Hydro Team-PMEL |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        |    |     |
| NO                   | DESIRED | NOTES               | SALT            | NUTS                                    | 02-BN No | 02 Temp    | CHL. | Frac CHL.                         | DIC              | 018               | Cooper                  | 615N                   | O2/Air                | Prod                | DON                    | Lessard       | Lomas | Radon | M20ops | Th | No. |
| 1                    | 120     |                     | 17              | A                                       | 130      | 216        |      |                                   |                  |                   |                         | 68.7                   |                       |                     |                        |               |       |       |        |    | 1   |
| 2                    | 100     |                     |                 | 131                                     |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 2  |     |
| 3                    | 75      |                     |                 | 132                                     |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 3  |     |
| 4                    | 50      |                     |                 | 133                                     |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 4  |     |
| 5                    | 40      |                     |                 | 134                                     |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 5  |     |
| 6                    | 30      |                     |                 | 135                                     |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 6  |     |
| 7                    | 20      |                     |                 | 136                                     |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 7  |     |
| 8                    | 10      |                     | 17              | A                                       | 137      |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 8  |     |
| 9                    | 10      |                     |                 |                                         |          |            |      |                                   |                  |                   |                         | 688                    |                       |                     |                        |               |       |       |        | 9  |     |
| 10                   | 0       |                     | 138             | A                                       |          |            |      |                                   |                  |                   |                         | 689                    |                       |                     |                        |               |       |       |        | 10 |     |
| 11                   |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 11 |     |
| 12                   |         |                     |                 |                                         |          |            |      |                                   |                  |                   |                         |                        |                       |                     |                        |               |       |       |        | 12 |     |

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| VESSEL<br>USCG Healy |            | CRUISE ID<br>H10803 |                    | PROJECT & LEG<br>BEST/BSERP_Summer '08 |            | Ship Designation (I.D.)<br>H10802 |                  | STATION NO.<br>93 |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
|----------------------|------------|---------------------|--------------------|----------------------------------------|------------|-----------------------------------|------------------|-------------------|------------------|----------------|------------------------|-----------------------|------------------|-----------------|---------------|--------------|-------|-------|--------|----|-----|
| CONSC<br>CAST #      | LATITUDE   |                     | LONGITUDE          |                                        | TIME (GMT) |                                   | DRY BULB<br>(°C) | WET BULB<br>(°C)  | PRESSURE<br>(mb) | SEA STATE<br>* | WIND<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>* | WEATHER<br>TYPE | BOTTOM<br>(m) | STA. NAME/ID |       |       |        |    |     |
|                      | DEG        | MIN                 | DEG                | MIN                                    | DAY        | MO                                | HR               | MIN               |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
| 1145900.40 N         | 17400.94 W | 22 Jul 08           | 1605               | 7.6                                    | .          | 08                                | 292              | 6                 |                  |                |                        |                       |                  |                 | 1123          | P14-2        |       |       |        |    |     |
| SBE 9+               |            |                     | FLUOR S/N          |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
| PRESS S/N            |            |                     | SBE 3-Oxy (prime)  |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
| PRI TEMP S/N         |            |                     | SBE 4-Oxy (sec)    |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
| SEC TEMP S/N         |            |                     | Transistor meter   |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
| PRI COND S/N         |            |                     | PAR S/N            |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
| SEC COND S/N         |            |                     | O2 Trip Sensor No. |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        |    |     |
| NIS                  | DEPTH      | Roset.              | Hydro Team-PMELE   |                                        |            |                                   | Tom W            | Gregory           | Masha            | Sambrotto      | Harvey                 | Moran/                | Shull            | Stoeber         | Pat           | NIS          |       |       |        |    |     |
| No.                  | DESIRED    | notes               | SALT               | NUTS                                   | 02-Btu     | No 02 Temp                        | CHL.             | Frac CHL.         | DIC              | 018            | Cooper                 | 615N                  | O2/Air           | Prod            | DON           | Lessard      | Lomas | Radon | μzoops | Th | No. |
| 1                    | 12.0       |                     |                    | A11/139                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 1  |     |
| 2                    | 5.1        |                     |                    | A12/140                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 2  |     |
| 3                    | 3.3        |                     |                    | A13/141                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 3  |     |
| 4                    | 2.7        |                     |                    |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 4  |     |
| 5                    | 2.7        |                     |                    | A15/142                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 5  |     |
| 6                    | 2.0        |                     |                    | A16/143                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 6  |     |
| 7                    | 1.3        |                     |                    | A17/144                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 7  |     |
| 8                    | 7          |                     |                    | A18/145                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 8  |     |
| 9                    | 7          |                     |                    |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 9  |     |
| 10                   | 7          |                     |                    |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 10 |     |
| 11                   | 0          |                     |                    | A21/146                                |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 11 |     |
| 12                   |            |                     |                    |                                        |            |                                   |                  |                   |                  |                |                        |                       |                  |                 |               |              |       |       |        | 12 |     |

26 - dlmw



| VESSEL<br>USCG Healy |             | CRUISE ID<br>H10803 |           | PROJECT & LEG<br>BEST/BSIEFP_Summer '08 |            |                 |      | Ship Designation (I.D.)<br>1H0802 |     |                   |        | STATION NO.<br>93 |           |           |        |                               |          |             |             |                 |    |              |  |  |    |     |
|----------------------|-------------|---------------------|-----------|-----------------------------------------|------------|-----------------|------|-----------------------------------|-----|-------------------|--------|-------------------|-----------|-----------|--------|-------------------------------|----------|-------------|-------------|-----------------|----|--------------|--|--|----|-----|
| CONSC<br>CAST #      | LATITUDE    |                     | LONGITUDE |                                         | TIME (GMT) |                 |      | DRY BULB<br>(°C)                  |     | WET BULB<br>(°C)  |        | PRESSURE<br>(mb)  |           | SEA STATE |        | WIND<br>DIRN.<br>SPD.<br>TYPE |          | CLOUD (amt) |             | BOTTOM<br>DEPTH |    | STA. NAME/ID |  |  |    |     |
|                      | DEG         | MIN                 | DEG       | MIN                                     | DAY        | MO              | YR   | HR                                | MIN |                   |        |                   | *         | *         | (deg)  | (kts)                         | *        | *           | (m)         |                 |    |              |  |  |    |     |
| 116 59 27.37 N       | 173 25.15 W | 08                  | 22        | JUL                                     | 22         | 08              | 2008 | 22                                | 30  | 6                 | 7.8    | 7.5               | 10        | 10704     | 1044   | P14-1                         |          |             |             |                 |    |              |  |  |    |     |
| SBE 9+               |             |                     |           |                                         |            |                 |      |                                   |     | FLUOR S/N         |        |                   |           |           |        |                               |          |             |             |                 |    |              |  |  |    |     |
| PRESS SN             |             |                     |           |                                         |            |                 |      |                                   |     | SBE43-0xy (prime) |        |                   |           |           |        |                               |          |             |             |                 |    |              |  |  |    |     |
| PRI TEMP SN          |             |                     |           |                                         |            |                 |      |                                   |     | SBE43-0xy (sec)   |        |                   |           |           |        |                               |          |             |             |                 |    |              |  |  |    |     |
| SEC TEMP SN          |             |                     |           |                                         |            |                 |      |                                   |     | Transmissometer   |        |                   |           |           |        |                               |          |             |             |                 |    |              |  |  |    |     |
| PRI COND SN          |             |                     |           |                                         |            |                 |      |                                   |     | PAR S/N           |        |                   |           |           |        |                               |          |             |             |                 |    |              |  |  |    |     |
| SFC COND SN          |             |                     |           |                                         |            |                 |      |                                   |     | 02 Tmp Sensor No. |        |                   |           |           |        |                               |          |             |             |                 |    |              |  |  |    |     |
| NIS                  | DEPTH       | Roset.              |           |                                         |            | Hydro Team-PMEI |      |                                   |     | TOM W             | Gebbie | Masha             | Sambrotto | Harvey    | Moran/ | Shull                         | Stoecker | Pat         |             |                 |    |              |  |  |    | NIS |
| No.                  | DESIRED     | notes               | SALT      | NUTS                                    | 02-BTL No  | 02 Temp         | CHL. | Frac CHL.                         | DIC | 018               | Cooper | 015N              | 02/Ar     | Prod      | DON    | Lessard                       | Lomas    | Radon       | $\mu$ Zoops | Th              |    |              |  |  | No |     |
| 1                    | 98          | 19/1                | 147       | 171                                     |            |                 |      |                                   |     | 691               |        |                   |           |           |        |                               |          |             |             |                 | 1  |              |  |  |    |     |
| 2                    | 75          | 20/A                | 148       |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 2  |              |  |  |    |     |
| 3                    | 50          |                     |           | 149                                     |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 3  |              |  |  |    |     |
| 4                    | 25          |                     |           |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 4  |              |  |  |    |     |
| 5                    | 2.5         |                     |           |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 5  |              |  |  |    |     |
| 6                    | 2.5         |                     |           |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 6  |              |  |  |    |     |
| 7                    | 2.5         |                     |           |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 7  |              |  |  |    |     |
| 8                    | 2.5         |                     |           |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 8  |              |  |  |    |     |
| 9                    | 2.5         |                     |           |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 9  |              |  |  |    |     |
| 10                   | 2.5         |                     | 150       |                                         |            |                 |      |                                   |     |                   |        |                   |           |           |        |                               |          |             |             |                 | 10 |              |  |  |    |     |
| 11                   | 10          |                     | 151       |                                         |            |                 |      |                                   |     | 692               |        |                   |           |           |        |                               |          |             |             |                 | 11 |              |  |  |    |     |
| 12                   | 0           |                     | 152       | 93                                      |            |                 |      |                                   | 693 |                   |        |                   |           |           |        |                               |          |             |             |                 | 12 |              |  |  |    |     |

$0_m, 2.5_m, 50_m - \text{Bi-optical}$

98m, 95m, 10m - Cdom

| VESSEL<br>USCG Healy   |                           | CRUISE ID<br>H10803 |           | PROJECT & LEG<br>BEST/BSIER_Summer '08 |            | Ship Designation (I.D.)<br>1H0802 |           | STATION NO.<br>94 |          |                 |                |                |                   |                            |                |                            |
|------------------------|---------------------------|---------------------|-----------|----------------------------------------|------------|-----------------------------------|-----------|-------------------|----------|-----------------|----------------|----------------|-------------------|----------------------------|----------------|----------------------------|
| CONSC<br>CAST #        | LATITUDE                  |                     | LONGITUDE |                                        | TIME (GMT) |                                   | DRY BULB  | WET BULB          | PRESSURE | WIND<br>DIRN.   | WIND<br>SPD.   | CLOUD (amt)    | BOTTOM<br>DEPTH   | STA. NAME/ID               |                |                            |
|                        | DEG                       | MIN                 | DEG       | MIN                                    | DAY        | MO                                | YR        | HR                | MIN      | (°C)            | (°C)           | (mb)           | *                 | *                          |                |                            |
| SBE 9+                 |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                |                            |
| PRESS SN               |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                |                            |
| PRI TEMP SN            |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                |                            |
| SEC TEMP SN            |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                |                            |
| PRI COND SN            |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                |                            |
| SEC COND SN            |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                |                            |
| SALINOMETER<br>ROSETTE |                           | Hydro Team-PMEI     |           | TOM W<br>Grebmeier                     |            | MASHA<br>Sambrotto                |           | HARVEY<br>Lessard |          | MORAN/<br>Lomas |                | SHULL<br>Radon |                   | STOECKER<br>Is Zooplankton |                |                            |
| NIS<br>No              | DEPTH<br>Desired<br>Notes | SALT                | NUTS      | 02-BR/NO                               | 02 TEMP    | CHL.                              | Frac CHL. | DIC               | 018      | Cooper/BSN      | 02/Air<br>Prod | DON            | Harvey<br>Lessard | Moran/<br>Lomas            | Shull<br>Radon | Stoecker<br>Is Zooplankton |
| 1                      | 82                        |                     | 61        | 97                                     |            |                                   |           |                   | 694      |                 |                |                |                   |                            |                | 1                          |
| 2                      | 75                        |                     | 62        |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 2                          |
| 3                      | 50                        |                     | 63        |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 3                          |
| 4                      | 40                        |                     | 64        |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 4                          |
| 5                      | 30                        |                     | 65        |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 5                          |
| 6                      | 20                        |                     | 66        |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 6                          |
| 7                      | 10                        |                     | —         |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 7                          |
| 8                      | 0                         |                     | 67        | 207                                    |            |                                   |           |                   | ✓        | 696             |                |                |                   |                            |                | 8                          |
| 9                      |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 9                          |
| 10                     |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 10                         |
| 11                     |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 11                         |
| 12                     |                           |                     |           |                                        |            |                                   |           |                   |          |                 |                |                |                   |                            |                | 12                         |

Bottle 7: (leaked); nozzle open

B10-OPT1C5 0, 30, H10

| VESSEL<br>USCG Healy   |                        | CRUISE ID<br>H10803     |                    | PROJECT & LEG<br>BEST/BSERP_Summer '08 |           | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>95 |                  |                    |                 |                       |                     |                        |              |
|------------------------|------------------------|-------------------------|--------------------|----------------------------------------|-----------|-----------------------------------|------------------|-------------------|------------------|--------------------|-----------------|-----------------------|---------------------|------------------------|--------------|
| CONSC<br>CAST #        | LATITUDE<br>DEG<br>MIN | LONGITUDE<br>DEG<br>MIN | DAY                | MO                                     | YR        | TIME (GMT)<br>HR<br>MIN           | DRY BULB<br>(°C) | WET BULB<br>(°C)  | PRESSURE<br>(mb) | SEA STATE<br>DIRN. | WIND<br>DIRN.   | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |
| 1                      | 18 59 54.              | 54 N                    | 17 24 7.           | 18 W                                   | 23 JUL 08 | 07 46                             | 7.3              | 5.5               | 1137350          | 658                | 2               | 72                    | m n - 9             |                        |              |
| SBE 9+                 |                        |                         | FLUOR S/N          |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        |              |
| PRESS SN               |                        |                         | SBE43-Oxy (prime)  |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        |              |
| PRI TEMP SN            |                        |                         | SBE43-Oxy (sec)    |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        |              |
| SEC TEMP SN            |                        |                         | Transmissometer    |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        |              |
| PRI COND SN            |                        |                         | PAR S/N            |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        |              |
| SEC COND SN            |                        |                         | 02 Temp Sensor No. |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        |              |
| NIS<br>DEPTH           | Roset.                 | Hydro Team-PMEL         |                    |                                        |           | Tom W                             | Gebink           | Masha             | Sambrotto        | Harvey             | Moran/<br>Shull | Stoecker              | Pat                 |                        | NIS          |
| No<br>DESIRED<br>notes | SALT                   | NUTS                    | 02-BN/No           | 02 Temp                                | CHL.      | Frac CHL.                         | DIC              | 018<br>Cooper/SN  | 02/Ar<br>Prod    | DON<br>Lessard     | Lomas           | Radon                 | $\mu$ Zoops         | Th                     | No           |
| 1<br>50                | 70                     | 21/4                    | 66                 | 118                                    |           |                                   |                  | ✓                 | 697a             |                    |                 |                       |                     |                        | 1            |
| 2                      | 50                     |                         | 69                 |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 2            |
| 3                      | 40                     |                         | 70                 |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 3            |
| 4                      | 30                     |                         | 71                 |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 4            |
| 5                      | 20                     |                         | 72                 |                                        |           |                                   |                  | ✓                 |                  |                    |                 |                       |                     |                        | 5            |
| 6                      | 10                     | 22/4                    | 73                 | 117                                    |           |                                   |                  | ✓                 | 697b             |                    |                 |                       |                     |                        | 6            |
| 7                      | 0                      |                         | 74                 |                                        |           |                                   |                  | ✓                 | 698              |                    |                 |                       |                     |                        | 7            |
| 8                      |                        |                         |                    |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 8            |
| 9                      |                        |                         |                    |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 9            |
| 10                     |                        |                         |                    |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 10           |
| 11                     |                        |                         |                    |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 11           |
| 12                     |                        |                         |                    |                                        |           |                                   |                  |                   |                  |                    |                 |                       |                     |                        | 12           |

7/15 10:45 AM - Bi-optics  
70m, 50m, 0m - CTD + ACP  
All depths - CTD + ACP



| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |      | STATION NO.<br>96 |          |          |           |               |              |             |                 |               |       |       |        |    |    |
|----------------------|---------|---------------------|-----------------|-----------------------------------------|---------|-----------------------------------|------|-------------------|----------|----------|-----------|---------------|--------------|-------------|-----------------|---------------|-------|-------|--------|----|----|
| CONSC<br>CAST #      |         | LATITUDE            |                 | LONGITUDE                               |         | TIME (GMT)                        |      | DRY BULB          | WET BULB | PRESSURE | SEA STATE | WIND<br>DIRN. | WIND<br>SPO. | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID. |       |       |        |    |    |
|                      |         | DEG                 | MIN             | DEG                                     | MIN     | DAY                               | MO   | HR                | MIN      | (°C)     | (°C)      | (mb)          | *            | *           | (deg)           | (kts)         | *     | *     | (m)    |    |    |
| 120                  | 59      | 54.12               | N               | 172                                     | 12.63   | W                                 | 23   | JUL               | 08       | 11       | 14        | 6.7           | .            | 11          | 054             | 3             | 73    | MW-8  |        |    |    |
| SBE 9+               |         |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       |        |    |    |
| PRESS SN             |         |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       |        |    |    |
| PRI TEMP SN          |         |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       |        |    |    |
| SEC TEMP SN          |         |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       |        |    |    |
| PRI COND SN          |         |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       |        |    |    |
| SEC COND SN          |         |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       |        |    |    |
| NIS                  | DEPTH   | Roset.              | Hydro Team-PMEL |                                         |         |                                   |      | Tom W             | Grebme   | Masha    | Sambrutto | Harvey        | Moran/       | Shull       | Stoecker        | Pat           |       | NIS   |        |    |    |
| No.                  | DESIRED | notes               | SALT            | NUTS                                    | 02-BTLN | 02 Temp                           | CHL. | Frac CHL.         | DIC      | 018      | Cooper    | 15N           | 02/A'        | Prod        | DON             | Lessard       | Lomas | Radon | µZoops | Th | No |
| 1                    | 20      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 1      |    |    |
| 2                    | 20      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 2      |    |    |
| 3                    | 20      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 3      |    |    |
| 4                    | 20      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 4      |    |    |
| 5                    | 20      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 5      |    |    |
| 6                    | 20      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 6      |    |    |
| 7                    | 20      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 7      |    |    |
| 8                    | 12      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 8      |    |    |
| 9                    | 12      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 9      |    |    |
| 10                   | 12      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 10     |    |    |
| 11                   | 12      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 11     |    |    |
| 12                   | 12      |                     |                 |                                         |         |                                   |      |                   |          |          |           |               |              |             |                 |               |       |       | 12     |    |    |

5Q12



| VESSEL<br>USCG Healy |             | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSERP Summer '08 |          | Ship Designation (I.D.)<br>1H0802 |                 | STATION NO.<br>98 |     |            |                  |                  |                  |                |               |                       |                           |                 |                        |              |     |
|----------------------|-------------|---------------------|------|----------------------------------------|----------|-----------------------------------|-----------------|-------------------|-----|------------|------------------|------------------|------------------|----------------|---------------|-----------------------|---------------------------|-----------------|------------------------|--------------|-----|
| CONSC<br>CAST #      | LATITUDE    | DEG                 | MIN  | LONGITUDE                              | DEG      | MIN                               | DAY             | MO                | YR  | TIME (GMT) | DRY BULB<br>(°C) | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>* | WIND<br>DIRN. | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>*<br>(deg) | WEATHER<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |     |
| 1                    | 1225953.92N | 17059.94W           | 23   | JUL                                    | 08       | 1601                              | 6.7             | .                 | 12  | 359        | 8                | 70               | MN               | -6             |               |                       |                           |                 |                        |              |     |
| SBE 9+               |             |                     |      | FLUOR S/N                              |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        |              |     |
| PRESS SN             |             |                     |      | SBE43-Oxy (prime)                      |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        |              |     |
| PRI TEMP SN          |             |                     |      | SBE43-Oxy (sec)                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        |              |     |
| SEC TEMP SN          |             |                     |      | Transmissometer                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        |              |     |
| PRI COND SN          |             |                     |      | PAR S/N                                |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        |              |     |
| SEC COND SN          |             |                     |      | 02 Tmp Sensor No.                      |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        |              |     |
| NIS                  | DEPTH       | Roset.              |      |                                        |          |                                   | Hydro Team-PHML |                   |     |            |                  | Tom W            | Gebbie           | Masha          | Sambrutto     | Harvey                | Moran/                    | Shull           | Stoecker               | Pat          | NIS |
| No                   | DESIRED     | notes               | SALT | NIJTS                                  | 02-BTLNO | 02 Temp                           | CHL.            | Frac CHL          | DIC | 018        | Cooper           | 015N             | 02/Ar            | Prod           | DDN           | Lessard               | Lomas                     | Radon           | μZoops                 | Th           | No  |
| 1                    | 65          |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 1            |     |
| 2                    | 38          |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 2            |     |
| 3                    | 25          |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 3            |     |
| 4                    | 20          |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 4            |     |
| 5                    | 15          |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 5            |     |
| 6                    | 10          |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 6            |     |
| 7                    | 5           |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 7            |     |
| 8                    |             |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 8            |     |
| 9                    | 5           |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 9            |     |
| 10                   | 0           |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 10           |     |
| 11                   |             |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 11           |     |
| 12                   |             |                     |      |                                        |          |                                   |                 |                   |     |            |                  |                  |                  |                |               |                       |                           |                 |                        | 12           |     |

REMARKS

PR20

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| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |                | PROJECT & LEG<br>BEST/BSERP_Summer '08 |                  | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>98       |                        |                       |                     |                        |              |      |
|----------------------|----------|---------------------|----------------|----------------------------------------|------------------|-----------------------------------|------------------|-------------------------|------------------------|-----------------------|---------------------|------------------------|--------------|------|
| CONSC<br>CAST #      | LATITUDE | LONGITUDE           |                | TIME (GMT)                             | DRY BULB<br>(°C) | WET BULB<br>(°C)                  | PRESSURE<br>(mb) | SEA STATE<br>VISIBILITY | WIND<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amb)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |      |
| DEG                  | MIN      | DEG                 | MIN            | DAY                                    | MO               | HR                                | MIN              | *                       | *                      | *                     | *                   | *                      |              |      |
| 12359                | 53.27    | N                   | 17100          | 44                                     | W                | 23                                | JUL              | 08                      | 1733                   | 6.9                   | .                   | 13                     | 556          |      |
| SBE 9+               |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        | 70MN-6       |      |
| PRESS SN             |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              |      |
| PRI TEMP SN          |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              |      |
| SEC TEMP SN          |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              |      |
| PRI COND SN          |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              |      |
| SEC COND SN          |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              |      |
| 02 Trip Sensor No.   |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              |      |
| NIS                  | DEPTH    | ROSET.              | Hydro Team-PME |                                        |                  | Ton W                             | Gebbie           | Masha                   | Sambrotto              | Harvey                | Moran/              | Shull                  | Stoecker     | Pat  |
| No                   | DESIRED  | notes               | SALT           | NUTS                                   | 02-BRL No        | 02 Temp                           | CHL.             | Frac CHL.               | DIC                    | 01B                   | Coope               | 01SN                   | 02/Ar        | Prod |
| 1                    | 66       |                     | 53             | * 163                                  |                  |                                   |                  |                         |                        |                       |                     |                        |              |      |
| 2                    | 50       |                     | 54             |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 1    |
| 3                    | 40       |                     | 55             |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 2    |
| 4                    | 30       |                     | 56             |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 3    |
| 5                    | 20       |                     | 57             |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 4    |
| 6                    | 10       |                     | 58             | * 166                                  |                  |                                   |                  |                         |                        |                       |                     |                        |              | 5    |
| 7                    | 0        |                     | 59             |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 6    |
| 8                    |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 7    |
| 9                    |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 8    |
| 10                   |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 9    |
| 11                   |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 10   |
| 12                   |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 11   |
|                      |          |                     |                |                                        |                  |                                   |                  |                         |                        |                       |                     |                        |              | 12   |

MAX DEPTH = 66 m

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| VESSEL<br>USCG Healy |            | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSE/RP_Summer '08 |           | Ship Designation (I.D.)<br>1H0802 |       | STATION NO.<br>99 |            |                  |                  |                  |                           |                                |                         |             |                        |              |        |    |    |
|----------------------|------------|---------------------|------|-----------------------------------------|-----------|-----------------------------------|-------|-------------------|------------|------------------|------------------|------------------|---------------------------|--------------------------------|-------------------------|-------------|------------------------|--------------|--------|----|----|
| CONSC<br>CAST #      | LATITUDE   | DEG                 | MIN  | DEG                                     | MIN       | DAY                               | MO    | YR                | TIME (GMT) | DRY BULB<br>(°C) | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>• *<br>(deg) | WIND<br>DIRN.<br>SPD.<br>(kts) | WIND<br>TYPE<br>WEATHER | CLOUD (amb) | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |        |    |    |
| 124                  | 59 53.99 N | 17024.03            | W    | 23                                      | JUL       | 08                                | 19    | 46                | 7.3        | 4.1              | 13               | 350              | 12                        | *                              | *                       | 62 MN05     |                        |              |        |    |    |
| SBE 9+               |            |                     |      | FLUOR S/N                               |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             | MAX. DEPTH = 58 m      |              |        |    |    |
| PRESS SN             |            |                     |      | SBE43-Oxy (prime)                       |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              |        |    |    |
| PRI TEMP SN          |            |                     |      | SBE43-Oxy (sec)                         |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              |        |    |    |
| SEC TEMP SN          |            |                     |      | Transmissometer                         |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              |        |    |    |
| PRI COND SN          |            |                     |      | PAR S/N                                 |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              |        |    |    |
| SEC COND SN          |            |                     |      | O2 Tmp Sensor No.                       |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              |        |    |    |
| NES                  | DEPTH      | Hydro Team-PHEL     |      |                                         |           |                                   | TOM W | Gebone            | Masha      | Sambrotto        | Harvey           | Moran/           | Shull                     | Stoecker                       | Pat                     |             | NIS                    |              |        |    |    |
| No                   | DESIRED    | notes               | SALT | NUTS                                    | 02-BTL No | 02 Temp                           | CHL.  | Frac CHL.         | DIC        | 018              | Cooper           | MSN              | 02/Ar                     | Prod                           | DON                     | Lessard     | Lomas                  | Radon        | uZoops | Th | No |
| 1                    | 58         |                     |      | 60                                      | 239       |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 1      | ✓  |    |
| 2                    | 50         |                     |      | 61                                      |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 2      | ✓  |    |
| 3                    | 46         |                     |      | 62                                      |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 3      | ✓  |    |
| 4                    | 40         |                     |      |                                         |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 4      |    |    |
| 5                    | 30         |                     |      | 63                                      |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 5      |    |    |
| 6                    | 20         |                     |      | 64                                      |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 6      |    |    |
| 7                    | 10         |                     |      | 65                                      |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 7      |    |    |
| 8                    | 0          |                     |      | 66                                      | 167       |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 8      |    |    |
| 9                    |            |                     |      |                                         |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 9      |    |    |
| 10                   |            |                     |      |                                         |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 10     |    |    |
| 11                   |            |                     |      |                                         |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 11     |    |    |
| 12                   |            |                     |      |                                         |           |                                   |       |                   |            |                  |                  |                  |                           |                                |                         |             |                        |              | 12     |    |    |

✓ ✓ ✓ ✕ ✕ ✕

Biooptics - 40m, 80m, 90m  
ALF - all dep'ts  
CDOM - "









| VESSEL<br>USCG Healy |                  | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSERP_Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>102 |                  |                           |                       |                              |                           |                                 |       |       |        |    |    |
|----------------------|------------------|---------------------|------|----------------------------------------|---------|-----------------------------------|------------------|--------------------|------------------|---------------------------|-----------------------|------------------------------|---------------------------|---------------------------------|-------|-------|--------|----|----|
| CONSC<br>CAST #      | LATITUDE         | LONGITUDE           |      |                                        |         | TIME (GMT)                        | DRY BULB<br>(°C) | WET BULB<br>(°C)   | PRESSURE<br>(mb) | SEA STATE<br>* *<br>(deg) | WIND<br>DIRN<br>(kts) | WIND<br>SPD.<br>* *<br>(m/s) | CLOUD (amt)<br>* *<br>(m) | BOTTOM<br>DEPTH<br>STA. NAME/ID |       |       |        |    |    |
| 129 59 53.93 N       | 173 58.56 W      | 24 JUL 08           | 1030 | 7.4                                    | .20     | 190                               | 7                |                    |                  |                           |                       |                              |                           | 103MW-11                        |       |       |        |    |    |
| SBE 9+               |                  | FLUOR S/N           |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        |    |    |
| PRESS SN             |                  | SBE43-Oxy (prime)   |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        |    |    |
| PRI TEMP SN          |                  | SBE43-Oxy (sec)     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        |    |    |
| SEC TEMP SN          |                  | Thermometer         |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        |    |    |
| PRI COND SN          |                  | PAR S/N             |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        |    |    |
| SEC COND SN          |                  | 02 Trip Session No. |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        |    |    |
| NIS<br>DEPTH         | ROSET.           | Hydro Team-PMEL     |      |                                        |         | TOM W                             | Grebmeier        | Masha              | Sambrotto        | Harvey                    | Moran/<br>Shull       | Stoecker                     | Pat                       | NIS                             |       |       |        |    |    |
| No.                  | DESIRED<br>notes | SALT                | NUTS | O2-BG/No                               | O2 Temp | CHL.                              | Frac CHL.        | DIC                | O18              | Coope<br>0.15N            | O2/Ar                 | Prod                         | DON                       | Lessard                         | Lomas | Radon | μZoops | Th | No |
| 1                    | 40               |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 1  |    |
| 2                    | 9                |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 2  |    |
| 3                    | 9                |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 3  |    |
| 4                    | 9                |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 4  |    |
| 5                    |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 5  |    |
| 6                    |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 6  |    |
| 7                    |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 7  |    |
| 8                    |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 8  |    |
| 9                    |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 9  |    |
| 10                   |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 10 |    |
| 11                   |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 11 |    |
| 12                   |                  |                     |      |                                        |         |                                   |                  |                    |                  |                           |                       |                              |                           |                                 |       |       |        | 12 |    |

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| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |                | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |           |          |          | Ship Designation (I.D.)<br>1H0802 |              |             |                 | STATION NO.<br>103 |                         |        |        |       |          |     |     |
|----------------------|----------|---------------------|----------------|-----------------------------------------|-----------|----------|----------|-----------------------------------|--------------|-------------|-----------------|--------------------|-------------------------|--------|--------|-------|----------|-----|-----|
| CONSC<br>CAST #      | LATITUDE | LONGITUDE           |                | TIME (GMT)                              | DRY BULB  | WET BULB | PRESSURE | WIND<br>DIRN.                     | WIND<br>SPD. | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID       |                         |        |        |       |          |     |     |
| DEG                  | MIN      | DEG                 | MIN            | DAY                                     | MO        | YR       | HR       | (°C)                              | (°C)         | (mb)        | *               |                    |                         |        |        |       |          |     |     |
| 130                  | 59       | 53.                 | 66             | N                                       | 174       | 35.      | 00       | W                                 | 24           | JUL         | 08              | 15                 | 11.7.1.2023919114M N-12 |        |        |       |          |     |     |
| SBE 9+               |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     |     |
| PRESS SN             |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     |     |
| PRI TEMP SN          |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     |     |
| SEC TEMP SN          |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     |     |
| PRI COND SN          |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     |     |
| SEC COND SN          |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     |     |
| NIS                  | DEPTH    | Roset.              | Hydro Team-PME |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     |     |
| No                   | DESIRED  | notes               | SALT           | NUTS                                    | 02-BR, No | 02 Temp  | CHL.     | Frac CHL.                         | DIC          | 018         | Geben           | Masha              | Sambrotto               | Harvey | Moran/ | Shull | Stoecker | Pat | NIS |
| 1                    | 107      | b                   | b              | 1                                       | 174       |          |          |                                   |              | 705         |                 |                    |                         |        |        |       |          |     | 1   |
| 2                    | 75       |                     |                | 2                                       |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 2   |
| 3                    | 50       |                     |                | 3                                       |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 3   |
| 4                    | 40       |                     |                | 4                                       |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 4   |
| 5                    | 30       |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 5   |
| 6                    | 30       |                     |                | 5                                       |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 6   |
| 7                    | 20       |                     |                | 6                                       |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 7   |
| 8                    | 10       |                     | 7              | B                                       |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 8   |
| 9                    | 0        |                     | 8              | 175                                     |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 9   |
| 10                   |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 10  |
| 11                   |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 11  |
| 12                   |          |                     |                |                                         |           |          |          |                                   |              |             |                 |                    |                         |        |        |       |          |     | 12  |

5.5 or 5.6m

| VESSEL<br>USCG Healy |               | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BSERP_Summer '08 |                 | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>103 |                  |                                    |                       |                       |                        |                        |              |     |
|----------------------|---------------|---------------------|-----------------|----------------------------------------|-----------------|-----------------------------------|------------------|--------------------|------------------|------------------------------------|-----------------------|-----------------------|------------------------|------------------------|--------------|-----|
| CONSC<br>CAST #      | LATITUDE      | DEG<br>MIN          | LONGITUDE       | DEG<br>MIN                             | DAY<br>MO<br>YR | TIME (GMT)<br>HR<br>MIN           | DRY BULB<br>(°C) | WET BULB<br>(°C)   | PRESSURE<br>(mb) | SEA STATE<br>* *<br>(deg)<br>(kts) | WIND<br>DIRN.<br>TYPE | WIND<br>SPD.<br>(kts) | CLOUD (amb)<br>WEATHER | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |     |
| SBE 9+               | 131 59 53.6 N | 174 34.52 W         | 24 JUL 08       | 15 57 7.1 .                            | 19              | 232 10                            |                  |                    |                  |                                    |                       |                       |                        |                        |              |     |
| PRESS SN             |               |                     |                 |                                        |                 | FLUOR SN                          |                  |                    |                  |                                    |                       |                       |                        |                        |              |     |
| PRI TEMP SN          |               |                     |                 |                                        |                 | SBE43-Oxy (prime)                 |                  |                    |                  |                                    |                       |                       |                        |                        |              |     |
| SEC TEMP SN          |               |                     |                 |                                        |                 | SBE43-Oxy (sec)                   |                  |                    |                  |                                    |                       |                       |                        |                        |              |     |
| PRI COND SN          |               |                     |                 |                                        |                 | Transmissometer                   |                  |                    |                  |                                    |                       |                       |                        |                        |              |     |
| SEC COND SN          |               |                     |                 |                                        |                 | PAR S/N                           |                  |                    |                  |                                    |                       |                       |                        |                        |              |     |
| NIS                  | DEPTH         | Roset.              | Hydro Team-PMEL |                                        |                 |                                   | TOM W            | Gebenek            | Masha            | Sambrutto                          | Harvey                | Moran/                | Shull                  | Stoecker               | Pat          | NIS |
| No                   | DESIRED       | notes               | SALT            | NUTS                                   | 02-BH           | No                                | 02 Temp          | CHL.               | Frac CHL.        | DIC                                | 018                   | Cooper/SN             | 02/Air                 | Prod                   | DON          | No  |
| 1                    | 107           |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 1   |
| 2                    | 51            |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 2   |
| 3                    | 33            |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 3   |
| 4                    | 33            |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              |     |
| 5                    | 27            |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 4   |
| 6                    | 20            |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 5   |
| 7                    | 13            |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 6   |
| 8                    | 7             |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 7   |
| 9                    | 7             |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 8   |
| 10                   | 0             |                     |                 | A11 16                                 |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 9   |
| 11                   |               |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 10  |
| 12                   |               |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 11  |
|                      |               |                     |                 |                                        |                 |                                   |                  |                    |                  |                                    |                       |                       |                        |                        |              | 12  |

MAX. DEPTH = 107 m

REMARKS

PROD

2@7

ALF

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓





| VESSEL<br>USCG Healy |              | CRUISE ID<br>H10803 |           | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |          | Ship Designation (I.D.)<br>H10802 |     | STATION NO.<br>/C6 |     |            |                  |                  |                  |                         |                                |                             |                        |              |             |    |
|----------------------|--------------|---------------------|-----------|-----------------------------------------|----------|-----------------------------------|-----|--------------------|-----|------------|------------------|------------------|------------------|-------------------------|--------------------------------|-----------------------------|------------------------|--------------|-------------|----|
| CONSC<br>CAST #      | LATITUDE     | DEG                 | MIN       | LONGITUDE                               | DEG      | MIN                               | DAY | MO                 | YR  | TIME (GMT) | DRY BULB<br>(°C) | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>*<br>(deg) | WIND<br>DIRN.<br>SPD.<br>(kts) | WIND<br>CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |             |    |
| 134                  | 59 54 . 41 N | 176                 | 22 . 29 W | 25 J U L 08 C 00 08                     | 88       | 18                                | 18  | J                  | U   | 2008       | 8.1              | 7.7              | 1018             | 177                     | 140                            | MN15                        |                        |              |             |    |
| SBE 9+               |              |                     |           | FLUOR S/N                               |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        |              |             |    |
| PRESS SN             |              |                     |           | SBE43-Oxy (prime)                       |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        |              |             |    |
| PRI TEMP SN          |              |                     |           | SBE43-Oxy (sec)                         |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        |              |             |    |
| SEC TEMP SN          |              |                     |           | Transmissometer                         |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        |              |             |    |
| PRI COND SN          |              |                     |           | PAR S/N                                 |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        |              |             |    |
| SEC COND SN          |              |                     |           | 02 Trip Sensor No.                      |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        |              |             |    |
| NIS                  | DEPTH        | Roset.              |           | Hydro Team-PMEI                         |          |                                   |     |                    |     | TOM. W     | Gebken           | Masha            | Sambrotto        | Harvey                  | Moran/                         | Shull                       | Stoecker               | Pat          |             |    |
| No                   | DESIRED      | notes               | SALT      | NUTS                                    | O2-BL No | O2 Temp                           | CHL | Frac CHL           | DIC | O18        | Coope            | 015N             | 02/Ar            | Prod                    | DON                            | Lessard                     | Lomas                  | Radon        | $\mu$ Zoops | Th |
| 1                    | 136          |                     |           |                                         | 34       | 68                                |     |                    |     |            | ✓                | 71               |                  |                         |                                |                             |                        |              | 1           |    |
| 2                    | 100          |                     |           |                                         | 35       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 2            |             |    |
| 3                    | 75           |                     |           |                                         | 36       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 3            |             |    |
| 4                    | 50           |                     |           |                                         | 37       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 4            |             |    |
| 5                    | 45           |                     |           |                                         | 38       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 5            |             |    |
| 6                    | 40           |                     |           |                                         | 39       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 6            |             |    |
| 7                    | 30           |                     |           |                                         | 40       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 7            |             |    |
| 8                    | 20           |                     |           |                                         | 41       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 8            |             |    |
| 9                    | 10           |                     |           |                                         | 42       |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 9            |             |    |
| 10                   | 0            |                     |           |                                         | 43       | 80                                |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 10           |             |    |
| 11                   |              |                     |           |                                         |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 11           |             |    |
| 12                   |              |                     |           |                                         |          |                                   |     |                    |     |            |                  |                  |                  |                         |                                |                             |                        | 12           |             |    |

ALF - all depths

DOM - 136m, 100m, 75m

Biooptid - 40m, 20m, 0m









| VESSEL<br>USCG Healy |                  | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BSI/RP_Summer '08 |            | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>110 |                  |           |                        |                       |             |         |                        |              |       |    |             |
|----------------------|------------------|---------------------|-----------------|-----------------------------------------|------------|-----------------------------------|------------------|--------------------|------------------|-----------|------------------------|-----------------------|-------------|---------|------------------------|--------------|-------|----|-------------|
| CONSC<br>CAST #      | LATITUDE         |                     | LONGITUDE       |                                         | TIME (GMT) |                                   | DRY BULB<br>(°C) | WET BULB<br>(°C)   | PRESSURE<br>(mb) | SEA STATE | WIND<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amt) | WEATHER | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |       |    |             |
|                      | DEG              | MIN                 | DEG             | MIN                                     | DAY        | MO                                | HR               | MIN                | *                | *         | *                      | *                     | *           | *       | *                      |              |       |    |             |
| 1                    | 39               | 59                  | 53              | .81                                     | N          | 17                                | 8                | 48                 | 50               | 25        | JUL                    | 08                    | 16          | 8.8     | .                      | 12           | 240   | 13 | 162 MJ - 19 |
| SBE 9+               |                  |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    |             |
| PRESS SN             |                  |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    |             |
| PRI TEMP SN          |                  |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    |             |
| SEC TEMP SN          |                  |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    |             |
| PRI COND SN          |                  |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    |             |
| SEC COND SN          |                  |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    |             |
| NIS                  | DEPTH            | ROSET               | Hydro Team-PMEL |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    |             |
| No.                  | DESIRED<br>notes | SALT                | NUTS            | 02-BR1No                                | 02 Temp    | CHL.                              | Frac CHL         | DIC                | 01B<br>Cooper    | MSN       | 02/Ar                  | Prod                  | DON         | Lessard | Lomas                  | Radon        | Zoopl | Th | NIS<br>No   |
| 1                    | 160              | 14                  | B               | 72                                      | 153        |                                   |                  | /                  | 723              |           |                        |                       |             |         |                        |              |       |    | 1           |
| 2                    | 125              |                     |                 | 73                                      |            |                                   |                  | /                  |                  |           |                        |                       |             |         |                        |              |       |    | 2           |
| 3                    | 100              |                     |                 | 74                                      |            |                                   |                  | /                  |                  |           |                        |                       |             |         |                        |              |       |    | 3           |
| 4                    | 75               |                     |                 | 75                                      |            |                                   |                  | /                  |                  |           |                        |                       |             |         |                        |              |       |    | 4           |
| 5                    | 50               |                     |                 | 76                                      |            |                                   |                  | /                  |                  |           |                        |                       |             |         |                        |              |       |    | 5           |
| 6                    | 40               |                     |                 | 77                                      |            |                                   |                  | /                  |                  |           |                        |                       |             |         |                        |              |       |    | 6           |
| 7                    | 30               |                     |                 | 78                                      |            |                                   |                  | /                  |                  |           |                        |                       |             |         |                        |              |       |    | 7           |
| 8                    | 30               |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    | 8           |
| 9                    | 20               |                     |                 | 79                                      | 202        |                                   |                  | /                  |                  |           |                        |                       |             |         |                        |              |       |    | 9           |
| 10                   | 10               | 15                  | B               | 80                                      |            |                                   |                  | /                  | 724              |           |                        |                       |             |         |                        |              |       |    | 10          |
| 11                   | 0                |                     |                 | 81                                      |            |                                   |                  | /                  | 725              |           |                        |                       |             |         |                        |              |       |    | 11          |
| 12                   |                  |                     |                 |                                         |            |                                   |                  |                    |                  |           |                        |                       |             |         |                        |              |       |    | 12          |

3 might be a leak

STD

REMARKS

#3 → leak?  
#11 → leak?

| VESSEL<br>USCG Healy |                        | CRUISE ID<br>H10803     |      | PROJECT & LEG<br>BEST/BSIERP Summer '08 |       | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>110 |                             |                       |                     |                        |              |       |      |     |         |       |       |        |    |    |
|----------------------|------------------------|-------------------------|------|-----------------------------------------|-------|-----------------------------------|------------------|--------------------|-----------------------------|-----------------------|---------------------|------------------------|--------------|-------|------|-----|---------|-------|-------|--------|----|----|
| CONSC<br>CAST #      | LATITUDE<br>DEG<br>MIN | LONGITUDE<br>DEG<br>MIN |      | TIME (GMT)<br>DAY MO YR<br>HR MIN       |       | DRY BULB<br>(*C)                  | WET BULB<br>(*C) | PRESSURE<br>(mb)   | SEA STATE<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |       |      |     |         |       |       |        |    |    |
|                      |                        | DEG                     | MIN  | DAY                                     | MO    | YR                                | HR               | MIN                |                             |                       |                     |                        |              |       |      |     |         |       |       |        |    |    |
| 140 59 53 . 71       | N                      | 178 48 . 39             | W    | 25                                      | JUL   | 08                                | 16               | 23                 | 8.8                         | .                     | 13                  | 250                    | 11           |       |      |     |         |       |       |        |    |    |
| SBE 9+               |                        |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        | 165 MN - 19  |       |      |     |         |       |       |        |    |    |
| PRESS SN             |                        |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        |    |    |
| PRI TEMP SN          |                        |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        |    |    |
| SEC TEMP SN          |                        |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        |    |    |
| PRI COND SN          |                        |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        |    |    |
| SEC COND SN          |                        |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        |    |    |
| NS DEPTH Rosat.      |                        | Hydro Team:PMEL         |      | Tom W                                   |       | Gretchen                          | Masha            | Sambrotto          | Harvey                      | Moran'                | Shull               | Stoecker               | Pat          | NS    |      |     |         |       |       |        |    |    |
| No                   | DESIRED                | notes                   | SALT | NUTS                                    | 02-BH | No                                | 02 Temp          | CHL.               | Frac CHL                    | DIC                   | 01B                 | Coope                  | 615N         | 02/Ar | Prod | DON | Lessard | Lomas | Radon | µZoops | Th | No |
| 1                    | 164                    |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 1  |    |
| 2                    | 66                     |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 2  |    |
| 3                    | 43                     |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 3  |    |
| 4                    | 39                     |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 4  |    |
| 5                    | 34                     |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 5  |    |
| 6                    | 25                     |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 6  |    |
| 7                    | 17                     |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 7  |    |
| 8                    | 9                      |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 8  |    |
| 9                    | 9                      |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 9  |    |
| 10                   | 9                      |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 10 |    |
| 11                   | 0                      |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 11 |    |
| 12                   |                        |                         |      |                                         |       |                                   |                  |                    |                             |                       |                     |                        |              |       |      |     |         |       |       |        | 12 |    |

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| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BSIERP Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |         | STATION NO.<br>111 |           |                    |               |              |             |                 |              |        |        |       |          |            |    |
|----------------------|---------|---------------------|-----------------|-----------------------------------------|---------|-----------------------------------|---------|--------------------|-----------|--------------------|---------------|--------------|-------------|-----------------|--------------|--------|--------|-------|----------|------------|----|
| CONSC<br>CAST #      |         | LATITUDE            |                 | LONGITUDE                               |         | TIME (GMT)                        |         | DRY BULB           | WET BULB  | PRESSURE           | WIND<br>DIRN. | WIND<br>SPD. | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID |        |        |       |          |            |    |
|                      |         | DEG                 | MIN             | DEG                                     | MIN     | DAY                               | MO      | HR                 | MIN       | (°C)               | (°C)          | (mb)         | *           | *               | (deg)        | (kts)  | *      | *     | (m)      |            |    |
| 14                   | 159     | 53                  | .64             | N                                       | 179     | 22                                | .872    | W                  | 25        | JUL                | 08            | 21           | 04          | 9.5             | 9.3          | 1F     | 35     | 33    | 098      | 2718MN -20 |    |
| SBE 9+               |         |                     |                 |                                         |         |                                   |         |                    |           | FLUOR S/N          |               |              |             |                 |              |        |        |       |          |            |    |
| PRESS SN             |         |                     |                 |                                         |         |                                   |         |                    |           | SBE33-Oxy (prime)  |               |              |             |                 |              |        |        |       |          |            |    |
| PRI TEMP SN          |         |                     |                 |                                         |         |                                   |         |                    |           | SBE33-Oxy (sec)    |               |              |             |                 |              |        |        |       |          |            |    |
| SEC TEMP SN          |         |                     |                 |                                         |         |                                   |         |                    |           | Transmissometer    |               |              |             |                 |              |        |        |       |          |            |    |
| PRI COND SN          |         |                     |                 |                                         |         |                                   |         |                    |           | PAR S/N            |               |              |             |                 |              |        |        |       |          |            |    |
| SEC COND SN          |         |                     |                 |                                         |         |                                   |         |                    |           | O2 Trip Sensor No. |               |              |             |                 |              |        |        |       |          |            |    |
| Ns                   | DEPTH   | Rolet.              | Hydro Team-PMEL |                                         |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            |    |
| No.                  | DESIRED | notes               | SALT            | NUTS                                    | 02-BTLN | No                                | 02 Temp | CHL.               | Frac CHL. | DIC                | 018           | Grothe       | Grebbink    | Mashia          | Sambrotto    | Harvey | Moran/ | Shull | Stoecker | Pat.       | Ns |
| 1                    | 500     |                     | 11F             | 91                                      |         |                                   | 176     |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 1  |
| 2                    | 400     |                     | 21F             | 92                                      |         |                                   | 181     |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 2  |
| 3                    | 300     |                     | 31F             | 93                                      |         |                                   | 174     |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 3  |
| 4                    | 200     |                     | 41F             | 94                                      |         |                                   | 175     |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 4  |
| 5                    | 100     |                     | 51F             | 95                                      |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 5  |
| 6                    | 75      |                     | 61F             | 96                                      |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 6  |
| 7                    | 50      |                     | 71F             | 97                                      |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 7  |
| 8                    | 40      |                     | 81F             | 98                                      |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 8  |
| 9                    | 32      |                     |                 | 99                                      |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 9  |
| 10                   | 20      |                     |                 | 100                                     |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 10 |
| 11                   | 10      |                     |                 |                                         |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 11 |
| 12                   | 0       |                     |                 |                                         |         |                                   |         |                    |           |                    |               |              |             |                 |              |        |        |       |          |            | 12 |

bio-optics - 30 m, 50 m, 0 m

DOM - all depth  
ALF - 20m, 100m, 75m, 50m, 140m, 30m, 20, 10, 0m

| VESSEL<br>USCG Healy |           | CRUISE ID<br>H10803 |                | PROJECT & LEG<br>BEST/BSI/RP Summer '08 |           | Ship Designation (I.D.) |      |           |                   |                  |                  | STATION NO.      |                           |                        |                       |                     |                        |              |
|----------------------|-----------|---------------------|----------------|-----------------------------------------|-----------|-------------------------|------|-----------|-------------------|------------------|------------------|------------------|---------------------------|------------------------|-----------------------|---------------------|------------------------|--------------|
| CONSC<br>CAST #      | LATITUDE  | DEG                 | MIN            | DEG                                     | MIN       | DAY                     | MO   | YR        | TIME (GMT)        | DRY BULB<br>(°C) | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>* *<br>(deg) | WIND<br>DIRN.<br>(kts) | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |
| 1426048.53 N         | 7758.55 W | 26                  | JUL            | 08                                      | 0133310.1 | 18.2                    | 16   | 00204     |                   |                  |                  |                  |                           |                        |                       |                     | 152DL-1                |              |
| SBE 9+               |           |                     |                |                                         |           |                         |      |           | FLUOR S/N         |                  |                  |                  |                           |                        |                       |                     |                        |              |
| PRESS SN             |           |                     |                |                                         |           |                         |      |           | SBE43-Oxy (prime) |                  |                  |                  |                           |                        |                       |                     |                        |              |
| PRI TEMP SN          |           |                     |                |                                         |           |                         |      |           | SBE43-Oxy (sec)   |                  |                  |                  |                           |                        |                       |                     |                        |              |
| SEC TEMP SN          |           |                     |                |                                         |           |                         |      |           | Transmissometer   |                  |                  |                  |                           |                        |                       |                     |                        |              |
| PRI COND SN          |           |                     |                |                                         |           |                         |      |           | PAR S/N           |                  |                  |                  |                           |                        |                       |                     |                        |              |
| SEC COND SN          |           |                     |                |                                         |           |                         |      |           | O2 Tmp Sensor No. |                  |                  |                  |                           |                        |                       |                     |                        |              |
| NIS                  | DEPTH     | ROSET.              | Hydro Team-PME |                                         |           |                         |      |           | Tom W             | Grebens          | Masha            | Sambrotto        | Harvey                    | Moran/                 | Shull                 | Stoecker            | Pat                    | NIS          |
| No                   | DESIRED   | notes               | SALT           | NUTS                                    | 02-BTL No | 02 Temp                 | CHL. | Frac CHL. | DIC               | 01B              | Cooper/MSN       | 02/Ar            | Prod                      | DON                    | Lessard               | Lomas               | Radon                  | uZoops       |
| 1                    | 146       |                     | 1C2            | 143                                     |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 1            |
| 2                    | 100       |                     | 1C3            |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 2            |
| 3                    | 75        |                     | 1C4            |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 3            |
| 4                    | 50        |                     | 1C5            |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 4            |
| 5                    | 40        |                     | 1C6            |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 5            |
| 6                    | 30        |                     | 1C7            |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 6            |
| 7                    | 20        |                     | 1C8            |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 7            |
| 8                    | 10        |                     | 1C9            |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 8            |
| 9                    | 0         |                     | 1C0            | 199                                     |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 9            |
| 10                   |           |                     |                |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 10           |
| 11                   |           |                     |                |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 11           |
| 12                   |           |                     |                |                                         |           |                         |      |           |                   |                  |                  |                  |                           |                        |                       |                     |                        | 12           |

CDOM - all depths.  
 ALF - all depths  
 Bioptics - 50m, 30m, 0m









| VESSEL<br>USCG Healy |               | CRUISE ID<br>H10803 |                   | PROJECT & LEG<br>BEST/BSI/RP_Summer '08 |            |        |           | Ship Designation (I.D.)<br>1H0802 |           |          |               | STATION NO.<br>115 |             |                 |              |       |        |
|----------------------|---------------|---------------------|-------------------|-----------------------------------------|------------|--------|-----------|-----------------------------------|-----------|----------|---------------|--------------------|-------------|-----------------|--------------|-------|--------|
| CONSC<br>CAST #      | LATITUDE      |                     | LONGITUDE         |                                         | TIME (GMT) |        |           | DRY BULB                          | WET BULB  | PRESSURE | WIND<br>DIRN. | WIND<br>SPD.       | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID |       |        |
|                      | DEG           | MIN                 | DEG               | MIN                                     | DAY        | MO     | YR        | HR                                | MIN       | (°C)     | (°C)          | (mb)               | *           | (deg)           | (Kts)        | *     | (m)    |
| 147.62               | 11.94         | N                   | 175.09            | .70                                     | W          | 26     | JUL       | 08                                | 1606      | 6.5      | .             | 16                 | 063         | 13              | 805          | -114  |        |
| SBE 9+               |               |                     | FLUOR S/N         |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| PRESS SN             |               |                     | SBE43-Oxy (prime) |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| PRI TEMP SN          |               |                     | SBE43-Oxy (sec)   |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| SEC TEMP SN          |               |                     | Transmissometer   |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| PRI COND SN          |               |                     | PAR S/N           |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| SEC COND SN          |               |                     | 02 Tmp Sensor No. |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| NIS DEPTH            | Roset.        | Hydro Team-PMEI     |                   |                                         |            | Torn W | Gebrek    | Masha                             | Sambrotto | Harvey   | Moran/        | Shull              | Stoecker    | Pat             |              | NIS   |        |
| No                   | DESIRED notes | SALT                | NUTS              | 02-BTL No                               | 02 Temp    | CHL.   | Frac OHL. | DIC                               | 018       | Coop/LSN | 02/Air        | Prod               | DON         | Lessard         | Lomas        | Radon | uZoops |
| 1                    | 75            |                     | A1                | 15                                      |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 1      |
| 2                    | 46            |                     | A2                | 16                                      |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 2      |
| 3                    | 30            |                     | A3                | 17                                      |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 3      |
| 4                    | 39            |                     |                   |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| 5                    | 24            |                     | A5                | 18                                      |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 5      |
| 6                    | 18            |                     | A6                | 19                                      |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 6      |
| 7                    | 12            |                     | A7                | 20                                      |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 7      |
| 8                    | 6             |                     | A8                | 21                                      |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 8      |
| 9                    | 6             |                     |                   |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| 10                   | 6             |                     |                   |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       |        |
| 11                   | 0             |                     | All 22            |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 11     |
| 12                   |               |                     |                   |                                         |            |        |           |                                   |           |          |               |                    |             |                 |              |       | 12     |

DS

DS

| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |            | PROJECT & LEG<br>BEST/BSIERP Summer '08 |        | Ship Designation (I.D.)<br>1H0802 |           |            |          |                   |                  | STATION NO.<br>116 |           |               |                       |                |                        |              |       |        |    |     |
|----------------------|---------|---------------------|------------|-----------------------------------------|--------|-----------------------------------|-----------|------------|----------|-------------------|------------------|--------------------|-----------|---------------|-----------------------|----------------|------------------------|--------------|-------|--------|----|-----|
| CONSC<br>CAST #      |         | LATITUDE            |            | LONGITUDE                               |        |                                   |           | TIME (GMT) |          | DRY BULB<br>("C)  | WET BULB<br>("C) | PRESSURE<br>(mb)   | SEA STATE | WIND<br>DIRN. | WIND<br>SPD.<br>(kts) | CLOUD<br>(amt) | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |       |        |    |     |
|                      |         | DEG<br>MIN          | DEG<br>MIN | DAY                                     | MO     | YR                                | HR<br>MIN |            |          |                   |                  | *                  | *         | (deg)         | *                     | *              | *                      |              |       |        |    |     |
| 1                    | 48      | 62                  | 11         | 12                                      | N      | 17                                | 51        | 0          | 50       | 26                | JUL              | 08                 | 1732      | 6.8           | .                     | 16             | 025                    | 1            |       |        |    |     |
| SBE 9+               |         |                     |            |                                         |        |                                   |           |            |          | FLUOR S/N         |                  |                    |           |               |                       |                |                        |              |       |        |    |     |
| PRESS S/N            |         |                     |            |                                         |        |                                   |           |            |          | SBE43-Oxy (prime) |                  |                    |           |               |                       |                |                        |              |       |        |    |     |
| PRI TEMP S/N         |         |                     |            |                                         |        |                                   |           |            |          | SBE43-Oxy (sec)   |                  |                    |           |               |                       |                |                        |              |       |        |    |     |
| SEC TEMP S/N         |         |                     |            |                                         |        |                                   |           |            |          | Transmissometer   |                  |                    |           |               |                       |                |                        |              |       |        |    |     |
| PRI COND S/N         |         |                     |            |                                         |        |                                   |           |            |          | PAR S/N           |                  |                    |           |               |                       |                |                        |              |       |        |    |     |
| SEC COND S/N         |         |                     |            |                                         |        |                                   |           |            |          | O2 Tmp Sensor No. |                  |                    |           |               |                       |                |                        |              |       |        |    |     |
| NIS                  |         | Depth:              |            | Hydro Team-PMEL                         |        |                                   |           | Tom W      |          | Grebme            | Masha            | Sambrotto          | Harvey    | Moran/        | Shull                 | Stoecker       | Pat                    | NIS          |       |        |    |     |
| No                   | DESIRED | notes               | SALT       | NUTS                                    | 02-Btl | No                                | 02 Temp   | OHL        | Frac OHL | DIC               | 018              | Cooper             | HSN       | 02/Air        | Prod                  | DON            | Lessard                | Lomas        | Radon | uZoops | Th | No. |
| 1                    | 26      | 14                  | F          | 23                                      | 164    |                                   |           | /          | /        | 435               |                  |                    |           |               |                       |                | /                      | /            | /     | /      | 1  |     |
| 2                    | 50      |                     |            | 24                                      |        |                                   |           | /          | /        |                   |                  |                    |           |               |                       |                |                        |              |       |        | 2  |     |
| 3                    | 40      |                     |            | 25                                      |        |                                   |           | /          | /        |                   |                  |                    |           |               |                       |                |                        |              |       |        | 3  |     |
| 4                    | 35      |                     |            | 26                                      |        |                                   |           | /          | /        |                   |                  |                    |           |               |                       |                |                        |              |       |        | 4  |     |
| 5                    | 30      |                     |            | 27                                      |        |                                   |           | /          | /        |                   |                  |                    |           |               |                       |                |                        |              |       |        | 5  |     |
| 6                    | 20      |                     |            | 28                                      |        |                                   |           | /          | /        |                   |                  |                    |           |               |                       |                |                        |              |       |        | 6  |     |
| 7                    | 10      | 15                  | F          | 29                                      |        |                                   |           | /          | /        | 436               |                  |                    |           |               |                       |                | /                      | /            |       |        | 7  |     |
| 8                    | 0       |                     |            | 30                                      |        |                                   |           | /          | /        | 437               |                  |                    |           |               |                       |                |                        |              |       |        | 8  |     |
| 9                    |         |                     |            |                                         |        |                                   |           |            |          |                   |                  |                    |           |               |                       |                |                        |              |       |        | 9  |     |
| 10                   |         |                     |            |                                         |        |                                   |           |            |          |                   |                  |                    |           |               |                       |                |                        |              |       |        | 10 |     |
| 11                   |         |                     |            |                                         |        |                                   |           |            |          |                   |                  |                    |           |               |                       |                |                        |              |       |        | 11 |     |
| 12                   |         |                     |            |                                         |        |                                   |           |            |          |                   |                  |                    |           |               |                       |                |                        |              |       |        | 12 |     |

CDGM - 26m, 46m, 20m

5MATHIS

Biooptics - 30m, 50m, 0m

3 WEINS: 0, 10, 5+

| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSERP_Summer '08 |          | Ship Designation (ID.)<br>1H0802 |           | STATION NO.<br>117 |               |                    |            |                 |              |              |         |       |       |        |    |    |     |        |
|----------------------|----------|---------------------|------|----------------------------------------|----------|----------------------------------|-----------|--------------------|---------------|--------------------|------------|-----------------|--------------|--------------|---------|-------|-------|--------|----|----|-----|--------|
| CONSC<br>CAST #      | LATITUDE | LONGITUDE           |      | TIME (GMT)                             | DRY BULB | WET BULB                         | PRESSURE  | SEA STATE          | WIND<br>DIRN. | WIND<br>SPD.       | CLOUD (amb | BOTTOM<br>DEPTH | STA. NAME/ID |              |         |       |       |        |    |    |     |        |
| DEG                  | MIN      | DEG                 | MIN  | DAY                                    | MO       | YR                               | (°C)      | (°C)               | (mb)          | *                  | *          | TYPE            | WEATHER      |              |         |       |       |        |    |    |     |        |
| 149                  | 62       | 12                  | .95  | N                                      | 17       | 44                               | 5.        | 10                 | w             | 26                 | JU         | 08              | 21           | 37           | 8.      | 1     | 5.    | 0      | 16 | 22 | 405 | 745L13 |
| SBE 9+               |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    |    |     |        |
| PRESS SN             |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    |    |     |        |
| PRI TEMP SN          |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    |    |     |        |
| SEC TEMP SN          |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    |    |     |        |
| PRI COND SN          |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    |    |     |        |
| SEC COND SN          |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    |    |     |        |
| SBE 43-Dry (prime)   |          | FLUOR S/N           |      | SBE 43-Dry (sec)                       |          | Transmissometer                  |           | PAR S/N            |               | 02 Temp Sensor No. |            | REMARKS         |              | MAX. DEPTH = |         |       |       |        |    |    |     |        |
| notes                |          | Hydro Team-PMEL     |      | Tom W<br>Grebmeier                     |          | Masha                            |           | Sambrutto          |               | Harvey             |            | Moran/<br>Shull |              | Stoecker     |         | Pat   |       | NS     |    |    |     |        |
| No.                  | DESIRED  | SALT                | NUTS | 02-Btl/No                              | 02 Temp  | CHL.                             | Frac CHL. | DIC                | 018           | Cooper             | 615N       | 0.2/Ar          | Prod         | DON          | Lessard | Lomas | Radon | µZoops | Th | No |     |        |
| 1                    | 69       |                     | 31   |                                        | 222      |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 1  |     |        |
| 2                    | 50       |                     | 32   |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 2  |     |        |
| 3                    | 40       |                     | 33   |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 3  |     |        |
| 4                    | 30       |                     | 34   |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 4  |     |        |
| 5                    | 20       |                     | 35   |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 5  |     |        |
| 6                    | 10       |                     | 36   |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 6  |     |        |
| 7                    | 0        |                     | 37   |                                        | 220      |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 7  |     |        |
| 8                    |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 8  |     |        |
| 9                    |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 9  |     |        |
| 10                   |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 10 |     |        |
| 11                   |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 11 |     |        |
| 12                   |          |                     |      |                                        |          |                                  |           |                    |               |                    |            |                 |              |              |         |       |       |        |    | 12 |     |        |





| VESSEL<br>USCG Healy |            | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSERP_Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |           | STATION NO.<br>/ 20 |                    |                  |                  |                  |           |               |                       |                |         |                        |              |        |
|----------------------|------------|---------------------|------|----------------------------------------|---------|-----------------------------------|-----------|---------------------|--------------------|------------------|------------------|------------------|-----------|---------------|-----------------------|----------------|---------|------------------------|--------------|--------|
| CONSC<br>CAST #      | LATITUDE   | DEG                 | MN   | DEG                                    | MN      | DAY                               | MO        | YR                  | TIME (GMT)         | DRY BULB<br>(*C) | WET BULB<br>(*C) | PRESSURE<br>(mb) | SEA STATE | WIND<br>DIRN. | WIND<br>SPD.<br>(kts) | CLOUD<br>(amt) | WEATHER | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |        |
| 1526211.84 N         | 17331.99 W | 27                  | JUL  | 08                                     | 03      | 02                                | 7.9       | 5.3                 | 15                 | 249              | 19               | 1015             | 6         | 15            | 10                    | 835410         |         |                        |              |        |
| SBE 9+               |            |                     |      |                                        |         |                                   |           |                     | FLUOR S/N          |                  |                  |                  |           |               |                       |                |         |                        |              |        |
| PRESS SN             |            |                     |      |                                        |         |                                   |           |                     | SBE43-Oxy (prime)  |                  |                  |                  |           |               |                       |                |         |                        |              |        |
| PRI TEMP SN          |            |                     |      |                                        |         |                                   |           |                     | SBE43-Oxy (sec)    |                  |                  |                  |           |               |                       |                |         |                        |              |        |
| SEC TEMP SN          |            |                     |      |                                        |         |                                   |           |                     | Transmissometer    |                  |                  |                  |           |               |                       |                |         |                        |              |        |
| PRI COND SN          |            |                     |      |                                        |         |                                   |           |                     | PAR S/N            |                  |                  |                  |           |               |                       |                |         |                        |              |        |
| SEC COND SN          |            |                     |      |                                        |         |                                   |           |                     | O2 Trip Sensor No. |                  |                  |                  |           |               |                       |                |         |                        |              |        |
| NIS DEPTH            | Roset.     | Hydro Team-PME      |      |                                        |         | Tom W                             | Grebene   | Masha               | Sambrutto          | Harvey           | Moran/           | Shull            | Stoecker  | Pat           |                       |                |         |                        |              |        |
| No DESIRED           | notes      | SALT                | NUTS | 02-BTLN#                               | 02 Temp | CHL.                              | Frac CHL. | DIC                 | 018                | Cooper           | blSN             | 02/Air           | Prod      | DON           | Lessard               | Lomas          | Radon   | uZoops                 | Th           | NIS No |
| 1 58                 |            | 52                  | 181  |                                        |         |                                   |           | ✓                   |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 1      |
| 2 50                 |            | 53                  |      |                                        |         |                                   |           | ✓                   |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 2      |
| 3 40                 |            | 54                  |      |                                        |         |                                   |           | ✓                   |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 3      |
| 4 35                 |            | 55                  |      |                                        |         |                                   |           | ✓                   |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 4      |
| 5 20                 |            | 56                  |      |                                        |         |                                   |           | ✓                   |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 5      |
| 6 10                 |            | 57                  |      |                                        |         |                                   |           | ✓                   |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 6      |
| 7 0                  |            | 58                  | 174  |                                        |         |                                   |           | ✓                   |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 7      |
| 8                    |            |                     |      |                                        |         |                                   |           |                     |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 8      |
| 9                    |            |                     |      |                                        |         |                                   |           |                     |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 9      |
| 10                   |            |                     |      |                                        |         |                                   |           |                     |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 10     |
| 11                   |            |                     |      |                                        |         |                                   |           |                     |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 11     |
| 12                   |            |                     |      |                                        |         |                                   |           |                     |                    |                  |                  |                  |           |               |                       |                |         |                        |              | 12     |

741  
742  
743

Bio-optic - 0m, 40m

color - all depths

ALF - R

| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |     | STATION NO.<br>121 |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
|----------------------|---------|---------------------|-----------------|-----------------------------------------|---------|-----------------------------------|-----|--------------------|------------------|------------------|----------------|------------------------|-----------------------|---------------------|------------------------|-------------------------|--------|----------|--------|-----|
| CONSC<br>CAST #      |         | LATITUDE            |                 | LONGITUDE                               |         | TIME (GMT)                        |     | DRY BULB<br>("C)   | WET BULB<br>("C) | PRESSURE<br>(mb) | SEA STATE<br>+ | WIND<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | WEATHER<br>STA. NAME/ID |        |          |        |     |
| DEG                  | MIN     | DEG                 | MIN             | DAY                                     | MO      | HR                                | MIN | (C)                | (C)              | (mb)             | *              | (deg)                  | (kts)                 | *                   | *                      |                         |        |          |        |     |
| 153                  | 62      | 11                  | .89             | N                                       | 173     | 07                                | .69 | W                  | 27               | JUL              | 08             | 04                     | 32                    | 9.5                 | 5.9                    | 15                      | 246    | /1       | 605Lc9 |     |
| SBE 9+               |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
| PRESS SN             |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
| PRI TEMP SN          |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
| SEC TEMP SN          |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
| PRI COND SN          |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
| SEC COND SN          |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
| NIS                  | DEPTH   | Roset.              | Hydro Team-PMEL |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          |        |     |
| No                   | DESIRED | notes               | SALT            | NUTS                                    | O2-BTNO | O2 Temp                           | CHL | Frac CHL           | DIC              | 018              | Cooper15N      | 02/Ar                  | Prod                  | DON                 | Lessard                | Lomas                   | Radden | Stoecker | Pat    | NIS |
| 1                    | 55      |                     | 59              | 179                                     |         |                                   |     |                    | 744              |                  |                |                        |                       |                     |                        |                         |        |          | No     |     |
| 2                    | 50      |                     | 60              |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 1      |     |
| 3                    | 40      |                     | 61              |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 2      |     |
| 4                    | 30      |                     | 62              |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 3      |     |
| 5                    | 20      |                     | 63              |                                         |         |                                   |     |                    | ✓                | 745              |                |                        |                       |                     |                        |                         |        |          | 4      |     |
| 6                    | 10      |                     | 64              |                                         |         |                                   |     |                    | ✓                | 746              |                |                        |                       |                     |                        |                         |        |          | 5      |     |
| 7                    | 0       |                     | 65              |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 6      |     |
| 8                    |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 7      |     |
| 9                    |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 8      |     |
| 10                   |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 9      |     |
| 11                   |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 10     |     |
| 12                   |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 11     |     |
|                      |         |                     |                 |                                         |         |                                   |     |                    |                  |                  |                |                        |                       |                     |                        |                         |        |          | 12     |     |

Bio-optics - Om  
Cdom - all depths  
ALF - "



| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |           | Ship Designation (I.D.)<br>H10802 |                  | STATION NO.<br>123 |                  |                         |                        |                       |             |                        |              |        |       |            |         |       |    |          |  |     |  |     |  |
|----------------------|---------|---------------------|------|-----------------------------------------|-----------|-----------------------------------|------------------|--------------------|------------------|-------------------------|------------------------|-----------------------|-------------|------------------------|--------------|--------|-------|------------|---------|-------|----|----------|--|-----|--|-----|--|
| CONSC<br>CAST #      |         | LATITUDE            |      | LONGITUDE                               |           | TIME (GMT)                        | DRY BULB<br>("C) | WET BULB<br>("C)   | PRESSURE<br>(mb) | SEA STATE<br>VISIBILITY | WIND<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amb) | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |        |       |            |         |       |    |          |  |     |  |     |  |
|                      | DEG     | MN                  | DEG  | MIN                                     | DAY       | MO                                | HR               | MIN                | *                | *                       | *                      | *                     | *           | *                      |              |        |       |            |         |       |    |          |  |     |  |     |  |
| 1                    | 55      | 56                  | 156  | 42                                      | N         | 1742                              | 1                | .85                | w                | 27                      | JUL                    | 08                    | 11          | 02                     | 8.1          | 13     | 235   | 17         | 7470156 |       |    |          |  |     |  |     |  |
| SBE 9+               |         |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       |    |          |  |     |  |     |  |
| PRESS S/N            |         |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       |    |          |  |     |  |     |  |
| PRI TEMP S/N         |         |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       |    |          |  |     |  |     |  |
| SEC TEMP S/N         |         |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       |    |          |  |     |  |     |  |
| PRI COND S/N         |         |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       |    |          |  |     |  |     |  |
| SEC COND S/N         |         |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       |    |          |  |     |  |     |  |
| Nes                  |         | Depth               |      | Roset.                                  |           | Hydro Team-PMEL                   |                  | Tom W              |                  | Grebenk                 |                        | Masha                 |             | Sambrotto              |              | Harvey |       | Moran/     |         | Shull |    | Stoecker |  | Pat |  | Nes |  |
| No                   | Desired | Notes               | SALT | NUTS                                    | O2-Btl No | O2 Temp                           | CHL.             | Frac CHL.          | DIC              | 018                     | Cooper 615N            | O2/Ar                 | Prod        | DON                    | Lessard      | Lomas  | Radon | Microzoopl | Th      |       | No |          |  |     |  |     |  |
| 1                    | 71      | 10°F                | 72   | *190                                    |           |                                   |                  |                    |                  | 750                     |                        |                       |             |                        |              |        |       |            |         |       | 1  |          |  |     |  |     |  |
| 2                    | 50      |                     | 73   |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 2  |          |  |     |  |     |  |
| 3                    | 40      |                     | 74   |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 3  |          |  |     |  |     |  |
| 4                    | 30      |                     | 75   |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 4  |          |  |     |  |     |  |
| 5                    | 25      |                     | 76   |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 5  |          |  |     |  |     |  |
| 6                    | 25      |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 6  |          |  |     |  |     |  |
| 7                    | 25      |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 7  |          |  |     |  |     |  |
| 8                    | 25      |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 8  |          |  |     |  |     |  |
| 9                    | 25      |                     |      |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 9  |          |  |     |  |     |  |
| 10                   | 20      |                     | 77   |                                         |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 10 |          |  |     |  |     |  |
| 11                   | 10      | 17                  | 1F   | 78                                      |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 11 |          |  |     |  |     |  |
| 12                   | 0       |                     |      | 79                                      |           |                                   |                  |                    |                  |                         |                        |                       |             |                        |              |        |       |            |         |       | 12 |          |  |     |  |     |  |





| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |           | PROJECT & LEG<br>BEST/BSIERP - Summer '08 |            | Ship Designation (I.D.)<br>1H0802 |           | STATION NO.<br>126 |          |                 |                |                |             |         |              |       |          |    |     |
|----------------------|----------|---------------------|-----------|-------------------------------------------|------------|-----------------------------------|-----------|--------------------|----------|-----------------|----------------|----------------|-------------|---------|--------------|-------|----------|----|-----|
| CONSC<br>CAST #      | LATITUDE |                     | LONGITUDE |                                           | TIME (GMT) |                                   | DRY BULB  | WET BULB           | PRESSURE | SEA STATE       | WIND           | WIND           | CLOUD (amt) | BOTTOM  | STA. NAME/ID |       |          |    |     |
|                      | DEG      | MIN                 | DEG       | MIN                                       | DAY        | MO                                | YR        | HR                 | MIN      | (°C)            | (°C)           | (mb)           | *           | *       | DIRN.        | SPD.  | TYPE     |    |     |
| 1                    | 58       | 6                   | 13        | 3                                         | 63         | N                                 | 173       | 42                 | .57      | W               | 27             | JUL            | 08          | 1536    | 6.8          | .     | 13       |    |     |
| SBE 9+               |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    |     |
| PRESS SN             |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    |     |
| PHT TEMP SN          |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    |     |
| SEC TEMP SN          |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    |     |
| PHT COND SN          |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    |     |
| SEC COND SN          |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    |     |
| NIS DEPTH            | Roset.   | Hydro Team-PMEL     |           | Tom W<br>Grebene                          |            | Masha                             | Sambrutto |                    | Harvey   | Moran/<br>Shull |                | Stoecker       | Pat         |         | NIS          |       |          |    |     |
| No.                  | DESIRED  | notes               | SALT      | NUTS                                      | O2-Btl No  | O2 Temp                           | CHL       | Frac CHL           | DIC      | 018             | Cooper<br>615N | O2/Air<br>Prod | DON         | Lessard | Lomas        | Radon | II-Zoops | Th | No. |
| 1                    | 68       |                     |           | 94                                        |            |                                   |           |                    |          | 753             |                |                |             |         |              |       |          |    | 1   |
| 2                    | 60       |                     |           | 95                                        |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 2   |
| 3                    | 40       |                     |           | 96                                        |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 3   |
| 4                    | 30       |                     |           | 97                                        |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 4   |
| 5                    | 20       |                     |           | 98                                        |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 5   |
| 6                    | 10       |                     |           | 99                                        |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 6   |
| 7                    | 0        |                     |           | 100                                       | 133        |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 7   |
| 8                    |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 8   |
| 9                    |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 9   |
| 10                   |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 10  |
| 11                   |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 11  |
| 12                   |          |                     |           |                                           |            |                                   |           |                    |          |                 |                |                |             |         |              |       |          |    | 12  |

2 MARCH

| VESSEL<br>USCG Healy |               | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSIERP Summer '08 |       | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>126 |                  |                    |                        |                       |                     |                        |                   |    |
|----------------------|---------------|---------------------|------|-----------------------------------------|-------|-----------------------------------|------------------|--------------------|------------------|--------------------|------------------------|-----------------------|---------------------|------------------------|-------------------|----|
| CONSC<br>CAST #      |               | LATITUDE            |      | LONGITUDE                               |       | TIME (GMT)                        | DRY BULB<br>(°C) | WET BULB<br>(°C)   | PRESSURE<br>(mb) | SEA STATE<br>(deg) | WIND<br>DIRN.<br>(kts) | WIND<br>SPD.<br>(m/s) | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/D<br>ID |    |
|                      | DEG           | MIN                 | DEG  | MIN                                     | DAY   | MO                                | YR               | HR                 | MN               | *                  | *                      | *                     | *                   | *                      |                   |    |
| 159                  | 61            | 33.12               | N    | 173                                     | 41.41 | W                                 | 27               | JUL                | 08               | 1617               | 6.8                    | 26715                 | 73                  | 70NS3                  |                   |    |
| SBE 9+               |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| PRESS S/N            |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| PRI TEMP S/N         |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| SEC TEMP S/N         |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| PRI COND S/N         |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| SEC COND S/N         |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| NIS DEPTH            | Roset.        | Hydro Team-PMEL     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| No                   | DESIRED notes | SALT                | NUTS | 02-BTU                                  | No    | 02 Temp                           | CHL.             | Frac CHL.          | DIC              | 018                | Cooper                 | 615N                  | 02/AR               | Prod                   | DON               |    |
| 1                    | 70            | A1                  | 101  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 1  |
| 2                    | 58            | A2                  | 102  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 2  |
| 3                    | 37            | A3                  | 103  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 3  |
| 4                    | 32            | A4                  | 104  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   |    |
| 5                    | 30            | A5                  | 105  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 4  |
| 6                    | 22            | A6                  | 106  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 5  |
| 7                    | 15            | A7                  | 107  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 6  |
| 8                    | 7             | A8                  | 108  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 7  |
| 9                    | 7             |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 8  |
| 10                   | 7             |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 9  |
| 11                   | 0             | A11                 | 109  |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 10 |
| 12                   |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 11 |
|                      |               |                     |      |                                         |       |                                   |                  |                    |                  |                    |                        |                       |                     |                        |                   | 12 |

ALF

MAX. DEPTH = 70 m

PROD

REMARKS

✓ ✓ ✓ ✓

| VESSEL<br>USCG Healy |             | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSE/RP_Summer '08 |           | Ship Designation (I.D.)<br>1H0802 |      | STATION NO.<br>127 |          |           |           |            |           |             |              |              |       |       |        |    |     |
|----------------------|-------------|---------------------|------|-----------------------------------------|-----------|-----------------------------------|------|--------------------|----------|-----------|-----------|------------|-----------|-------------|--------------|--------------|-------|-------|--------|----|-----|
| CAST #               | CONSC       | LATITUDE            |      | LONGITUDE                               |           | TIME (GMT)                        |      | DRY BULB           | WET BULB | PRESSURE  | SEA STATE | WIND DIRN. | WIND SPD. | CLOUD (amt) | BOTTOM DEPTH | STA. NAME/ID |       |       |        |    |     |
|                      |             | DEG                 | MIN  | DEG                                     | MIN       | DAY                               | MO   | HR                 | MIN      | (°C)      | (°C)      | (mb)       | *         | (deg)       | (kts)        | *            | (m)   |       |        |    |     |
|                      | SBE 9+      |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        |    |     |
|                      | PRESS SN    |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        |    |     |
|                      | PRI TEMP SN |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        |    |     |
|                      | SEC TEMP SN |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        |    |     |
|                      | PRI COND SN |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        |    |     |
|                      | SEC COND SN |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        |    |     |
| N/S                  | DEPTH       | Roset:              |      | Hydro Team-PME                          |           | Tom W.                            |      | Gebrem             | Masha    | Sambrotto | Harvey    | Moran/     | Shull     | Stoecker    | Pat          |              | N/S   |       |        |    |     |
| No.                  | DESIRED     | notes               | SALT | NUTS                                    | 02-BBL No | 02 Temp                           | CHL. | Frac CHL.          | DIC      | 01B       | Cooper    | ISBN       | 02/A      | Prod        | DON          | Lessard      | Lomas | Radon | zLoops | Th | No. |
| 1                    | 71          | 18/F                | 110  | 213                                     |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 1  |     |
| 2                    | 50          |                     | 11   |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 2  |     |
| 3                    | 40          |                     | 112  |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 3  |     |
| 4                    | 30          |                     | 113  |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 4  |     |
| 5                    | 20          |                     | 114  |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 5  |     |
| 6                    | 10          | 19/F                | 115  |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 6  |     |
| 7                    | 0           |                     | 116  |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 7  |     |
| 8                    |             |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 8  |     |
| 9                    |             |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 9  |     |
| 10                   |             |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 10 |     |
| 11                   |             |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 11 |     |
| 12                   |             |                     |      |                                         |           |                                   |      |                    |          |           |           |            |           |             |              |              |       |       |        | 12 |     |

0-217

| VESSEL<br>USCG Healy |                  | CRUISE ID<br>H10803 |           | PROJECT & LEG<br>BEST/BSERP_Summer '08 |            | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>128 |                       |                             |                       |                     |                        |             |        |    |     |
|----------------------|------------------|---------------------|-----------|----------------------------------------|------------|-----------------------------------|------------------|--------------------|-----------------------|-----------------------------|-----------------------|---------------------|------------------------|-------------|--------|----|-----|
| CONSC<br>CAST #      | LATITUDE         |                     | LONGITUDE |                                        | TIME (GMT) |                                   | DRY BULB<br>(°C) | WET BULB<br>(°C)   | PRESSURE<br>(mb)      | SEA STATE<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amb)<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/D |        |    |     |
|                      | DEG              | MIN                 | DEG       | MIN                                    | DAY        | MO                                | HR               | MIN                | *                     | *                           | *                     | *                   | *                      |             |        |    |     |
| SBE 9+               | 16               | 16                  | 11        | 41                                     | 52         | N                                 | 17               | 34                 | 3                     | 53                          | W                     | 27                  | JUL                    | 08          |        |    |     |
| PRESS SN             |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        |    |     |
| PRI TEMP SN          |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        |    |     |
| SEC TEMP SN          |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        |    |     |
| PRI COND SN          |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        |    |     |
| SEC COND SN          |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        |    |     |
| NIS<br>DEPTH         | Roset:           | Hydro Team-PMEI     |           | Tom W<br>Grebmeier                     |            | Masha                             | Sambrotto        | Harvey             | Moran/<br>Shull       | Stoecker                    | Pat                   |                     | NIS                    |             |        |    |     |
| No.                  | DESIRED<br>notes | SALT                | NUTS      | 02-BUENO                               | 02 Temp    | CHL.                              | Frac CHL         | DIC                | 01B<br>Cooper<br>b1SN | 02/A <sup>r</sup><br>Prod   | DON                   | Lessard             | Lomas                  | Radon       | μZoops | Th | No. |
| 1                    | 70               |                     | 117       |                                        |            |                                   | /                |                    |                       |                             |                       |                     |                        |             |        | 1  |     |
| 2                    | 50               |                     | 118       |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        | 2  |     |
| 3                    | 40               |                     | 119       |                                        |            |                                   | /                |                    |                       |                             |                       |                     |                        |             |        | 3  |     |
| 4                    | 30               |                     | 120       |                                        |            |                                   | /                |                    |                       |                             |                       |                     |                        |             |        | 4  |     |
| 5                    | 20               |                     | 121       |                                        |            |                                   | /                |                    |                       |                             |                       |                     |                        |             |        | 5  |     |
| 6                    | 10               |                     | 122       | 211                                    |            |                                   | /                |                    |                       |                             |                       |                     |                        |             |        | 6  |     |
| 7                    | 0                |                     | 123       |                                        |            |                                   | /                |                    |                       |                             |                       |                     |                        |             |        | 7  |     |
| 8                    |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        | 8  |     |
| 9                    |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        | 9  |     |
| 10                   |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        | 10 |     |
| 11                   |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        | 11 |     |
| 12                   |                  |                     |           |                                        |            |                                   |                  |                    |                       |                             |                       |                     |                        |             |        | 12 |     |

O2 #211 suspended

6 MARS SAMPLES



A  
15











| VESSEL<br>USCG Heavy |                        | CRUISE ID<br>H10803 |                | PROJECT & LEG<br>BEST/BS-ERP Summer '08 |           | Ship Designation (I.D.)<br>H10802 |                  | STATION NO.<br>136 |           |               |                       |               |                        |         |              |
|----------------------|------------------------|---------------------|----------------|-----------------------------------------|-----------|-----------------------------------|------------------|--------------------|-----------|---------------|-----------------------|---------------|------------------------|---------|--------------|
| CONSC<br>CAST #      | LATITUDE<br>DEG<br>MIN | LONGITUDE           |                | TIME (GMT)                              |           | DRY BULB<br>(*C)                  | WET BULB<br>(*C) | PRESSURE<br>(mb)   | SEA STATE | WIND<br>DIRN. | WIND<br>SPD.<br>(kts) | CLOUD<br>TYPE | BOTTOM<br>DEPTH<br>(m) | WEATHER | STA. NAME/ID |
|                      |                        | DEG                 | MIN            | DAY                                     | MO        | YR                                | HR               | MIN                | *         | *             | (deg)                 | (deg)         | *                      | *       | *            |
| 1696002.75           | N                      | 17301.54            | W              | 28                                      | JUL       | 08                                | 08               | 06                 | 6.7       | .             | 18                    | 247           | 9                      | 6720    | M43          |
| SBE 9+               |                        | FLUOR S/N           |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| PRESS SN             |                        | SBE43-Oxy (prime)   |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| PRI TEMP SN          |                        | SBE43-Oxy (sec)     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| SEC TEMP SN          |                        | Transmissometer     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| PRI COND SN          |                        | PAR S/N             |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| SEC COND SN          |                        | O2 Tmp Sensor No.   |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| NIS                  | DEPTH                  | ROSET.              | Hydro Team-PME |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| No                   | DESIRED                | notes               | SALT           | NUTS                                    | 02-8t, No | 02 Temp                           | CHL.             | Frac CHL.          | DIC       | 018           | Coope &SN             | 02/Ar         | Prod                   | DON     |              |
| 1                    | 64                     | 30/F                | 15             | 106                                     |           |                                   |                  |                    |           |               |                       |               |                        |         |              |
| 2                    | 50                     | 21/F                | 16             |                                         |           | /                                 |                  |                    |           |               |                       |               |                        |         | 1            |
| 3                    | 40                     |                     | 17             |                                         |           | /                                 |                  |                    |           |               |                       |               |                        |         | 2            |
| 4                    | 30                     |                     | 18             |                                         |           | /                                 |                  |                    |           |               |                       |               |                        |         | 3            |
| 5                    | 20                     |                     | 19             |                                         |           | /                                 |                  |                    |           |               |                       |               |                        |         | 4            |
| 6                    | 10                     |                     | 20             |                                         |           | /                                 |                  |                    |           |               |                       |               |                        |         | 5            |
| 7                    | 0                      |                     | 21             |                                         |           | /                                 |                  |                    |           |               |                       |               |                        |         | 6            |
| 8                    |                        |                     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         | 7            |
| 9                    |                        |                     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         | 8            |
| 10                   |                        |                     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         | 9            |
| 11                   |                        |                     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         | 10           |
| 12                   |                        |                     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         | 11           |
|                      |                        |                     |                |                                         |           |                                   |                  |                    |           |               |                       |               |                        |         | 12           |

2 MARCH

| VESSEL<br>USCG Healy |                        | CRUISE ID<br>H10803     |                                            | PROJECT & LEG<br>BEST/BSI RP Summer '08 |                  | Ship Designation (I.D.)<br>1H0802 |                             | STATION NO.<br>137    |                                |                        |              |
|----------------------|------------------------|-------------------------|--------------------------------------------|-----------------------------------------|------------------|-----------------------------------|-----------------------------|-----------------------|--------------------------------|------------------------|--------------|
| CONSC<br>CAST #      | LATITUDE<br>DEG<br>MIN | LONGITUDE<br>DEG<br>MIN | TIME (GMT)<br>DAY<br>MO<br>YR<br>HR<br>MIN | DRY BULB<br>(°C)                        | WET BULB<br>(°C) | PRESSURE<br>(mb)                  | SEA STATE<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>TYPE<br>WEATHER | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |
| 1                    | 70 59.59               | 91.93 N                 | 172 43.16 W                                | 28 JUL 08                               | 09 10 6.5        | 18                                | 24810                       | 68                    | 70 M 42                        |                        |              |
| SBE 9+               |                        |                         | FLUOR S/N                                  |                                         |                  |                                   |                             |                       |                                |                        |              |
| PRESS SN             |                        |                         | SBE43-Oxy (prime)                          |                                         |                  |                                   |                             |                       |                                |                        |              |
| PRI TEMP SN          |                        |                         | SBE43-Oxy (sec)                            |                                         |                  |                                   |                             |                       |                                |                        |              |
| SEC TEMP SN          |                        |                         | Transmissometer                            |                                         |                  |                                   |                             |                       |                                |                        |              |
| PRI COND SN          |                        |                         | PAR S/N                                    |                                         |                  |                                   |                             |                       |                                |                        |              |
| SEC COND SN          |                        |                         | O2 Trip Sensor No.                         |                                         |                  |                                   |                             |                       |                                |                        |              |
| NIS                  | DEPTH                  | ROSET.                  | Hydro Team -PMEL                           |                                         |                  |                                   |                             |                       |                                |                        |              |
| No.                  | Desired                | Notes                   | SALT                                       | NUTS                                    | O2-Btl No        | O2 Temp                           | CHL.                        | Frac CHL.             | DIC                            | O18                    | Grebenni     |
| 1                    | 65                     |                         | 22                                         |                                         |                  |                                   |                             |                       |                                |                        | Masha        |
| 2                    | 50                     |                         | 23                                         |                                         |                  |                                   | /                           |                       |                                |                        | Sambarotto   |
| 3                    | 40                     |                         | 24                                         |                                         |                  |                                   | /                           |                       |                                |                        | Harvey       |
| 4                    | 30                     |                         | 25                                         |                                         |                  |                                   | /                           |                       |                                |                        | Moran/       |
| 5                    | 20                     |                         | 26                                         |                                         |                  |                                   | /                           |                       |                                |                        | Shull        |
| 6                    | 10                     |                         | 27                                         |                                         |                  |                                   | /                           |                       |                                |                        | Stoecker     |
| 7                    | 0                      |                         | 28                                         | OK6                                     |                  |                                   | /                           |                       |                                |                        | Pat.         |
| 8                    |                        |                         |                                            |                                         |                  |                                   |                             |                       |                                |                        | NIS          |
| 9                    |                        |                         |                                            |                                         |                  |                                   |                             |                       |                                |                        | No.          |
| 10                   |                        |                         |                                            |                                         |                  |                                   |                             |                       |                                |                        |              |
| 11                   |                        |                         |                                            |                                         |                  |                                   |                             |                       |                                |                        |              |
| 12                   |                        |                         |                                            |                                         |                  |                                   |                             |                       |                                |                        |              |

O<sub>2</sub> - O<sub>26</sub>, SURF

O Matrix

| VESSEL<br>USCG Healy |               | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSSERp Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |           | STATION NO.<br>138 |          |                    |                   |              |              |             |                 |              |         |     |     |
|----------------------|---------------|---------------------|------|-----------------------------------------|---------|-----------------------------------|-----------|--------------------|----------|--------------------|-------------------|--------------|--------------|-------------|-----------------|--------------|---------|-----|-----|
| CONSC<br>CAST #      |               | LATITUDE            |      | LONGITUDE                               |         | TIME (GMT)                        |           | DRY BULB           | WET BULB | PRESSURE           | SEA STATE         | WIND<br>DRN. | WIND<br>SPD. | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID |         |     |     |
|                      | DEG           | MIN                 |      | DEG                                     | MIN     | DAY                               | MO        | HR                 | MIN      | (°C)               | (°C)              | (mb)         | *            | *           | (deg)           | (kts)        | *       | (m) |     |
| 174                  | 59            | 54                  | .10  | N                                       | 172     | 25                                | .25       | W                  | 28       | JUL 08             | 10 28             | 6.8          | .            | 18          | 260             | 7            | 7470m41 |     |     |
| SBE 9+               |               |                     |      |                                         |         |                                   |           |                    |          | FLUOR S/N          | SBE43-Dry (prime) |              |              |             |                 |              |         |     |     |
| PRESS SN             |               |                     |      |                                         |         |                                   |           |                    |          | SBE43-Dry (sec)    |                   |              |              |             |                 |              |         |     |     |
| PHI TEMP SN          |               |                     |      |                                         |         |                                   |           |                    |          | Transistorometer   |                   |              |              |             |                 |              |         |     |     |
| SEC TEMP SN          |               |                     |      |                                         |         |                                   |           |                    |          | PAR S/N            |                   |              |              |             |                 |              |         |     |     |
| PRI COND SN          |               |                     |      |                                         |         |                                   |           |                    |          | O2 Trip Sensor No. |                   |              |              |             |                 |              |         |     |     |
| SEC COND SN          |               |                     |      |                                         |         |                                   |           |                    |          |                    |                   |              |              |             |                 |              |         |     |     |
| NIS DEPTH            | Roset.        | Hydro Team/PINL     |      |                                         |         | Tom W                             |           | Gebrem             | Masha    | Sambrotto          | Harvey            | Moran/       | Shull        | Stoecker    | Pat             |              | NIS     |     |     |
| No.                  | DESIRED notes | SALT                | NUTS | 02-BBL No                               | 02 Temp | CHL.                              | Frac CHL. | 018                | Coope    | 615N               | 02/Ar             | Prod         | DON          | Lessard     | Lomas           | Radon        | µZoops  | Th  | No. |
| 1                    | 76            |                     | 29   | 200                                     |         | /                                 |           |                    |          |                    |                   |              |              |             |                 |              |         | 1   |     |
| 2                    | 50            |                     | 30   |                                         |         | /                                 |           |                    |          |                    |                   |              |              |             |                 |              |         | 2   |     |
| 3                    | 40            |                     | 31   |                                         |         | /                                 |           |                    |          |                    |                   |              |              |             |                 |              |         | 3   |     |
| 4                    | 30            |                     | 32   |                                         |         | /                                 |           |                    |          |                    |                   |              |              |             |                 |              |         | 4   |     |
| 5                    | 20            |                     | 33   |                                         |         | /                                 |           |                    |          |                    |                   |              |              |             |                 |              |         | 5   |     |
| 6                    | 10            |                     | 34   |                                         |         | /                                 |           |                    |          |                    |                   |              |              |             |                 |              |         | 6   |     |
| 7                    | 0             |                     | 35   |                                         |         | /                                 |           |                    |          |                    |                   |              |              |             |                 |              |         | 7   |     |
| 8                    |               |                     |      |                                         |         |                                   |           |                    |          |                    |                   |              |              |             |                 |              |         | 8   |     |
| 9                    |               |                     |      |                                         |         |                                   |           |                    |          |                    |                   |              |              |             |                 |              |         | 9   |     |
| 10                   |               |                     |      |                                         |         |                                   |           |                    |          |                    |                   |              |              |             |                 |              |         | 10  |     |
| 11                   |               |                     |      |                                         |         |                                   |           |                    |          |                    |                   |              |              |             |                 |              |         | 11  |     |
| 12                   |               |                     |      |                                         |         |                                   |           |                    |          |                    |                   |              |              |             |                 |              |         | 12  |     |

6 MATHS

264



| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |       | PROJECT & LEG<br>BEST/BSE/RP_Summer '08 |       | Ship Designation (I.D.)<br>1H0802 |         | STATION NO. 140 |           |          |           |            |           |             |              |              |         |          |      |     |
|----------------------|---------|---------------------|-------|-----------------------------------------|-------|-----------------------------------|---------|-----------------|-----------|----------|-----------|------------|-----------|-------------|--------------|--------------|---------|----------|------|-----|
| CAST #               | CONSC   | LATITUDE            |       | LONGITUDE                               |       | TIME (GMT)                        |         | DRY BULB        | WET BULB  | PRESSURE | SEA STATE | WIND DIRN. | WIND SPD. | CLOUD (amt) | BOTTOM DEPTH | STA. NAME/ID |         |          |      |     |
|                      |         | DEG                 | MIN   | DEG                                     | MIN   | DAY                               | MO      | HR              | MIN       | (°C)     | (°C)      | (mb)       | *         | (deg)       | (kts)        | *            | (m)     |          |      |     |
| 1                    | 73      | 59                  | 49.83 | N                                       | 171   | 46.44                             | W       | 28              | JUL       | 08       | 1246      | 6.9        | .         | 18          | 262          | 7            | 7470m39 |          |      |     |
| SBE 9+               |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| PRESS SN             |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| PRI TEMP SN          |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| SEC TEMP SN          |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| PRI COND SN          |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| SEC COND SN          |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| 02 Trip Sensor No.   |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| NIS                  | DEPTH   | Roset.              |       | Hydro Team-PMEL                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      |     |
| No.                  | DESIRED | notes               | SALT  | NUTS                                    | 02-BL | No                                | 02 Temp | CHL.            | Frac CHL. | DIC      | 018       | Grebink    | Mashia    | Sanfratto   | Harvey       | Moran'       | Shull   | Stoecker | Pat. | NIS |
| 1                    | 70      |                     | 43    | 4072                                    |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | No. |
| 2                    | 50      |                     | 44    |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 1   |
| 3                    | 40      |                     | 45    |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 2   |
| 4                    | 30      |                     | 46    |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 3   |
| 5                    | 20      |                     | 47    |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 4   |
| 6                    | 10      |                     | 48    |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 5   |
| 7                    | 0       |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 6   |
| 8                    | 9       |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 7   |
| 9                    |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 8   |
| 10                   |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 9   |
| 11                   |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 10  |
| 12                   |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 11  |
|                      |         |                     |       |                                         |       |                                   |         |                 |           |          |           |            |           |             |              |              |         |          |      | 12  |

2 MAT(F)



| VESSEL<br>USCG Healy |                        | CRUISE ID<br>H10803     |           | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |      | Ship Designation (I.D.)<br>H10802 |                         | STATION NO.<br>142 |                  |                  |                         |                                              |               |                 |              |     |     |
|----------------------|------------------------|-------------------------|-----------|-----------------------------------------|------|-----------------------------------|-------------------------|--------------------|------------------|------------------|-------------------------|----------------------------------------------|---------------|-----------------|--------------|-----|-----|
| CONSC<br>CAST #      | LATITUDE<br>DEG<br>MIN | LONGITUDE<br>DEG<br>MIN |           | DAY                                     | MO   | YR                                | TIME (GMT)<br>HR<br>MIN | DRY BULB<br>(°C)   | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>VISIBILITY | WIND<br>DIRN.<br>SPD.<br>CLOUD (amt<br>TYPE) | WIND<br>DEPTH | BOTTOM<br>DEPTH | STA. NAME/ID |     |     |
|                      |                        | DEG                     | MIN       |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| 1755943.41           | N                      | 17108.71                | W         | 28JUL08                                 | 14   | 48                                | 1448                    | 6.5                | 18               | 262              | 5                       | 72                                           | 70            | M37             |              |     |     |
| SBE 9+               |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| PRESS SN             |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| PRI TEMP SN          |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| SEC TEMP SN          |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| PRI COND SN          |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| SEC COND SN          |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| NIS DEPTH            | Roset.                 | Hydro Team PMEL         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| No DESIRED notes     | SALT                   | NUTS                    | 02-BTL No | 02 Temp                                 | CHL. | Frac CHL.                         | DIC                     | 018                | Grebene          | Masha            | Sambrotto               | Harvey                                       | Moran/        | Shull           | Stroeker     | Pat | NIS |
| 1 70                 |                        | 9                       | 175       |                                         |      | /                                 |                         |                    |                  |                  |                         |                                              |               |                 |              |     |     |
| 2 50                 |                        | 10                      |           |                                         |      | /                                 |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 1   |
| 3 40                 |                        | 11                      |           |                                         |      | /                                 |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 2   |
| 4 30                 |                        | 12                      |           |                                         |      | /                                 |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 3   |
| 5 20                 |                        | 13                      |           |                                         |      | /                                 |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 4   |
| 6 10                 |                        | 14                      |           |                                         |      | /                                 |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 5   |
| 7 0                  |                        | 15                      |           |                                         |      | /                                 |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 6   |
| 8                    |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 7   |
| 9                    |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 8   |
| 10                   |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 9   |
| 11                   |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 10  |
| 12                   |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 11  |
|                      |                        |                         |           |                                         |      |                                   |                         |                    |                  |                  |                         |                                              |               |                 |              |     | 12  |

2 MATHES

| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |                | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |           |         |      | Ship Designation (ID.)<br>1H0802 |        |                   |          | STATION NO.<br>143 |            |        |        |             |          |              |         |    |
|----------------------|---------|---------------------|----------------|-----------------------------------------|-----------|---------|------|----------------------------------|--------|-------------------|----------|--------------------|------------|--------|--------|-------------|----------|--------------|---------|----|
| CONSC<br>CAST #      |         | LATITUDE            |                | LONGITUDE                               |           |         |      | TIME (GMT)                       |        | DRY BULB          | WET BULB | PRESSURE           | SEA STATE  | WIND   | WIND   | CLOUD (amt) | BOTTOM   | STA. NAME/ID |         |    |
|                      | DEG     | MIN                 |                | DEG                                     | MIN       | DAY     | MO   | YR                               | HR     | (°C)              | (°C)     | (mb)               | *          | *      | (deg)  | (kts)       | *        | DEPTH        | WEATHER |    |
| 1                    | 76      | 59                  | 36.96          | N                                       | 170       | 55.96   | W    | 28                               | JUL 08 | 1549              | 6.4      | 1014               | 277        | 6      | 71     | 70M36       |          |              |         |    |
| SBE 9+               |         |                     |                |                                         |           |         |      |                                  |        | FLUOR S/N         |          |                    |            |        |        |             |          |              |         |    |
| PRESS SN             |         |                     |                |                                         |           |         |      |                                  |        | SBE43-Oxy (prime) |          |                    |            |        |        |             |          |              |         |    |
| PRI TEMP SN          |         |                     |                |                                         |           |         |      |                                  |        | SBE43-Oxy (sec)   |          |                    |            |        |        |             |          |              |         |    |
| SEC TEMP SN          |         |                     |                |                                         |           |         |      |                                  |        | Transmissometer   |          |                    |            |        |        |             |          |              |         |    |
| PRI COND SN          |         |                     |                |                                         |           |         |      |                                  |        | PAR S/N           |          |                    |            |        |        |             |          |              |         |    |
| SEC COND SN          |         |                     |                |                                         |           |         |      |                                  |        | O2 Tmp Sensor No. |          |                    |            |        |        |             |          |              |         |    |
| NIS                  | DEPTH   | Rolet.              | Hydro Team-PML |                                         |           |         |      |                                  |        | Tom W             | Gretchen | Masha              | Sambarotto | Harvey | Moran/ | Shull       | Stoecker | Pak          | Nis     |    |
| No                   | DESIRED | notes               | SALT           | NUTS                                    | O2-Btl No | O2 Temp | CHL. | Frac CHL.                        | DIC    | 018               | Cooper   | HSN                | O2/Air     | Prod   | DON    | Lessard     | Lomas    | Radon        | µZoops  | No |
| 1                    | 67      |                     |                | 16                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 1       |    |
| 2                    | 50      |                     |                | 17                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 2       |    |
| 3                    | 38      |                     |                | 18                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 3       |    |
| 4                    | 30      |                     |                | 19                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 4       |    |
| 5                    | 25      |                     |                | 20                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 5       |    |
| 6                    | 20      |                     |                | 21                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 6       |    |
| 7                    | 15      |                     |                | 22                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 7       |    |
| 8                    | 10      |                     |                | 23                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 8       |    |
| 9                    | 5       |                     |                | 24                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 9       |    |
| 10                   | 5       |                     |                |                                         |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 10      |    |
| 11                   | 5       |                     |                |                                         |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 11      |    |
| 12                   | 0       |                     |                | 25                                      |           |         |      |                                  |        |                   |          |                    |            |        |        |             |          |              | 12      |    |

$\sigma_2$  - surface

b+, 50 45 30 20 10 0

38 29 15 15 5  
A 1 1 5





| VESSEL<br>USCG Healy |               | CRUISE ID<br>H10803 |                   | PROJECT & LEG<br>BEST/BSSRP_Summer '08 |            | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>146 |                  |           |               |              |             |                 |              |
|----------------------|---------------|---------------------|-------------------|----------------------------------------|------------|-----------------------------------|------------------|--------------------|------------------|-----------|---------------|--------------|-------------|-----------------|--------------|
| CONSC<br>CAST #      | LATITUDE      |                     | LONGITUDE         |                                        | TIME (GMT) |                                   | DRY BULB<br>("C) | WET BULB<br>("C)   | PRESSURE<br>(mb) | SEA STATE | WIND<br>DIRN. | WIND<br>SPD. | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID |
|                      | DEG<br>MIN    | DEG<br>MIN          | DAY               | MO                                     | HR         | MIN                               |                  |                    | *                | *         | (deg)         | (kts)        | *           | *               | (m)          |
| 179 59 15 . 61 N     | 170 22 . 87 W | 28 J U L 0 8        | 19 28             | 6 . 9                                  | .          | 19                                | 110              | 110                | 6870             | M33       |               |              |             |                 |              |
| SBE 9+               |               |                     | FLUOR S/N         |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 |              |
| PRESS SN             |               |                     | SBE43-Dry (prime) |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 |              |
| PRI TEMP SN          |               |                     | SBE43-Oxy (sec)   |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 |              |
| SEC TEMP SN          |               |                     | Transmissometer   |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 |              |
| PRI COND SN          |               |                     | PAR S/N           |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 |              |
| SEC COND SN          |               |                     | O2 Tmp Senson No. |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 |              |
| NIS                  | DEPTH         | Rolet,              | Hydro Team-PMEL   |                                        | Tom W      | Grebme                            | Masha            | Sambrutto          | Harvey           | Moran/    | Shull         | Stoecker     | Pat         |                 | NIS          |
| No.                  | DESIRED       | notes               | SALT              | NUTS                                   | O2-Btl No  | O2 Temp                           | CHL.             | Frac. CHL.         | DIC              | O18       | Cooper S/N    | O2/Ar        | Prod        | DON             |              |
| 1                    | 65            |                     | 46                | 219                                    |            |                                   |                  |                    | 729              |           |               |              |             |                 | 1            |
| 2                    | 50            |                     | 41                |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 2            |
| 3                    | 40            |                     | 42                |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 3            |
| 4                    | 30            |                     | 43                |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 4            |
| 5                    | 20            |                     | 44                |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 5            |
| 6                    | 10            |                     | 45                |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 6            |
| 7                    | 0             |                     | 46                |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 7            |
| 8                    |               |                     |                   |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 8            |
| 9                    |               |                     |                   |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 9            |
| 10                   |               |                     |                   |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 10           |
| 11                   |               |                     |                   |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 11           |
| 12                   |               |                     |                   |                                        |            |                                   |                  |                    |                  |           |               |              |             |                 | 12           |

2 MATRICES



| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |           | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |      | Ship Designation (I.D.)<br>1H0802 |     | STATION NO.<br>148 |                  |                  |                    |                       |                     |                 |              |        |    |
|----------------------|----------|---------------------|-----------|-----------------------------------------|------|-----------------------------------|-----|--------------------|------------------|------------------|--------------------|-----------------------|---------------------|-----------------|--------------|--------|----|
| CONSC<br>CAST #      | LATITUDE | DEG<br>MIN          | LONGITUDE | DEG<br>MIN                              | DAY  | MO                                | YR  | DRY BULB<br>(°C)   | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>DIRN. | WIND<br>SPD.<br>(kts) | CLOUD (amb)<br>TYPE | BOTTOM<br>DEPTH | STA. NAME/ID |        |    |
| SBE 9+               |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              |        |    |
| PRESS SN             |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              |        |    |
| PRI TEMP SN          |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              |        |    |
| SEC TEMP SN          |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              |        |    |
| PRI COND SN          |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              |        |    |
| SEC COND SN          |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              |        |    |
| NIS DEPTH            | Roset.   | Hydro Team-PMEI     |           |                                         |      |                                   |     | TOM W              | Gebrem           | Masha            | Sambrotto          | Harvey                | Moran/              | Shull           | Stoecker     | NIS No |    |
| NO DESIRED notes     | SALT     | NUTS                | 02-BU#    | 02 Temp                                 | CHL. | Frac CHL.                         | DIC | 018                | Cooper/15N       | 02/Ar            | Prod               | DON                   | Lessard             | Lomas           | Radon        | μZoops | Th |
| 1 66                 |          | 53                  | 239       |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 1      |    |
| 2 50                 |          | 54                  |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 2      |    |
| 3 40                 |          | 55                  |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 3      |    |
| 4 30                 |          | 57                  |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 4      |    |
| 5 20                 |          | 58                  |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 5      |    |
| 6 10                 |          | 59                  |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 6      |    |
| 7 0                  |          | 60                  |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 7      |    |
| 8                    |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 8      |    |
| 9                    |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 9      |    |
| 10                   |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 10     |    |
| 11                   |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 11     |    |
| 12                   |          |                     |           |                                         |      |                                   |     |                    |                  |                  |                    |                       |                     |                 |              | 12     |    |

Truly fish trawlers may have  
faded temperature







| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSERP_Summer '08 |           | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>152 |                  |           |                       |                            |                 |              |       |
|----------------------|---------|---------------------|------|----------------------------------------|-----------|-----------------------------------|------------------|--------------------|------------------|-----------|-----------------------|----------------------------|-----------------|--------------|-------|
| CONSC<br>CAST #      |         | LATITUDE            |      | LONGITUDE                              |           | TIME (GMT)                        | DRY BULB<br>(°C) | WET BULB<br>(°C)   | PRESSURE<br>(mb) | SEA STATE | WIND<br>DIRN.<br>SPD. | WIND<br>CLOUD (amt<br>TYPE | BOTTOM<br>DEPTH | STA. NAME/ID |       |
| DEG                  | MIN     | DEG                 | MIN  | DAY                                    | MO        | HR                                | MIN              | (°C)               | (mb)             | *         | (deg)                 | (kts)                      | *               | (m)          |       |
| 18                   | 55      | 81                  | 6.82 | N                                      | 170       | 04                                | .97              | W                  | 29               | JUL       | 08                    | 03                         | 44              | 6.8          | 4.718 |
| SBE 9+               |         | FLUOR S/N           |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              |       |
| PRESS SN             |         | SBE43-Dby (prime)   |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              |       |
| PRI TEMP SN          |         | SBE43-Dby (sec)     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              |       |
| SEC TEMP SN          |         | Transmissometer     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              |       |
| PRI COND SN          |         | PAR S/N             |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              |       |
| SEC COND SN          |         | 02 Tmp Sensor No.   |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              |       |
| NIS                  | DEPTH   | Hydro Team-PMEI     |      |                                        |           | TOM W                             | Grebene          | Mashia             | Sambrutto        | Harvey    | Moran/                | Shull                      | Stoecker        | Pat          | NIS   |
| No.                  | DESIRED | notes               | SALT | NUTS                                   | 02-BBL No | 02 Temp                           | CHL.             | Frac CHL           | DIC              | 018       | Coope                 | 615N                       | 02/Ar           | Prod         | DON   |
| 1                    | 67      |                     |      | 82                                     | 22.0      |                                   |                  |                    |                  | 777       |                       |                            |                 |              |       |
| 2                    | 50      |                     |      | 83                                     |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 1     |
| 3                    | 46      |                     |      | 84                                     |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 2     |
| 4                    | 30      |                     |      | 85                                     |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 3     |
| 5                    | 20      |                     |      | 86                                     |           |                                   |                  |                    |                  |           |                       |                            |                 |              |       |
| 6                    | 10      |                     |      | 87                                     |           |                                   |                  |                    |                  | 778       |                       |                            |                 |              |       |
| 7                    | 0       |                     |      | 88                                     |           |                                   |                  |                    |                  |           | PS                    |                            |                 |              |       |
| 8                    |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 4     |
| 9                    |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 5     |
| 10                   |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 6     |
| 11                   |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 7     |
| 12                   |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 8     |
|                      |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 9     |
|                      |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 10    |
|                      |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 11    |
|                      |         |                     |      |                                        |           |                                   |                  |                    |                  |           |                       |                            |                 |              | 12    |

bio-optica - 0m, 30m, 70m

cdom - all dip kg  
ALF -

| VESSEL<br>USCG Healy | CRUISE ID<br>H10803 | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |                     |                      | Ship Designation (J.D.)<br>1H0802 |                      |                  | STATION NO.<br>133 |                  |                         |               |              |                     |                 |              |
|----------------------|---------------------|-----------------------------------------|---------------------|----------------------|-----------------------------------|----------------------|------------------|--------------------|------------------|-------------------------|---------------|--------------|---------------------|-----------------|--------------|
|                      |                     | CONSC<br>CAST #                         | LATITUDE<br>DEG MIN | LONGITUDE<br>DEG MIN | DAY MO YR                         | TIME (GMT)<br>HR MIN | DRY BULB<br>("C) | WET BULB<br>("C)   | PRESSURE<br>(mb) | SEA STATE<br>VISIBILITY | WIND<br>DIRN. | WIND<br>SPD. | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH | STA. NAME/ID |
| 18658                | 08.76N              | 16954.49W                               | 29 JUL 08           | 0509                 | 7.3                               | 4.718                | 656              |                    |                  |                         |               |              |                     |                 |              |
| SBE 9+               |                     | FLUOR S/N                               |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| PRESS SN             |                     | SBE43-Dwy (prime)                       |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| PRI TEMP SN          |                     | SBE43-Dwy (sec)                         |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| SEC TEMP SN          |                     | Transmissometer                         |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| PRI COND SN          |                     | PAR S/N                                 |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| SEC COND SN          |                     | 02 Time Sensor No.                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| INS DEPTH            | Roset.              | Hydro Team-PMEI                         |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| No DESIRED notes     | SALT                | NUTS                                    | 02-Btl/No           | 02 Temp              | CHL.                              | Frac CHL.            | DIC              | 018                | Grebme           | Masha                   | Sambrotto     | Harvey       | Moran/              | Shull           | Stockar      |
| 1 68                 |                     | 89                                      |                     |                      |                                   |                      |                  |                    | Cope             | 615N                    | O2/Ar         | Lessard      | Prod                | DON             | Pat          |
| 2 50                 | X                   | 90                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               | Radon        | Lomas               | Th              | No.          |
| 3 60                 | X                   | 91                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 4 40                 |                     | 91                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 5 30                 |                     | 92                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 6 23                 |                     | 93                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 7 20                 |                     | 93                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 8 15                 |                     | 94                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 9 10                 |                     | 94                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 10 10                |                     | 95                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 11 6                 |                     | 95                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |
| 12 0                 |                     | 95                                      |                     |                      |                                   |                      |                  |                    |                  |                         |               |              |                     |                 |              |

Tripped  
out of  
order



| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |                | PROJECT & LEG<br>BEST/BSIEAP_Summer '08 |           | Ship Designation (I.D.)<br>1H0802 |          | STATION NO. 155 |               |              |             |                 |              |        |        |       |          |      |     |
|----------------------|----------|---------------------|----------------|-----------------------------------------|-----------|-----------------------------------|----------|-----------------|---------------|--------------|-------------|-----------------|--------------|--------|--------|-------|----------|------|-----|
| CONSC<br>CAST #      | LATITUDE | LONGITUDE           |                | TIME (GMT)                              | DRY BULB  | WET BULB                          | PRESSURE | SEA STATE       | WIND<br>DIRN. | WIND<br>SPD. | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID |        |        |       |          |      |     |
| DEG                  | MIN      | DEG                 | MIN            | DAY                                     | MO        | YR                                | HR       | MIN             | (°C)          | (°C)         | (mb)        | *               | *            | (deg)  | (kts)  | *     | *        | *    | (m) |
| 188                  | 57 58.5  | 1 N                 | 16 921.72      | W                                       | 29        | JUL 08                            | 0        | 800             | 16.4          | 19           | 1085        | 3               |              |        |        |       |          | 6870 | 24  |
| SBE 9+               |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      |     |
| PRESS SN             |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      |     |
| PRI TEMP SN          |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      |     |
| SEC TEMP SN          |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      |     |
| PRI COND SN          |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      |     |
| SEC COND SN          |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      |     |
| NIS                  | DEPTH    | ROSET.              | Hydro Team-PME |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      |     |
| No.                  | DESIRED  | notes               | SALT           | NUTS                                    | O2-Btl No | O2 Temp                           | CHL      | Frac CHL        | DIC           | O18          | Gebene      | Masha           | Sambrotto    | Harvey | Moran/ | Shull | Stoecker | Pat  | Ns  |
| 1                    | 66       |                     |                | 103                                     | 168       |                                   | /        |                 |               |              |             |                 |              |        |        |       |          |      | 1   |
| 2                    | 50       |                     |                | 104                                     |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      | 2   |
| 3                    | 40       |                     |                | 105                                     |           |                                   | /        | /               |               |              |             |                 |              |        |        |       |          |      | 3   |
| 4                    | 30       |                     |                | 106                                     |           |                                   | /        | /               |               |              |             |                 |              |        |        |       |          |      | 4   |
| 5                    | 20       |                     |                | 107                                     |           |                                   | /        | /               |               |              |             |                 |              |        |        |       |          |      | 5   |
| 6                    | 10       |                     |                | 108                                     |           |                                   | /        | /               |               |              |             |                 |              |        |        |       |          |      | 6   |
| 7                    | 0        |                     |                | 109                                     |           |                                   | /        | /               |               |              |             |                 |              |        |        |       |          |      | 7   |
| 8                    |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      | 8   |
| 9                    |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      | 9   |
| 10                   |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      | 10  |
| 11                   |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      | 11  |
| 12                   |          |                     |                |                                         |           |                                   |          |                 |               |              |             |                 |              |        |        |       |          |      | 12  |

Chloro May 20



51.25 596 1991 0015 75

| VESSEL<br>USCG Healy | CRUISE ID<br>H10803 | PROJECT & LEG<br>BEST/BSIERP Summer '08 |                        |                         |           | Ship Designation (I.D.)<br>1H0802 |                                |                  |                  | STATION NO.<br>158               |                        |                      |                                                           |
|----------------------|---------------------|-----------------------------------------|------------------------|-------------------------|-----------|-----------------------------------|--------------------------------|------------------|------------------|----------------------------------|------------------------|----------------------|-----------------------------------------------------------|
|                      |                     | CONSC<br>CAST #                         | LATITUDE<br>DEG<br>MIN | LONGITUDE<br>DEG<br>MIN | DAY<br>MO | YR<br>HR<br>MIN                   | TIME (GMT)<br>DRY BULB<br>("C) | WET BULB<br>("C) | PRESSURE<br>(mb) | SEA STATE<br>VISIBILITY<br>(deg) | WIND<br>DIRN.<br>(kts) | WIND<br>SPD.<br>TYPE | CLOUD (amb<br>DEPTH<br>WEATHER<br>BOTTOM<br>STA. NAME/ID) |
| SBE 9+               |                     |                                         |                        |                         |           |                                   | FLUOR S/N                      |                  |                  |                                  |                        |                      |                                                           |
| PRESS S/N            |                     |                                         |                        |                         |           |                                   | SBE43-Dry (prime)              |                  |                  |                                  |                        |                      |                                                           |
| PRI TEMP S/N         |                     |                                         |                        |                         |           |                                   | SBE43-Dry (sec)                |                  |                  |                                  |                        |                      |                                                           |
| SEC TEMP S/N         |                     |                                         |                        |                         |           |                                   | Transmissometer                |                  |                  |                                  |                        |                      |                                                           |
| PRI COND S/N         |                     |                                         |                        |                         |           |                                   | PAR S/N                        |                  |                  |                                  |                        |                      |                                                           |
| SEC COND S/N         |                     |                                         |                        |                         |           |                                   | O2 Temp Sensor No.             |                  |                  |                                  |                        |                      |                                                           |
| NIS                  | DEPTH               | Roget,<br>Hydro Team-PMEI               |                        |                         |           |                                   | Tom W<br>Grebene               | Masha            | Sambrotto        | Harvey                           | Moran/<br>Shull        | Stoecker             | Pat                                                       |
| No                   | DESIRED             | notes                                   | SALT                   | NUTS                    | O2-Btl No | O2 Temp                           | CHL.                           | Frac CHL.        | DIC              | 018                              | Coope<br>15N           | 02/Ar<br>Prod        | DON                                                       |
| 1                    | 68                  |                                         |                        | 124                     |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 2                    | 50                  |                                         |                        | 125                     |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 3                    | 40                  |                                         |                        | 126                     |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 4                    | 30                  |                                         |                        | 127                     |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 5                    | 20                  |                                         |                        | 128                     |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 6                    | 10                  |                                         |                        | 129                     |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 7                    | 0                   |                                         |                        | 130                     | 205       |                                   | /                              | /                |                  |                                  |                        |                      |                                                           |
| 8                    |                     |                                         |                        |                         |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 9                    |                     |                                         |                        |                         |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 10                   |                     |                                         |                        |                         |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 11                   |                     |                                         |                        |                         |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |
| 12                   |                     |                                         |                        |                         |           |                                   |                                |                  |                  |                                  |                        |                      |                                                           |

2 MATHERS

| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BSIERP_Summer '08 |       | Ship Designation (I.D.)<br>TH0802 |         | STATION NO.<br>159 |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
|----------------------|----------|---------------------|-----------------|-----------------------------------------|-------|-----------------------------------|---------|--------------------|-----------|-----|------|--------|------|--------|------|-------|---------|-------|-------|--------|------------------------|--------------|
| CONSC<br>CAST #      | LATITUDE | DEG                 | MIN             | DEG                                     | MIN   | DAY                               | MO      | YR                 | HR        | MIN | (°C) | (°C)   | (mb) | *      | *    | (deg) | (kts)   | *     | *     | *      | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |
|                      |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| SBE 9+               |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| PRESS SN             |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| PRI TEMP SN          |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| SEC TEMP SN          |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| PRI COND SN          |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| SEC COND SN          |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| NIS                  | DEPTH    | Roset.              | Hydro Team-PMEL |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| No                   | DESIRED  | notes               | SALT            | NUTS                                    | 02-BN | No                                | 02 Temp | CHL.               | Frac CHL. | DIC | 018  | Cooper | b15N | 02/Air | Prod | DON   | Lessard | Lomas | Radon | µZoops | Shull                  | Stoecker     |
| 1                    | 69       |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 2                    | 50       |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 3                    | 40       |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 4                    | 30       |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 5                    | 20       |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 6                    | 10       |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 7                    | 0        |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 8                    |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 9                    |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 10                   |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 11                   |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |
| 12                   |          |                     |                 |                                         |       |                                   |         |                    |           |     |      |        |      |        |      |       |         |       |       |        |                        |              |

5 MATHTS



|                      |          |                     |                    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
|----------------------|----------|---------------------|--------------------|-----------------------------------------|-------------------|-----------------------------------|----------|-----------------|----------|-----------|------------|-----------|-------------|-----------|--------------|--------|-------|----------|-----|-----|
| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |                    | PROJECT & LEG<br>BEST/BS-ERP Summer '08 |                   | Ship Designation (I.D.)<br>1H0802 |          | STATION NO. 161 |          |           |            |           |             |           |              |        |       |          |     |     |
| CONSC<br>CAST #      | LATITUDE |                     | LONGITUDE          |                                         | TIME (GMT)        |                                   | DRY BULB | WET BULB        | PRESSURE | SEA STATE | WIND DIRN. | WIND SPD. | CLOUD (amt) | BOTTOM    | STA. NAME/ID |        |       |          |     |     |
|                      | DEG      | MIN                 | DEG                | MIN                                     | DAY               | MO                                | YR       | HR              | MIN      | (°C)      | (°C)       | (mb)      | *           | *         | (deg)        | (kts)  | *     | *        | (m) |     |
| 19 45.7              | 29.99    | N                   | 167 59.35          | W                                       | 29                | JUL                               | 08       | 18              | 02       | 4.2       | .          | 19        | 050         | 8         |              | 71     | 70M17 |          |     |     |
| SBE 9+               |          |                     | FLUOR S/N          |                                         | SBE43-Oxy (prime) |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
| PRESS SN             |          |                     | SBE43-Oxy (sec)    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
| PRI TEMP SN          |          |                     | Transmissometer    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
| SEC TEMP SN          |          |                     | PAR S/N            |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
| PRI COND SN          |          |                     | O2 Trip Setson No. |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
| SEC COND SN          |          |                     |                    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
| NIS                  | DEPTH    | Roset.              |                    | Hydro Team-PMEL                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     |     |
| No                   | DESIRED  | notes               | SALT               | NUTS                                    | 02-BIN            | No                                | 02 Temp  | CHL.            | Frac CHL | DIC       | 018        | Grebmeier | Mashia      | Sambrotto | Harvey       | Moran/ | Shull | Stoecker | Pat | NIS |
| 1                    | 69       |                     |                    | 9                                       |                   | 187                               |          |                 | /        |           |            |           |             |           |              |        |       |          |     | No  |
| 2                    | 50       |                     |                    |                                         | 10                |                                   |          |                 | /        |           |            |           |             |           |              |        |       |          |     | 1   |
| 3                    | 40       |                     |                    |                                         | 11                |                                   |          |                 | /        |           |            |           |             |           |              |        |       |          |     | 2   |
| 4                    | 30       |                     |                    |                                         | 12                |                                   |          |                 | /        |           |            |           |             |           |              |        |       |          |     | 3   |
| 5                    | 25       |                     |                    | 13                                      |                   |                                   |          |                 | /        |           |            |           |             |           |              |        |       |          |     | 4   |
| 6                    | 20       |                     |                    | 14                                      |                   |                                   |          |                 | /        |           |            |           |             |           |              |        |       |          |     | 5   |
| 7                    | 10       |                     |                    | 15                                      |                   |                                   |          |                 | /        |           |            |           |             |           |              |        |       |          |     | 6   |
| 8                    | 0        |                     |                    | 16                                      |                   |                                   |          |                 | /        |           |            |           |             |           |              |        |       |          |     | 7   |
| 9                    |          |                     |                    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     | 8   |
| 10                   |          |                     |                    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     | 9   |
| 11                   |          |                     |                    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     | 10  |
| 12                   |          |                     |                    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     | 11  |
|                      |          |                     |                    |                                         |                   |                                   |          |                 |          |           |            |           |             |           |              |        |       |          |     | 12  |

2 MANTIS



| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |      | PROJECT & LEG<br>BEST/BSERP Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |      | STATION NO.<br>163 |          |           |                   |           |           |            |        |              |       |       |       |         |     |
|----------------------|---------|---------------------|------|----------------------------------------|---------|-----------------------------------|------|--------------------|----------|-----------|-------------------|-----------|-----------|------------|--------|--------------|-------|-------|-------|---------|-----|
| CAST #               | CONSC   | LATITUDE            |      | LONGITUDE                              |         | TIME (GMT)                        |      | DRY BULB           | WET BULB | PRESSURE  | SEA STATE         | WIND DRN. | WIND SPD. | CLOUD (amb | BOTTOM | STA. NAME/ID |       |       |       |         |     |
|                      |         | DEG                 | MIN  | DEG                                    | MIN     | DAY                               | MO   | YR                 | HR       | MIN       | (°C)              | (°C)      | (mb)      | *          | *      | (deg)        | (kts) | *     | *     | (m)     |     |
|                      |         | 196                 | 57   | 30                                     | .10     | N                                 | 167  | 21                 | 05       | W         | 29                | JUL       | 08        | 21         | 11     | 5.5          | 4.7   | 19    | 33506 | 7070m15 |     |
| SBE 9+               |         |                     |      |                                        |         |                                   |      |                    |          |           | FLUOR S/N         |           |           |            |        |              |       |       |       |         |     |
| PRESS SN             |         |                     |      |                                        |         |                                   |      |                    |          |           | SBE43-Oxy (prime) |           |           |            |        |              |       |       |       |         |     |
| PHT TEMP SN          |         |                     |      |                                        |         |                                   |      |                    |          |           | SBE43-Oxy (sec)   |           |           |            |        |              |       |       |       |         |     |
| SEC TEMP SN          |         |                     |      |                                        |         |                                   |      |                    |          |           | Transmissometer   |           |           |            |        |              |       |       |       |         |     |
| PHT COND SN          |         |                     |      |                                        |         |                                   |      |                    |          |           | PAR S/N           |           |           |            |        |              |       |       |       |         |     |
| SEC COND SN          |         |                     |      |                                        |         |                                   |      |                    |          |           | 02 Tmp Sensor No. |           |           |            |        |              |       |       |       |         |     |
| NIS                  | DEPTH   | Roset.              |      | Hydro Team:PMEL                        |         | Tom W.                            |      | Grebmeier          | Mashia   | Sambrotto | Harvey            | Moran'    | Shull     | Stoecker   | Pat    |              |       |       |       |         |     |
| No.                  | DESIRED | notes               | SALT | NUTS                                   | 02-BLNU | 02 Temp                           | CHL. | Frac CHL.          | DIC      | 01B       | Cooper            | BLSN      | 02/Ar     | Prod       | DON    | Lessard      | Lomas | Radon | Zoops | Th      | No. |
| 1                    | 65      |                     |      | 24                                     | 171     |                                   |      |                    |          |           | 706               |           |           |            |        |              |       |       |       |         | 1   |
| 2                    | 50      |                     |      | 25                                     |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 2   |
| 3                    | 40      |                     |      | 26                                     |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 3   |
| 4                    | 30      |                     |      | 27                                     |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 4   |
| 5                    | 20      |                     |      | 28                                     |         |                                   |      |                    |          |           | ✓ 767             |           |           |            |        |              |       |       |       |         | 5   |
| 6                    | 10      |                     |      | 29                                     |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 6   |
| 7                    | 0       |                     |      | 30                                     | :       |                                   |      |                    |          |           | ✓ 769             |           |           |            |        |              |       |       |       |         | 7   |
| 8                    |         |                     |      |                                        |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 8   |
| 9                    |         |                     |      |                                        |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 9   |
| 10                   |         |                     |      |                                        |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 10  |
| 11                   |         |                     |      |                                        |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 11  |
| 12                   |         |                     |      |                                        |         |                                   |      |                    |          |           |                   |           |           |            |        |              |       |       |       |         | 12  |

✓ used  
as added  
done  
NJ+  
changes



| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803 |                | PROJECT & LEG<br>BEST/BSIERP Summer '08 |                  | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>165 |               |              |             |                 |              |           |        |         |       |          |             |     |    |
|----------------------|----------|---------------------|----------------|-----------------------------------------|------------------|-----------------------------------|------------------|--------------------|---------------|--------------|-------------|-----------------|--------------|-----------|--------|---------|-------|----------|-------------|-----|----|
| CONSC<br>CAST #      | LATITUDE | LONGITUDE           |                | TIME (GMT)                              | DRY BULB<br>(°C) | WET BULB<br>(°C)                  | PRESSURE<br>(mb) | SEA STATE          | WIND<br>DIRN. | WIND<br>SPD. | CLOUD (amt) | BOTTOM<br>DEPTH | STA. NAME/ID |           |        |         |       |          |             |     |    |
| DEG                  | MIN      | DEG                 | MIN            | DAY                                     | MO               | HR                                | MIN              | *                  | *             | *            | (deg)       | (kts)           | *            | *         |        |         |       |          |             |     |    |
| 198                  | 57.25    | 67                  | 166 48.13      | W                                       | JUL              | 08                                | 20               | 44                 | 6.5           | 4.9          | 20          | 16              | 4            |           |        |         |       |          |             |     |    |
| SBE 9+               |          |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             |     |    |
| PRESS SN             |          |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             |     |    |
| PRI TEMP SN          |          |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             |     |    |
| SEC TEMP SN          |          |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             |     |    |
| PRI COND SN          |          |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             |     |    |
| SEC COND SN          |          |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             |     |    |
| NIS                  | DEPTH    | Roset.              | Hydro Team-PME |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             |     |    |
| No                   | DESIRED  | notes               | SALT           | NUTS                                    | 02-BN            | No                                | 02 Temp          | CHL.               | Frac CHL.     | DIC          | 018         | Gebink          | Masha        | Sambrotto | Harvey | Moran/  | Shull | Stoecker | Pat         | NIS |    |
| 1                    | 67       |                     | 98             |                                         |                  |                                   |                  |                    |               |              | Cooper      | 15N             | 02/Ar        | Prod      | DON    | Lessard | Lomas | Radon    | $\mu$ Zoops | Th  | No |
| 2                    | 50       |                     | 99             |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 1   |    |
| 3                    | 40       |                     | 160            |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 2   |    |
| 4                    | 30       |                     | 161            |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 3   |    |
| 5                    | 25       |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 4   |    |
| 6                    | 18       |                     | 162            |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 5   |    |
| 7                    | 14       |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 6   |    |
| 8                    | 10       |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 7   |    |
| 9                    | 16       |                     | 163            |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 8   |    |
| 10                   | 6        |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 9   |    |
| 11                   | 0        |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 10  |    |
| 12                   | 0        |                     | 164            |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 11  |    |
|                      |          |                     |                |                                         |                  |                                   |                  |                    |               |              |             |                 |              |           |        |         |       |          |             | 12  |    |

2



| VESSEL<br>USCG Healy |         | CRUISE ID<br>H10803 |                 | PROJECT & LEG<br>BEST/BSI/FRP_Summer '08 |         |         |           | Ship Designation (I.D.)<br>1H0802 |         |                  |                  | STATION NO.<br>167 |           |               |                       |                     |                 |              |
|----------------------|---------|---------------------|-----------------|------------------------------------------|---------|---------|-----------|-----------------------------------|---------|------------------|------------------|--------------------|-----------|---------------|-----------------------|---------------------|-----------------|--------------|
| CONSC:<br>CAST #     |         | LATITUDE            |                 | LONGITUDE                                |         |         |           | TIME (GMT)                        |         | DRY BULB<br>(°C) | WET BULB<br>(°C) | PRESSURE<br>(mb)   | SEA STATE | WIND<br>DIRN. | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>TYPE | BOTTOM<br>DEPTH | STA. NAME/ID |
|                      |         | DEG<br>MIN          | DEG<br>MIN      | DAY                                      | MO      | YR      | HR<br>MIN |                                   |         | *                | *                | *                  | (deg)     | *             | *                     | *                   | (m)             |              |
| 2                    | 0       | 0                   | 57              | 18                                       | .98     | N       | 16        | 6                                 | 19      | .82              | W                | 30                 | JUL       | 08            | 03                    | 25                  | 7.7             | 6.520        |
| SBE 9+               |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| PRESS SN             |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| PRI TEMP SN          |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| SEC TEMP SN          |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| PRI COND SN          |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| SEC COND SN          |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| NIS                  | DEPTH   | Roset.              | Hydro Team-PMEL |                                          |         |         |           | Torn W                            | Grebene | Masha            | Sambrotto        | Harvey             | Moran/    | Shull         | Stoecker              | Pat                 |                 |              |
| No                   | DESIRED | notes               | SALT            | NUTS                                     | 02-BLNO | 02 Temp | CHL.      | Frac CHL.                         | DIC     | 01B              | Cooper           | 01SN               | 02/Air    | Prod          | DON                   | Lessard             | Lomas           | Radon        |
| 1                    | 66      |                     |                 | 112                                      |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 2                    | 50      |                     |                 | 113                                      |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 3                    | 40      |                     |                 | 114                                      |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 4                    | 30      |                     |                 | 115                                      |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 5                    | 20      |                     |                 | 116                                      |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 6                    | 10      |                     |                 | 117                                      |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 7                    | 0       |                     |                 | 118                                      |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 8                    |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 9                    |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 10                   |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 11                   |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |
| 12                   |         |                     |                 |                                          |         |         |           |                                   |         |                  |                  |                    |           |               |                       |                     |                 |              |

790  
791





| VESSEL<br>USCG Healy | CRUISE ID<br>H10803 | PROJECT & LEG<br>BEST/BSS/RP Summer '08 |                     | Ship Designation (I.D.)<br>1H0802 |           | STATION NO.<br>170   |                  |                  |                  |                |                        |                       |                  |                        |                         |
|----------------------|---------------------|-----------------------------------------|---------------------|-----------------------------------|-----------|----------------------|------------------|------------------|------------------|----------------|------------------------|-----------------------|------------------|------------------------|-------------------------|
|                      |                     | CONSC<br>CAST #                         | LATITUDE<br>DEG MIN | LONGITUDE<br>DEG MIN              | DAY MO YR | TIME (GMT)<br>HR MIN | DRY BULB<br>(°C) | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>* | WIND<br>DIRN.<br>(deg) | WIND<br>SPO.<br>(kts) | CLOUD (amt)<br>• | BOTTOM<br>DEPTH<br>(m) | WEATHER<br>STA. NAME/ID |
| 20                   | 35                  | 706                                     | .65 N               | 16536.26 W                        | 30 JUL 08 | 07 12                | 17.9             | 16.4             | 1013.4           | 34             | 14                     | 7                     | 70               | M08                    |                         |
| SBE 9+               |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  | MAX. DEPTH = m         |                         |
| PRESS SN             |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        |                         |
| PRI TEMP SN          |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        |                         |
| SEC TEMP SN          |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        |                         |
| PRI COND SN          |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        |                         |
| SEC COND SN          |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        |                         |
| NIS                  | DEPTH               | ROSET.                                  | Hydro Team-PMEI     |                                   |           |                      | Tom W            | Gebrem           | Masha            | Sambrotto      | Harvey                 | Moran/                | Shull            | Stecker                | Pat                     |
| No                   | DESIRED             | notes                                   | SALT                | NUITS                             | 02-Btl No | 02 Temp              | CHL.             | Frac CHL.        | DIC              | 018            | Cooper                 | 615N                  | 02/Ar            | Prod                   | DON                     |
| 1                    | 66                  |                                         |                     | 133                               |           |                      | /                |                  |                  |                |                        |                       |                  |                        | 1                       |
| 2                    | 50                  |                                         |                     |                                   |           |                      | /                |                  |                  |                |                        |                       |                  |                        | 2                       |
| 3                    | 40                  |                                         |                     |                                   |           |                      | /                |                  |                  |                |                        |                       |                  |                        | 3                       |
| 4                    | 30                  |                                         |                     |                                   |           |                      | /                |                  |                  |                |                        |                       |                  |                        | 4                       |
| 5                    | 20                  |                                         |                     |                                   |           |                      | /                |                  |                  |                |                        |                       |                  |                        | 5                       |
| 6                    | 10                  |                                         |                     |                                   |           |                      | /                |                  |                  |                |                        |                       |                  |                        | 6                       |
| 7                    | 0                   |                                         |                     |                                   |           |                      | /                |                  |                  |                |                        |                       |                  |                        | 7                       |
| 8                    |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        | 8                       |
| 9                    |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        | 9                       |
| 10                   |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        | 10                      |
| 11                   |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        | 11                      |
| 12                   |                     |                                         |                     |                                   |           |                      |                  |                  |                  |                |                        |                       |                  |                        | 12                      |

These  
were added  
during  
VTPR analysis.)



| VESSEL<br>USCG Healy |          | CRUISE ID<br>H10803    |      | PROJECT & LEG<br>BEST/SBEP Summer '08 |                  | Ship Designation (I.D.)<br>1H0802 |                  | STATION NO.<br>172      |                                          |                 |             |       |          |      |     |         |       |       |        |    |    |    |
|----------------------|----------|------------------------|------|---------------------------------------|------------------|-----------------------------------|------------------|-------------------------|------------------------------------------|-----------------|-------------|-------|----------|------|-----|---------|-------|-------|--------|----|----|----|
| CONSC<br>CAST #      | LATITUDE | LONGITUDE              |      | TIME (GMT)                            | DRY BULB<br>(°C) | WET BULB<br>(°C)                  | PRESSURE<br>(mb) | SEA STATE<br>VISIBILITY | WIND<br>DIRN.<br>SPD.<br>TYPE<br>WEATHER | BOTTOM<br>DEPTH | STA. NAME/D |       |          |      |     |         |       |       |        |    |    |    |
| DEG                  | MIN      | DEG                    | MIN  | DAY                                   | MO               | YR                                | HR               | MN                      | (deg)                                    | (kts)           | (m)         |       |          |      |     |         |       |       |        |    |    |    |
| 20                   | 55       | 65                     | 35   | 6                                     | N                | 16508.19                          | W                | 30                      | JUL                                      | 08              | 1003        |       |          |      |     |         |       |       |        |    |    |    |
| SBE 9+               |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    |    |
| PRESS SN             |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    |    |
| PRI TEMP SN          |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    |    |
| SEC TEMP SN          |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    |    |
| PRI COND SN          |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    |    |
| SEC COND SN          |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    |    |
| NIS                  | DEPTH    | Roset. Hydro Team-PMEL |      |                                       |                  | TOM W                             | Grebene          | Masha                   | Sambrotto                                | Harvey          | Moran/      | Shull | Stoecker | Pat  | NIS |         |       |       |        |    |    |    |
| No                   | DESIRED  | notes                  | SALT | NUTS                                  | O2-BIN No        | O2 Temp                           | CHL.             | Frac CHL.               | DIC                                      | O1B             | Coope       | 015N  | 02/Ar    | Prod | DON | Lessard | Lomas | Radon | WZoops | Th | No |    |
| 1                    | 71       |                        |      | 148                                   |                  |                                   |                  |                         |                                          | 792             |             |       |          |      |     |         |       |       |        |    | 1  |    |
| 2                    | 50       |                        |      | 149                                   |                  |                                   |                  |                         |                                          | 793             |             |       |          |      |     |         |       |       |        |    | 2  |    |
| 3                    | 40       |                        |      | 150                                   |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 3  |
| 4                    | 30       |                        |      | 151                                   |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 4  |
| 5                    | 20       |                        |      | 152                                   |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 5  |
| 6                    | 10       |                        |      | 153                                   |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 6  |
| 7                    | 0        |                        |      | 154                                   |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 7  |
| 8                    |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 8  |
| 9                    |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 9  |
| 10                   |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 10 |
| 11                   |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 11 |
| 12                   |          |                        |      |                                       |                  |                                   |                  |                         |                                          |                 |             |       |          |      |     |         |       |       |        |    |    | 12 |

$\text{CO}_2$  surface

| VESSEL<br>USCG Healy |            | CRUISE ID<br>H10803    |      | PROJECT & LEG<br>BEST/BSI/EP_Summer '08 |         | Ship Designation (I.D.)<br>1H0802 |      | STATION NO.<br>172 |                   |                  |                  |                  |                |                        |                       |                  |                 |                        |              |    |
|----------------------|------------|------------------------|------|-----------------------------------------|---------|-----------------------------------|------|--------------------|-------------------|------------------|------------------|------------------|----------------|------------------------|-----------------------|------------------|-----------------|------------------------|--------------|----|
| CONSC<br>CAST #      | LATITUDE   | DEG                    | MIN  | DEG                                     | MIN     | DAY                               | MO   | YR                 | TIME (GMT)        | DRY BULB<br>(°C) | WET BULB<br>(°C) | PRESSURE<br>(mb) | SEA STATE<br>+ | WIND<br>DIRN.<br>(deg) | WIND<br>SPD.<br>(kts) | CLOUD (amt)<br>* | WEATHER<br>TYPE | BOTTOM<br>DEPTH<br>(m) | STA. NAME/ID |    |
| 2065654.65 N         | 16450.19 W | 30                     | JUL  | 08                                      | 1146    | 7.8                               | .    | 21                 | 325               | K                |                  |                  |                |                        |                       |                  | 7370 m          | 05                     |              |    |
| SBE 9+               |            |                        |      |                                         |         |                                   |      |                    | FLUOR S/N         |                  |                  |                  |                |                        |                       |                  |                 |                        |              |    |
| PRESS SN             |            |                        |      |                                         |         |                                   |      |                    | SBE43-Cby (prime) |                  |                  |                  |                |                        |                       |                  |                 |                        |              |    |
| PRI TEMP SN          |            |                        |      |                                         |         |                                   |      |                    | SBE43-Cby (sec)   |                  |                  |                  |                |                        |                       |                  |                 |                        |              |    |
| SEC TEMP SN          |            |                        |      |                                         |         |                                   |      |                    | Transmissometer   |                  |                  |                  |                |                        |                       |                  |                 |                        |              |    |
| PRI COND SN          |            |                        |      |                                         |         |                                   |      |                    | PAR S/N           |                  |                  |                  |                |                        |                       |                  |                 |                        |              |    |
| SEC COND SN          |            |                        |      |                                         |         |                                   |      |                    | O2 Tmp Senson No. |                  |                  |                  |                |                        |                       |                  |                 |                        |              |    |
| NIS                  | DEPTH      | Rosat: Hydro Team-PMEL |      |                                         |         |                                   |      |                    | Torr W            | Gebing           | Masha            | Sambrotto        | Harvey         | Moran/                 | Shull                 | Stoecker         | Pat             |                        | NIS          |    |
| No                   | DESIRED    | notes                  | SALT | NUTS                                    | O2-BLNo | O2 Temp                           | CHL. | Frac CHL.          | 018               | Coope            | N/SN             | O2/Ar            | Prod           | DON                    | Lessard               | Lomas            | Radon           | μZoops                 | Th           | No |
| 1                    | 69         |                        |      | 31                                      |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 1            |    |
| 2                    | 50         |                        |      | 32                                      | 150     |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 2            |    |
| 3                    | 40         |                        |      | 33                                      |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 3            |    |
| 4                    | 30         |                        |      | 34                                      |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 4            |    |
| 5                    | 20         |                        |      | 35                                      |         | /                                 |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 5            |    |
| 6                    | 10         |                        |      | 36                                      |         | /                                 |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 6            |    |
| 7                    | 0          |                        |      | 37                                      |         | /                                 |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 7            |    |
| 8                    |            |                        |      |                                         |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 8            |    |
| 9                    |            |                        |      |                                         |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 9            |    |
| 10                   |            |                        |      |                                         |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 10           |    |
| 11                   |            |                        |      |                                         |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 11           |    |
| 12                   |            |                        |      |                                         |         |                                   |      |                    |                   |                  |                  |                  |                |                        |                       |                  |                 |                        | 12           |    |

CHL MAX ② 30m

MAX DEPTH = 69 m

REMARKS

2 MARCH







