

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. *R*

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
154	14	62	N	166	33	14	JUN	09	23	09	6.3	21.20		25	*	136	16				1224	1

REMARKS: *Test Coat Reeling Cannon*

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

MAX. DEPTH = 1825 m

No. DESIRED	notes	SALT	Nut. Bl	O2-Bl. No	CHL. Frac	CHL. DIC/CAK	DOC	O18	Weingart		Sambrotto		DON	Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	No.	
									Julie	Urea Part.	Prod									
1	6 ✓	511	1	238																1
2	1000 ✓		2	1000																2
3	750 ✓		3																	3
4	900 ✓	485	4	157																4
5	350 ✓		5																	5
6	200 ✓		6	147																6
7	150 ✓		7																	7
8	100 ✓		8	111																8
9	75 ✓		9																	9
10	50 ✓		10	121																10
11	40 ✓		11																	11
12	30		12																	12

Robette Notes:  
 13 30  
 14 20  
 15 20  
 16 10  
 17 10

*See page 2*

*DOC*

$\frac{1213}{33}$

*13.14.03*

*1030*



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer09  
 PROJECT & LEG: BEST/BIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 2

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
00254	20	39	165	41	15	JUN	09	08	44	5.4	Hum 88.18%		89			118	20			94	U-2

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: *Vertical pass (West)*  
 MAX. DEPTH = 90 m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil No	CHL	Frac CHL	DIC/AIK	DOC	O18	Julie	Sambrotto			Lomas	Harvey	Diane	Pat/Lared	Optics	No.
											Urea Part.	Prod	DON						
1	b	512	116						500										1
2	75		FK																2
3	50		18						501										3
4	40		19																4
5	30		20																5
6	20		21																6
7	10		22																7
8	0		23						502										8
9																			9
10																			10
11																			11
12																			12

Rosette Notes: Upper 40m high chlor

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SI/ERP\_Summer'09  
 PROJECT & LEG: BEST/SI/ERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 3

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
3	54	26.9	6 N	16	517.8	4 W	15	JUN	09	13	02	02	6.3		07			11	22	0		157	152

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m  
 SBE 9+ \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No.	NIS DEPTH	Roset	Hydro Team-PMEL										Weingart	Julie	Sambrotto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Lared	Optics	NIS No.		
			No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Fac	CHL	DIC/CAK	DOC			O18	S15N	Urea							Part.	Prod
1	15	25	513	24							503														1
2	125			25																					2
3	100			26																					3
4	75			27																					4
5	50			28							504														5
6	40			29																					6
7	30			30																					7
8	20			31																					8
9	10			32																					9
10	0			33							505														10
11																									11
12																									12

Chlor high 0 to 30

Rosette Notes:



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: U-4(4)

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
4	54	29	910 N	164	57	23 W	15	JUN	09	13	10	5.8	8.3	0.6	0	038	04	87				61	19510004

REMARKS: East Windward  
 MAX. DEPTH = 52 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset. notes	Hydro Team-PMEL										Weingart		Julie		Sambrotto			Moran/	Harvey	Diane	Pat/ Jared	Optics	Nis No.		
		No. DESIRED	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/CAK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard			TH							
1	52	✓514	34	✓6								✓														1
2	40		35	✓5								✓														2
3	30		36	✓4								✓														3
4	20		37	✓3								✓														4
5	10		38	✓2								✓														5
6	0		39	✓1								✓														6
7																										7
8																										8
9																										9
10																										10
11																										11
12																										12

DID NOT FIRE

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. **5**

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
554	52	32	N	165	13	73	W	15	JUN	09	19	47	6.3			116	18	8			128	UAPB

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS \_\_\_\_\_  
 MAX. DEPTH = 118 m

No. DESIRED	Roset.	SALT	Num. Bl	O2-Bl. No	CHL. Frac	CHL D/C/A/K	DOC	O18	Weingart		Sambrotto			Moran/		Diane	Pat./Jared	Optics	No.	
									Julie	Urea Part.	Prod	DON	Lomas	Harvey	Lessard					
1	120	515	40																	1
2	100		41																	2
3	75		42																	3
4	50		43																	4
5	40		44																	5
6	35		45																	6
7	20		46																	7
8	20		47																	8
9	15		48																	9
10	10		49																	10
11	0		50																	11
12																				12

Rosette Notes: *SFC*  
*chl max*  
*chl hi, 0-20*  
*ophelone max*

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP\_Summer'09  
 PROJECT & LEG: BEST/BIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO: V195-7  
 (6)

CONSC	CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BUB	WET BUB	WET BUB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
	006	55	05	40	N	15	JUN	09	02	31	18	6.3	86.	05737	7	635	138					101	

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Temp Sensor No.  
 REMARKS: See page 20  
 MAX. DEPTH = 97 m

NIS DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/	Harvey	Diane	Pat./lared	Optics	NIS No.		
		No. DESIRED	notes	SALT	Nul. Bil	O2-Bil No	CHL. Frac	CHL/DIC/Alk	DOC	O18	Julie	Urea Part.	Prod	DON	Lomas	Lessard		TH						
1	BT			516	51																			1
2	97																							2
3	97																							3
4	97																							4
5	97																							5
6	97																							6
7	76																							7
8	50																							8
9	40																							9
10	30																							10
11	19																							11
12	19																							12

Rosette Notes:  
 3 at 50% light 3m  
 3 at 40% max 19m  
 Diver

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP\_Summer'09  
 PROJECT & LEG: BEST/SIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO: LAAP-7

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	SEC	DEG	MIN	SEC													DAY
00655	50	57	40	N	164	48	22	W	15	JUN	09	23	18						

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 Temp Sensor No. \_\_\_\_\_

REMARKS: *page 2 of 2*

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	Roset	Hydro Team-PMEL						Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	No.
		SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/ALK			DOC	O18	\$15N						
19																		1
18																		2
17																		3
16																		4
15																		5
14																		6
13																		7
12																		8
11																		9
10																		10
9																		11
8																		12

Rosette Notes: *all star bottom bottles passed to filter*

VESSEL: RVV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP\_Summer'09  
 PROJECT & LEG: BEST/SIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 4A P-6 (7)

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0755	18	22	16	42	3	6	2009	02	37		6.288	09	37	064	138						101	

MAX. DEPTH = 97 m

REMARKS

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Imp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset. notes	Hydro Team-PMEL										Weingart		Sambrotto			Moran/ Lomas		Harvey Lessard		Diane		Pat Jared		Optics	NIS No.	
		SALT	Nul.Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	Pat	Jared	Optics	NIS No.						
1	Bot	517	59																								1
2	75		60																								2
3	56		61																								3
4	46		62																								4
5	30		63																								5
6	20		64																								6
7	16		65																								7
8	0		66																								8
9																											9
10																											10
11																											11
12																											12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO: 1A-P-6 (7)

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
06855	19	30	N	64	22	16	JUN	09	04	13		6.19	8.1	0638	8	060	13	8			119	

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 011<sup>24</sup> water to filter for heavy tanks  
 needs near bottom  
 no samples taken

MAX. DEPTH = 82 m

NIS DEPTH	Roset	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/	lared	Optics	NIS			
		No. DESIRED	notes	SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	S15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane		TH	lared	Optics
1	82m																					1
2																						2
3																						3
4																						4
5																						5
6																						6
7																						7
8																						8
9																						9
10																						10
11																						11
12																						12

Rosette Notes:

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG  
 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. **2**

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
00955	31	30	1655	68	16	JUN	09	06	17	5.8	92.1		0438	050	128						95	UAP-5

REMARKS: *many jelly fish*

MAX. DEPTH = 92 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Trmp Sension No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.			
		No. DES/REF	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	δ15N	Urea	Part	Prod	DON	Lomas	Lessard		TH		
1	68		518	67																1	
2	75			68																	2
3	50			69																	3
4	40			70																	4
5	30			71																	5
6	20			72																	6
7	10			73																	7
8	0			74																	8
9																					9
10																					10
11																					11
12																					12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N199 for PMEL CTD archive  
 STATION NO. (9)

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
01055	31	40	N	163	58	61	W	16	JUN	09	09	29	6.5		03			54	14			6	UAP-4

REMARKS: MAX. DEPTH = m

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	Rosel.	Hydro Team-PMEL										Weingart	Julie	Sambroto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	Nis No.			
		No. DESIRED	notes	SALT	Nut. Blt	O2-Blt. No	CHL. Frac	CHL. DIC/CAIK	DOC	O18	Urea Part.			Prod	DON	TH									
1	90V		519	75																					1
2	75V			76																					2
3	50V			77		6																			3
4	40V			78		4																			4
5	30V			79		4																			5
6	20V			80		3																			6
7	10V			81		2																			7
8	D			82		1																			8
9																									9
10																									10
11																									11
12																									12

Rosette Notes:



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 19510 011 10

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
11	55	57.69	N 163	8.33	W 16	JUN	09	18	45	5.9	22.1%			01			087	083			90	UAP-3

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Temp Sensor No.  
 REMARKS  
 MAX. DEPTH = 80 m

No. DESIRED	notes	SALT	Hydro Team-PMEL						DOC	O18	Wingart	Julie	Sambrotto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	No.		
			Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/Alk	Wingart					Urea Part.	Prod	DON	Lomas							Harvey	Diane
1	80 ✓		83						X															1
2	50 ✓		84			X																X		2
3	40 ✓		85			X			X													X		3
4	40 ✓		85			X			X													X		4
5	30 ✓		86			X																X		5
6	27 ✓																					X		6
7	27 ✓																					X		7
8	27 ✓																					X		8
9	27 ✓																					X		9
10	24 ✓																					X		10
11	20 ✓																					X		11
12	18 ✓																					X		12

(487)

Rosette Notes:  
 85  
 50 4240 30 29 18 12 10 6 0 0  
 Q3 at b11  
 27 27 27 27  
 333  
 27 27

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP\_Summer'09  
 PROJECT & LEG: BEST/BIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.:

CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DAY MO YR	TIME (GMT) HR MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
			JUN 09												

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 Temp Sensor No. \_\_\_\_\_

REMARKS \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset. notes	Hydro Team-PMEL						Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
		SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/ALK	DOC			O18	Urea Part.	Prod						
13	101																	1
14	101																	2
15	101																	3
16	101																	4
17	101																	5
18	101																	6
19	101																	7
20	101																	8
21	101																	9
22	101																	10
23	101																	11
24	101																	12

Rosette Notes: *Loss on 20xha at Diane's depths*

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 11

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
1255	57	69	N	168	08	33	W	1	6	JUN	09	14	02	6.7	.	00	04	21	13	.	.	82	WPA-2

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: Tally covering 1<sup>st</sup> sensor? + other CO2, So on up cast)  
 MAX. DEPTH = 74 m

NIS DEPTH	Roset	Hydro Team-PMEL										Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics		NIS
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/CAK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH									
1	74		520	90																							1
2	50			91																							2
3	40			92																							3
4	30			93																							4
5	20			94																							5
6	10			95																							6
7	0			96																							7
8																											8
9																											9
10																											10
11																											11
12																											12

Rosette Notes:  
 5, has problems - Sully?  
 Chmax ~ 22ms  
 0.3 min above this  
 10ms T at 10ms - opening blocked? Sully

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 12

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
013	56	24	111N	162	18	16	JUN	09	20	51	7.4			993	8065	117					78	WAP-1

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR S/N  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR S/N  
 O2 Temp Sensor No.  
 REMARKS: *max haul*  
*Trashed bottom with waste*  
 MAX. DEPTH = 75 m

NIS DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/		Harvey		Diane		Pat./Iared		Optics		NIS
		No. DESIRE	notes	SALT	NUL/BIL	O2-BIL No	CHL	Frac CHL	DIC/AIK	DOC	O18	O18	Julie	Urea Part.	Prod	DON	Lomas	Lessard			TH						
1	9.5		521	97																							1
2	56			98																							2
3	40			99																							3
4	30			100																							4
5	20			101																							5
6	10			102																							6
7	0			103																							7
8																											8
9																											9
10																											10
11																											11
12																											12

Rosette Notes:  
*Cher Max 21 m*

VESSEL R/V Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP\_Summer'09 PROJECT & LEG BEST/SIERP\_Summer'09 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive STATION NO. **V3**

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0145637			161152.85			16	JUN	09	23	59			7.0		995.8			055	153			73	4AP-0

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 Temp Sensor No. \_\_\_\_\_

REMARKS \_\_\_\_\_

MAX. DEPTH = 67 m

No. DESIRED	Roset. notes	Hydro Team-PMEL						DOC	OT8	Weingart	Julie	Sambrotto				Lomas	Harvey	Diane	Pat. Jared	Optics	No.			
		SALT	Nu: Bl	O2-Bll No	CHL. Frac	CHL	CHL/CAIK					Prod	DON	Moran/	Lessard							TH		
1	Bot	522	104																					1
2	50		105																					2
3	70		106																					3
4	30		107																					4
5	20		108																					5
6	10		109																					6
7	0		110																					7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N199 for PMEL CTD archive  
 STATION NO.: 14

CONSC	CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	0155658	16	19	16	24	17	JUN	09	06	25	17.3			983.8	052	144						80	UPR(-1)

REMARKS: MAX. DEPTH = 78 m

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 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	Hydro Team-PMEL										Wingard	Julie	Sambroto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	No.			
		SALT	Nut Bl	O2-BI.No	CHL	Frac CHL	DIC/CAIK	DOC	O18	615N	Urea Part.			Prod	DON	Lomas							Lessard	Diane	Pat/Jared
1	Bot	523	111																						1
2	50		112																						2
3	46		113																						3
4	30		114																						4
5	20		115																						5
6	10		116																						6
7	0		117																						7
8																									8
9																									9
10																									10
11																									11
12																									12

Rosette Notes: Chl or MAX 28 m to near bottom

VESSEL: RVV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: 6N195-10 or 6N193 for PMEL CTD archive  
 Ship Designation (I.D.): 6N195-10 or 6N193 for PMEL CTD archive  
 STATION NO.: 15

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	84%	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
016	57	03	32N	161	02	63W	17	JUN	09	05	40		6.9			98	28	03	6	33			71	UAP-(2)

REMARKS: MAX. DEPTH = 68 m

SBE 9+  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Tmp Sensor No.

NIS DEPTH	Rosel	Hydro Team-PMEL										Weingart	Julie	Sambroto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	NIS No.				
		No. DESIRED	notes	SALT	Nut. Bl	O2-BL No	CHL. Frac	CHL	CHL	DIC	CAIK			DOC	OT18	615N							Urea Part.	Prod	DON	TH
1	80t		524	118																						1
2	50			119																						2
3	40			120																						3
4	30			121																						4
5	20			122																						5
6	10			123																						6
7	0			124																						7
8																										8
9																										9
10																										10
11																										11
12																										12

Club May 15m

Rosette Notes:

VESEL R/V Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) PROJECT & LEG BEST/BSIERP Summer'09 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive STATION NO. 6N195101716

CONSC	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
01757	50.66 N	16120.00 W	7 JUN 09 11:19	7.0		98			072	8			45	CN-0

REMARKS: *Water for bungs*

MAX. DEPTH = 41 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No.	DEPT	No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/CAIK	DOC	O18	Weingart		Sambrotto			DON	Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	No.
												Julie	Urea Part.	Prod									
1	40			525	125						509												1
2	30				126																		2
3	20				127																		3
4	10				128																		4
5	7																						5
6	7																						6
7	7																						7
8	7																						8
9	7																						9
10	7																						10
11	7																						11
12	7																						12

Rosette Notes:



VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG  
 Ship Designation (I.D.) 6N195-10 or 6N199 for PMEL CTD archive  
 STATION NO. 16

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
DEG MIN	DEG MIN	DAY MO YR	HR MIN	(°C)	(°C)	(mb)			(deg)	(kts)			(m)	
	N													

REMARKS

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 Temp Sensor No. \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	Rosel	Hydro Team-PMEL					Waingard	Julia	Sambrotto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	Nis No.
		SALT	Nut Bil	O2-Bil.No	CHL. Frac	CHL DIC/CAIK			DOC	O18	Urea						
1	7																1
2	7																2
3	7																3
4	0																4
5																	5
6																	6
7																	7
8																	8
9																	9
10																	10
11																	11
12																	12

13  
14  
15  
16  
17

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP\_Summer'09  
 PROJECT & LEG: BEST/SIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 6N19510018 (17)

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID		
	DEG	MIN	DEG	MIN	DAY												MO	YR
18	57	33.6	07	7.1	7	JUN	09	15	26	6.1		97	8	54	11	9	52	CN2

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 Temp Sensor No. \_\_\_\_\_

REMARKS: Prod Cast  
 MAX. DEPTH = 45 m

No DESIRED	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambrotto				Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis
		notes	SALT	Nut Bil	O2-Bil.No	CHL.	Frac CHL			DIC/CAIK	DOC	O18	Urea						
1	645 ✓										✓	✓	✓	✓	✓				1
2	645 ✓										✓	✓	✓	✓	✓				2
3	645 ✓										✓	✓	✓	✓	✓				3
4	68 ✓										✓	✓	✓	✓	✓				4
5	68 ✓										✓	✓	✓	✓	✓				5
6	15 ✓										✓	✓	✓	✓	✓				6
7	10 ✓									02	✓	✓	✓	✓	✓				7
8	7 ✓										✓	✓	✓	✓	✓				8
9	3 ✓										✓	✓	✓	✓	✓				9
10	3 ✓										✓	✓	✓	✓	✓				10
11	3 ✓										✓	✓	✓	✓	✓				11
12	3 ✓										✓	✓	✓	✓	✓				12

Rosette Notes:

30 28  
 22 15  
 10 7  
 3 3 3 3  
 0

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.:

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
DEG MIN	DEG MIN	DAY MO YR	HR MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)	
	N	W	JUN 09											

REMARKS: MAX. DEPTH = m

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 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset	Hydro Team-PMEL					Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/ Jared	Optics	Nis No.	
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL DIC/CAK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard		
1	0											✓	✓	✓				1
2																		2
3																		3
4																		4
5																		5
6																		6
7																		7
8																		8
9																		9
10																		10
11																		11
12																		12

13  
14  
15  
16  
17  
18  
19  
20

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. (17)

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA NAME/ID
19	57	33	162	7	56	17	JUN	09	16	44	6.0	89.32		97			75	11.3	4/8		51	CW2

REMARKS: 5th Cast  
 + extra paid depth bottles  
 (need 2 bottles at bay's depth)

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambrotto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac			CHL DICA/IK	DOC	O18						
1	44		526	130				911										1
2	40																	2
3	30			131														3
4	28	Prod																4
5	25																	5
6	22																	6
7	15			132														7
8	10			133														8
9	7																	9
10	3																	10
11	0																	11
12																		12

13 0 V134 (30) (22) (512)  
 Rosette Notes: b 28 22 15 10 7 3 0.

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 18

CONSC CAST #	DEG MIN	LATITUDE	DEG MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0205716.52N		16.52N		62.55.22W	17	JUN	09	21	29		8.1		972	280	60	11	3				52	C04

SBE 9+ \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime)  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec)  
 SEC TEMP SN \_\_\_\_\_ Transisssomete  
 PRI COND SN \_\_\_\_\_ PAR S/N \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: no cast at 15 mpm rate  
 some pile wave

MAX. DEPTH = m

No. DESIRED	Roset notes	Hydro Team-PMEL										Weigart O18	Julie §1SN	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pal/ Jared	Optics	No.	
		SALT	Nut:Bl	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	Prod	DON	Lomas												
1	48	527	135	009	/																		1
2	40		136		/																		2
3	30		137		/																		3
4	26		138		/																		4
5	10		139		/																		5
6	0		140	144/175	/					514													6
7																							7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes: 144/175<sup>02</sup>  
 Chlor WAT = 10m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.:

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0215653			37N			16463	18	JUN	09	02	39		6.4	/	9738			017	14			72	CN-6

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR S/N  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR S/N  
 O2 Tmp Sensor No.

REMARKS: *Moorings 500s BS-2*

MAX. DEPTH = 69 m

NIS DEPTH	Rosel	Hydro Team-PMEL								Weingart		Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics		NIS No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL. DIC/CAIK	DOC	OT8	\$15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH							
1	80T			528	141	166 <del>127</del>	/	/																	1
2	50				142		/																		2
3	40				143		/																		3
4	30				144		/																		4
5	20				145		/																		5
6	10				146		/																		6
7	0				147	120	/																		7
8																									8
9																									9
10																									10
11																									11
12																									12

Rosette Notes:

*Chlorophyll = 2.2*

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0225	6	42	32N	1	43	8	JUN	09	05	55		6.2	96%	983.8								75	CN-8

REMARKS: MAX. DEPTH = 72 m

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 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics		Nis
		No. DESIRED	notes	SALT	Nut:Bit	O2-Bit:No	CHL	Frac CHL	DIC/AIK	DOC	O18	Julie	Urea	Part.	Prod	DON	Lomas	Lessard			TH						
1	ROT	529	148	112																							1
2	50		149		/																						2
3	40		150		/																						3
4	30		151		/																						4
5	20		152		/																						5
6	10		153		/																						6
7	0		154		88/239	/																					7
8																											8
9																											9
10																											10
11																											11
12																											12

Rosette Notes: Chlor Max 23 m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 21

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (Kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0235625			.69	N		16518	18	JUN	09	11	024		5.2		0.0			41208					81	CN-10

REMARKS: Bongo bobber CTD / NO need for ZOPP water

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 Temp Sensor No. \_\_\_\_\_

MAX. DEPTH = 81 m

Nis DEPTH	Rosel. notes	Hydro Team-PMEL											Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.		
		SALT	Nut. Bil	O2-Bil.No	CHL	Frac CHL	DIC/ALK	DOC	O18	\$15N	Urea Part.	Prod			DON	TH									
1	80	530	01	008								515													1
2	50		02		4																				2
3	40		03		5							516													3
4	30		04		4																				4
5	20		05		3																				5
6	10		06		2																				6
7	0		07		1							517													7
8																									8
9																									9
10																									10
11																									11
12																									12

Rosette Notes: 060 / 074

O2 density increase in SWB-SWEL. No or max. NOT healthy! Cmax (peaks) ~37 dead 5hr FF



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 22

CONC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2456	8.13 N	166 6.34 W	18 JUN 09 1441	4.8		01			096	098	0	bc	107	CN12

REMARKS: MAX. DEPTH = 104 m

SBE 9+ \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	NUT.BI	O2-BI.No	CHL. Frac	CHL DIC/ALK	DOC	O18	O18N	Urea Part.	Sambrotto			DON	Moran/	Harvey	Diane	Pal/Jared	Optics	No.
											Lomas	Lessard					TH			
1	1000	38.1	8	38.2																1
2	1000																			2
3	750		9																	3
4	750																			4
5	500		10																	5
6	400		11																	6
7	300		12																	7
8	200		13																	8
9	100		14																	9
10	100		15																	10
11	0																			11
12																				12

Rosette Notes: 200 100 75 50 40 30 20 250  
 3 bomb b's  
 W07 Cmax

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 22

CONSC	LATITUDE		LONGITUDE		TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2556	7	83 N	166	7.40 W	18 JUN 09	1540	4.9	022	265	098	6	C	104	104	CN12	

REMARKS: Pead 104  
 MAX DEPTH = 100 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prme) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No.	NIS	Optics	Jared	Pat/TH	Diane	Moran/			Harvey			Lomas			Lessard			Nis
						Urea	Part.	Prod	Urea	Part.	Prod	Urea	Part.	Prod	Urea	Part.	Prod	
1	42V																	1
2	27V																	2
3	27V																	3
4	23V																	4
5	20V																	5
6	20V																	6
7	20V																	7
8	14V																	8
9	14V																	9
10	11																	10
11	11																	11
12	11																	12

Rosette Notes:

Cmax ~ 5 hours 23 m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.:

CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
					09														

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Rosel	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Lared		Optics	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	Urea Part.	Prod	DON	Lomas	Lessard			TH				No.
13	7.5									✓		✓										
14	7.5																					
15	7.5																					
16	5																					
17	5																					
18	5																					
19	5																					
20	5																					
21	5																					
22	0																					
23	0																					
24	0																					

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 23

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
026	55	51	61 N	16	45	18	JUN	09	20	40	4.7	91.1	-	0238	200	158					133	CN-14

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: CTD = 40A Botf an

MAX. DEPTH = 129 m

NIS DEPTH	Roset. notes	Hydro Team-PMEL						Weingart		Julie		Sambrotto			Moran/	Harvey	Diane	Pat/Lared	Optics	NIS No.
		SALT	Nut. Bil	O2-Bil No	CHL	Frac CHL	DIC/AIK	DOC	O18	815N	Urea Part.	Prod	DON	Lomas	Lessard		TH			
1	Bot	531	16	200				518												1
2	100		17																	2
3	75		18																	3
4	50		19																	4
5	40		20					519												5
6	30		21																	6
7	20		22																	7
8	10		23																	8
9	0		24	165				520												9
10																				10
11																				11
12																				12

Rosette Notes:  
 Chlor MAX 52

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP\_Summer09  
 PROJECT & LEG: BEST/BIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 24

CONSC CAST #	DEG MIN	LATITUDE	DEG MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0275533.38		N	16741.53	W	19	JUN	09	08	10	8	5.2		0137		163	23	8		136	CN-16

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: *CTD 3 m of A 5*

MAX. DEPTH = 133 m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingard		Sambrotto			Moran/		Harvey		Diane		Pat. lared		Optics	NIS
		No. DESIREL	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard				
1	85	133	532	25	206				S21													1
2	100			26																		2
3	75			27																		3
4	50			28																		4
5	40			29					S22													5
6	40																					6
7	30			31																		7
8	20			32																		8
9	10			33																		9
10	0			34					S23													10
11																						11
12																						12

Rosette Notes: *Chlor MAX = 68*

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BS/IERP Summer'09  
 PROJECT & LEG: BEST/BS/IERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 25

CONSC CAST # 0285525  
 LATITUDE 25.91 N  
 LONGITUDE 168.03.44 W  
 DAY 19 JUN 09  
 TIME (GMT) 0503  
 DRY BULB (°C) 5.6  
 WET BULB (°C) /  
 PRESSURE (mb) 993.7  
 SEA STATE 7  
 VISIBILITY 14  
 WIND DIRN. (deg) 146  
 WIND SPD. (kts) 18  
 CLOUD (amt) /  
 WEATHER /  
 BOTTO M DEPTH (m) 2010  
 STA. NAME/ID CN-17

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: CTD 4 off bottom  
 Sea Temp deployed here  
 MAX DEPTH = 196 m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics		NIS No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard			TH		
1	200			533	35	15.50																	1
2	160				36																		2
3	75				37																		3
4	60				38																		4
5	50				39																		5
6	48				40																		6
7	30				41																		7
8	25				42																		8
9	20				43																		9
10	10				44																		10
11	0				45	0.6																	11
12																							12

Rosette Notes:  
 Clear May 10-20  
 High top zooplankton

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 26

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
02955	18	42	N	168	24	77	W	19	JUN	09	07	25	6.0	1	964	7	187	25	8				1683	CN-18

REMARKS: 30 m/hr to 200 60 m/hr to STOP  
 MAX. DEPTH = 1625 m

NIS DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/Lomas		Harvey/Lessard		Diane		Pat/Lared		Optics		NIS No.	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/Alk	DOC	O18	018	015N	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	Pat	Lared	Optics	No.				
1	Bot			534	46	174																						1
2	1000				47	202																						2
3	500				48	176																						3
4	250				49	181																						4
5	100				50	193																						5
6	75				51	177																						6
7	50				52																							7
8	40				53																							8
9	30				54																							9
10	20				55																							10
11	10				56																							11
12	0				57	199																						12

Rosette Notes: CN-18 MAX TOP 35m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 26

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0305516	16.88 N	168 24.07 W	19 JUN 09 10:23	5.8	5.8	95			211	5			1659	6N-182

REMARKS: 6 m go out  
 MAX. DEPTH = 50 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	Weingart		Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS No.
								018	\$15N	Urea Part.	Prod	DON						
1		88																1
2																		2
3																		3
4																		4
5																		5
6																		6
7																		7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes: 13-16 also at 6m

(No 16)



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N194 for PMEL CTD archive  
 STATION NO.: 27

CONSC	CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	31155	1	38	N 169112.951	W	19	JUN	09	14	21	5.5	94	94	212	16	3329							2020

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Temp Sensor No.  
 REMARKS:  
 Standard Cast  
 Very little wind & not much current  
 MAX. DEPTH = 1500 m

NIS DEPTH	Roset	Hydro Team-PMEL							Weingart		Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics	NIS
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil.No	CHL. Frac	CHL	DIC/CAIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	TH	Jared		
1	1500 ✓		536	58	213																		1
2	1500 ✓			59																			117
3	1200 ✓			89	195																		3
4	1250 ✓			61																			4
5	1000 ✓			65	133																		5
6	1000 ✓			63																			6
7	1750 ✓			64	197																		7
8	200 ✓			65	190																		8
9	250 ✓			66	162																		9
10	200 ✓			67	212																		10
11	1500 ✓			68	234																		11
12	75 ✓			68																			12

Rosette Notes:  
 1307  
 2 at 1500  
 1000  
 7000  
 69

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP Summer09 | Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive | STATION NO.

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
							09															

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trip Senson No. \_\_\_\_\_

No. DESIRED	notes	SALT	NUT BIL	O2-BIL No	CHL. Frac	CHL DIC/AIK	DOC	O18	Weingard	Julie	Sambrotto				DON	Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	No.
											Urea Part.	Prod	TH								
1	50'		20																		1
2	130'		28																		2
3	20'		28																		3
4	20'		73																		4
5	10'		74																		5
6	D		78																		6
7																					7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes:

13  
14  
15  
16  
17  
18

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 27

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
3255	1	37	N	49	13	02	W	19	JUN	09	16	36	5.9	94	94	249	13			2329	CN20

MAX. DEPTH = 50 m

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Temp Sensor No.

REMARKS  
 Prod Cast

NIS DEPTH	Rosel.	Hydro Team-PMEL						Weingart		Sambrotto				Moran/ Harvey		Diane	Pat/Jared	Optics	NIS No.		
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bll. No	CHL. Frac	CHL DIC/CAIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas					Lessard	
1	23										✓	✓	✓	✓	✓						1
2	33										✓	✓	✓	✓	✓						2
3	23																				3
4	23																				4
5	23										✓	✓	✓	✓	✓						5
6	23					OUT					✓	✓	✓	✓	✓						6
7	16																				7
8	16																				8
9	11										✓	✓	✓	✓	✓						9
10	11										✓	✓	✓	✓	✓						10
11	11										✓	✓	✓	✓	✓						11
12	75										✓	✓	✓	✓	✓						12

Rosette Notes:  
 ~7

Handwritten notes and circled numbers:  
 33  
 25  
 33  
 22  
 33  
 23  
 33  
 33  
 23

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: 6N195-10 or 6N195J for PMEL CTD archive  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN								
					J	U	N	0	9							

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

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. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut/Bil	O2-Bil. No	Hydro Team-PMEL			DOC	Wingart. O18	Julia \$15N	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared TH	Optics	Nis No.
					CHL. Frac	CHL	CHL				Urea Part.	Prod	DON						
1	77																		1
2	77																		2
3	75																		3
4	75			02															4
5	55																		5
6	00																		6
7	00																		7
8	00																		8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:

13  
14  
15  
16  
17  
18  
19  
20

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG BEST/BSIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 28

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
33	55	20.35	N	168	26.09	W	20	JUN	09	01	03		5.6	✓	973	8	218	08	4			1620	X1

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trp Sensor No. \_\_\_\_\_

REMARKS Front/Chlor  
 OBTAINER Delivered # 80095  
 SVP  
 H<sub>2</sub>O x-2

MAX. DEPTH = 501 m

No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	Weingart		Sambroto			Moran/	Harvey	Diane	Pat/	Optics	NIS
								O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard	TH			
1	500	536	76	303													1	
2	250		77	226													2	
3	100		78	198													3	
4	75		79	10X													4	
5	50		80														5	
6	40		81														6	
7	30		82														7	
8	20		83														8	
9	11		84														9	
10	11		85														10	
11	0		85														11	
12	0		85														12	

Rosette Notes:

Chlor max 11m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 29

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
03455	28	84	N	16	811	27	20	JUN	09	06			5.3		9738235			117					191	X-2

REMARKS: STD of Sed. Temp recovery  
 Spk. no samples  
 Depth reading 2x not bottom  
 Robb & present /

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PAR COND SN \_\_\_\_\_ PAR S/N \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

MAX. DEPTH = 158 m

NIS DEPTH	Rosel	Hydro Team-PMEL					Weingart				Sambroto				Moran/		Harvey		Diane		Pat/ Jared		Optics	NIS No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL	DIC	CAIK	DOC	O18	015N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	Pat/ Jared	Optics	NIS No.		
1	bat			537																				1
2																								2
3																								3
4																								4
5																								5
6																								6
7																								7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL R/V Knorr PROJECT & LEG BEST/BSIERP Summer09 Ship Designation (I.D.) 6N195-10 or 6N191 for PMEL CTD archive STATION NO. 29

CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09

CONSC CAST # 035 DEGREE MIN 55 28.54 N LONGITUDE DEGREE MIN 168 11.47 W DAY 20 JUN 09 07 15 TIME (GMT) 5.02 DRY BULB WET BULB PRESSURE SEA STATE VISIBILITY WIND DIRN. WIND SPD. CLOUD(amt) TYPE WEATHER BOTTO M DEPTH STA. NAME/ID

DEG MIN 55 28.54 N DEG MIN 168 11.47 W DAY 20 JUN 09 07 15 TIME (GMT) 5.02 DRY BULB WET BULB PRESSURE SEA STATE VISIBILITY WIND DIRN. WIND SPD. CLOUD(amt) TYPE WEATHER BOTTO M DEPTH STA. NAME/ID

SBE 9+ FLUOR S/N SBE43-Oxy (prime) SBE43-Oxy (sec) Transmissometer PAR S/N O2 Trip Sensor No.

REMARKS repeats of 34 for water samples spot of Sed. Trap recovery

No. DESIRED	notes	SALT	Nut. Bil.	O2-Bil. No.	CHL. Frac	CHL. DIC/AIK	DOC	O18	S15N	Urea Part.	Prod	DON	Lomas	Harvey	Diane	Pat/Jared	Optics	No.
1	106		86															1
2	70		87															2
3	40		88															3
4	32		89															4
5	18		90															5
6	10		91															6
7	0		92															7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes: What samples did Ray take?

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 30

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
03656	8	57N	168	41	20	JUN	09	12	12	5.2	97	97	203	07		203	07			468	CNN-8

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 Temp Sensor No. \_\_\_\_\_

REMARKS: bungee water also  
 462 MAX DEPTH = 458 m

NIS DEPTH	Rosel. notes	SALT	Nut. Bl	O2-Bll. No	CHL	Frac CHL	DIC/AIK	DOC	Wengard		Julie		Sambrotto		Moran/	Harvey	Diane	Pat/Jared	Optics	NIS No.
									O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard	TH	No.			
1	458	538	93	(143)																1
2	250		94																	2
3	200		95	(269)																3
4	150		96																	4
5	100		97																	5
6	175		98																	6
7	52		99	(219)	6															7
8	42		100		5															8
9	32		101		4															9
10	22		102		3															10
11	12		103		2															11
12	7																			12

Rosette Notes: ~~12~~ 7m h 12-23  
 10 24 = 0  
 12 b from 7m



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID					
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)	
36																			

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR S/N \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: *P2*

MAX DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/ Jared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/Alk	DOC	O18	Julie	Urea Part.	Prod	DON	Lomas	Lessard	TH	
1	7																		1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 31

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
375627	01	N	16817.26	20	JUN	09	1623	5.1		972	157	7/2	126										CUNT

REMARKS: 3 of bottom by alim

MAX. DEPTH = 123 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL										Wengart		Julie		Sambrotto			Moran/	Harvey	Diane	Pat/	Jared	Optics	NIS No.		
		No. DESIRED	notes	SALT	Nut. Bit	O2-Bit. No	CHL	Frac CHL	DIC/ALK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH								
1	123 ✓		105	020																							1
2	150 ✓		106																								2
3	75 ✓		107																								3
4	50 ✓		108																								4
5	40 ✓		109																								5
6	30 ✓		110																								6
7	20 ✓		111																								7
8	10 ✓		112																								8
9	0		539	113	080																						9
10																											10
11																											11
12																											12

Rosette Notes:

low chl.

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer/09  
 PROJECT & LEG: BEST/BSI/ERP Summer/09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 32

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
385645	6	7	N	16	75	20	JUN	09	20	07	5.0	85.1	78.1	983.8	133	118					101	CNN6

REMARKS: 3 07 BETA  
 MAX DEPTH = 98 m

NIS DEPTH	Roset. notes	Hydro Team-PMEL										Weingart		Julie		Sambroto			Moran/	Harvey	Diane	Pat/	Shared	Optics	NIS No.	
		SALT	Nut. Bl	O2-Bl. No	CHL	Frac CHL	DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH								
1	80T	540	114	205																	X14					1
2	80T											X	X								X11					2
3	75											X	X								X21					3
4	75																				X21					4
5	50											X	X								X31					5
6	50																				X31					6
7	41											X	X								X4					7
8	41																									8
9	30																				X5					9
10	20																				X10					10
11	10																				X7					11
12	0																				X8					12

Rosette Notes: Chlor MAX = 41x

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N199J for PMEL CTD archive  
 STATION NO.: 32

CONSC CAST #: 0395645  
 LATITUDE: 11 5 N  
 DEGREE: 11, MINUTE: 5  
 LONGITUDE: 167 52.25 W  
 DEGREE: 167, MINUTE: 52.25  
 DAY: 20, MO: JUN, YR: 09  
 TIME (GMT): 20 10 5.6  
 DRY BULB: 86.1  
 WET BULB: 81.1  
 PRESSURE: 973.8  
 SEA STATE: 1  
 VISIBILITY: 11  
 WIND DIRN: 112  
 WIND SPD: 08  
 CLOUD(amt): 8  
 WEATHER: 8  
 BOTTO M DEPTH: 101  
 STA. NAME/ID: CNN-6

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: Prod cont See page 2  
 MAX. DEPTH = 63 m

Nis No.	Nis Depth	Roset. notes	Hydro Team-PMEL					Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	No.	
			SALT	NutBil	O2-Bil.No	CHL	Frac CHL	DOC	O18	Julie	Urea	Part.	Prod	DON	Lomas	Lessard			TH
1	55																	✓	1
2	43																	✓	2
3	36																	✓	3
4	36																	✓	4
5	32																	✓	5
6	32																	✓	6
7	32																	✓	7
8	23			RZ														✓	8
9	23																	✓	9
10	12																	✓	10
11	12			NO WATER														✓	11
12	5																	✓	12

Rosette Notes:

122

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
39	5	6	151.15 N	16	7	2	25	W	20	JUN	09	20	10										CNN-6

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: *Prod cor of CNN-6*  
*Page 2 of 2*

MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset. notes	Hydro Team-PMEL						Wengart/Julie		Sambroto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	Nis No.		
		SALT	Nut.BI	O2-BI.No	CHL.Frac	CHL.DIC/Alk	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH	Optics			
1	5																			1
2	0											✓	✓	✓	✓					2
3	0																			3
4	0	Q1															✓			4
5																				5
6																				6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer'09  
 PROJECT & LEG: BEST/BIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 33

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
6405703		14	111°N	16	27	19	JUN	09	01	58		4.6		9738			165	088			73	CNN-5

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 2 of 3 stations  
 Station # 33  
 MAX. DEPTH = 71 m

NIS DEPTH	Rosel. notes	Hydro Team-PMEL					Weingart		Sambrotto			Moran/Lomas		Harvey		Diane		Pat Jared		Optics	NIS No.	
		SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL DIC/AIK	DOC	O18	515N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	Pat Jared	Optics	NIS No.				
1	BT	541	122																			1
2	60		123																			2
3	50		124																			3
4	40		125																			4
5	30		126																			5
6	20		127																			6
7	10		128																			7
8	0		129																			8
9																						9
10																						10
11																						11
12																						12

Rosette Notes:  
 Chlor MAX = 22?  
 No oxygen bottles on logsheet  
 O2 Excel spreadsheet indicates  
 float 155 on ND 172 on ND8.

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 34

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
0415720.92			16	702.72	21	JUN	09	02	13		5.3		9828113037								71	CNN-4

REMARKS: 3-4 up for pm  
 STA = 34  
 MAX. DEPTH = 67 m

NIS No.	NIS DEPTH	Roset. notes	Hydro Team-PMEL										NIS										
			SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	Wengart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics				
1	Bot		542	130	086									X									1
2	50			131										X									2
3	40			132										X									3
4	30			133										X									4
5	20			134										X									5
6	10			135										X									6
7	0			136										X									7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes:

Oh max 22

VESSEL: RVN Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer/09  
 PROJECT & LEG: BEST/BSI/ERP Summer/09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 35

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amnt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0425738	95	N	6637.67	W	21	JUN	09	08	25	4.7	90.86%			99			47	05			68	6N-3

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: STA=35  
 MAX DEPTH = 64 m  
 21. by by adlin

NIS DEPTH	Rosel. notes	Hydro Team-PMEL										Wengart		Sambrotto			Moran/	Harvey	Diane	Pat	Jared	Optics	NIS No.	
		SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	Julie	Urea Part.	Prod	DON	Lomas	Lessard		TH							
1	64	543	137																					1
2	50		138		6																			2
3	40		139	174	5																			3
4	30		140		4																			4
5	20		141		3																			5
6	10		142	262	2																			6
7	0		143		1																			7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:  
 5 sharp max 10m  
 just in 20 or 10m bottles



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 36

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD (amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
43	57	57	10	N	16	6	13	05	21	JUN	09	12	05	3.4		99a	011	5			61	CNN-2

REMARKS: 4 by alvin  
 SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (ptime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_

Nis No.	Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto				Moran/	Harvey	Diane	Pat	Lared	Optics	Nis No.	
			No. DESIRED	nodes	SALT	Nut. Btl	O2-Btl. No	CHL. Frac	CHL DIC/AIK	DOC	O18	S15N	Urea Part.	Prod	DON	Lomas	Lessard		TH			
1	57				544	144		6														1
2	40				145	170	5															2
3	30				146		4															3
4	20				147		3															4
5	18																					5
6	18																					6
7	18																					7
8	18																					8
9	18																					9
10	18																					10
11	18																					11
12	18																					12

Rosette Notes:

10 18

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG BEST/BSIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN												

REMARKS  
 MAX. DEPTH = \_\_\_\_\_ m  
 SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pav/ TH	Jared	Optics	Nis No.
		No. DESIRE	Notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL. DIC/AIK			DOC	O18	Urea Part.							
1	18																			1
2	18																			2
3	10				148															3
4	0				149															4
5																				5
6																				6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

181

↑

22

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 37

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
445	81	5.06	N	165	47	21	JUN	09	15	29	2.3	96.3%	992	0	1	308	4	1		43	CNN-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 Temp Sensor No. \_\_\_\_\_

REMARKS: 304f → 43

MAX. DEPTH = 43 m

No. DESIRED	Rosel		Hydro Team-PMEL						Weingard		Julie			Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics		No.
	notes	SALT	Nut. Blt	O2-Blt No	CHL.	Fac CH	DIC/CAK	DOC	O18	S15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH									
1	43	545	150	193																							1
2	30		151																								2
3	20		152																								3
4	10		153																								4
5	0		154																								5
6																											6
7																											7
8																											8
9																											9
10																											10
11																											11
12																											12

Rosette Notes:

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG BEST/BSIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 38

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
45	58	46.64	N	166	42.14	21	JUN	09	20	15	11.4	96%		993.63	06	088					40	X-3

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Trip Sensor No. \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 REMARKS  
 Prod Station  
 next CTD  
 Fos  
 MAX. DEPTH = 37 m

Nis DEPTH	Rosel.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat/	Jared	Optics	Nis No.	
		No. DESIREF	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	015N	Urea	Part.	Prod	DON	Lomas	Lessard		TH					
1	80t			546	155	179						1	1	1	1									1
2	30				156							1	1	1										2
3	20				157																			3
4	10				158																			4
5	0				159																			5
6																								6
7																								7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 38

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
0465	84	46	166	43	21	JUN	09	20	14	5	1.3	1.3	0036	288	098	190	X-3				

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: Prod CTD 45-46  
 MAX DEPTH = 27 m

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/	Clared	Optics	Nis No.	
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		
1	19																			1
2	19																			2
3	19																			3
4	T1																			4
5	11																			5
6	11																			6
7	9																			7
8	9																			8
9	7																			9
10	7																			10
11	4																			11
12	4																			12

Rosette Notes:

VESSEL RV Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP\_Summer09 PROJECT & LEG Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive STATION NO. 38

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 * * *	WEATHER * * *	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN												
04658	46	42N	66	43.84	21	JUN	09	20	45	.	.	.	.	.	.	X-3

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (p/line) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS  
 MAX. DEPTH = \_\_\_\_\_ m

NIS DEPTH No. DESIRED	Roset. notes	SALT	Nut. Bl	O2-Bll. No	CHL	Frac CHL	DIC/AIK	DOC	O18	SiSN	Sambrotto				Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS No.
											Hydro Team-PMEL	Weingart	Julie	Urea Part.						
9																				9
10																				10
11																				11
12																				12

13 2.5  
14 2.5  
15 2.5  
16 2.5  
17 2.5  
18 0  
19 0  
20 0  
21 0

Rosette Notes:

VESEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 39

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
04759	17	05	N	167	36	02	W	22	JUN	09	00	31	3.0	✓	003229	1	09	6			39	39 ND1

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: NP-1 Fog MAX DEPTH = 36 m  
 3 off Bottom

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/	Harvey/	Diane	Pat/Jared	Optics	Nis No.		
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bll.No	CHL	Frac CHL	DIC/AIK	DOC	O18	§15N	Urea Part	Prod	DON	Lomas	Lessard		TH					
1	BOT			547	160	199	✓		✓	524													✓	1
2	30				161		✓		✓														✓	2
3	20				162		✓		✓														✓	3
4	10				163		✓		✓														✓	4
5	0				164		✓		✓	525													✓	5
6																								6
7																								7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 40

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0485963		53	16753.00		22	JUN	09	02	54			2.7	-	993	3	292	10	8				41	40

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 Temp Sensor No. \_\_\_\_\_

REMARKS: *Soft bottom NP-2 Fog*  
 MAX. DEPTH = 39 m

Nis DEPTH	Rosel	Hydro Team-PMEL										Weingart		Sambrotto				Moran/	Harvey	Diane	Pat/	Jared	Optics	Nis No.				
		No. DESIRED	notes	SALT	Nut BI	O2-BI/No	CHL	Frac CHL	DIC/AIK	DOC	O18	§15N	Urea	Part	Prod	DON	Lomas	Lessard		TH								
1	60 f			548	165					✓																		1
2	30				166				✓																			2
3	20				167				✓																			3
4	10				168			195	✓																			4
5	0				169				✓																			5
6																												6
7																												7
8																												8
9																												9
10																												10
11																												11
12																												12

Rosette Notes:



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 41

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
049	58	49	168	09	35	W	22	J	U	N	09	04	52	2.8	99.3	4	288	11	8			46	NP-3

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: Fog MAX. DEPTH = 43 m

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/	Jared	Optics	Nis No.
		No. DESIRE	Notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH				
1	Box		170				✓	✓	526														1
2	30		171	213			✓	✓															2
3	70		172				✓	✓															3
4	10		549	173																			4
5	0		174				✓	✓	527														5
6																							6
7																							7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 42

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID		
05058	35	77	N	168	25	55	W	22	J	U	N	09	57	11	3.1	+	00	3	73	30	14	8	56	NR-4

REMARKS: MAX. DEPTH = 53 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.						
		No. DESIRED	notes	SALT	Nut. Bit	O2-Bit. No.	CHL. Frac	CHL DIC/AIK	DOC	O18	S15N	Urea Part.	Prod	DON	Lomas	Lessard	TH							
1	Bot	53		550	175		/		/															1
2	40				176	133	/																	2
3	30				177		/		/															3
4	20				178		/																	4
5	10				179		/																	5
6	0				180		/		/															6
7																								7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 43

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID		
	DEG	MIN	SEC	DEG	MIN	SEC													DAY	MO
051582	11	70	N	168	42	18	W	22	JUN	09	05	3.5			013		321	168	76	NP-5

REMARKS: Mussel 40 m -  
 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 Temp Sensor No. \_\_\_\_\_  
 c (uvd) MAX. DEPTH = 61 m  
 65

N/S DEPTH	Roset.	Hydro Team-PMEL							Weingart		Sambroto			Moran/	Harvey	Diane	Pat/	Jared	Optics	N/S
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bll No	CHL	Frac CHL	DIC/AIK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard		TH	
1	694		551	181						528										1
2	504			182	197	6														2
3	90	11		183		4				329										3
4	26			184																4
5	26																			5
6	26																			6
7	26																			7
8	26																			8
9	26																			9
10	26																			10
11	26																			11
12	26																			12

Rosette Notes:

26 x 12

10

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
							9															

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

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 Temp Sensor No. \_\_\_\_\_

No. DESIRED	Rosel. notes	SALT	Nul. Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	Weingart		Sambroto			Moran/		Harvey		Diane	Pat/Jared	Optics	Nis No.
										Julie	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard					
1	26																					1
2	26																					2
3	26																					3
4	20			185			3															4
5	10			186			2															5
6	0			187			1															6
7																						7
8																						8
9																						9
10																						10
11																						11
12																						12

13  
14  
15  
16  
17  
18

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer 09  
 PROJECT & LEG: BEST/BSIERP Summer 09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 44

CONSC CAST # 5258  
 LATITUDE 7.87N  
 LONGITUDE 16858.36W  
 DAY 22 JUN 09  
 TIME (GMT) 1202  
 DRY BULB 3.3  
 WET BULB .  
 PRESSURE 01  
 SEA STATE 3  
 VISIBILITY 13  
 WIND DIRN. 323  
 WIND SPD. 13  
 CLOUD(amt) TYPE WEATHER  
 BOTTO M DEPTH 74  
 STA. NAME/ID NPD6

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis No.	Nis DEPTH	Roset.		Hydro Team-PMEL				Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics	Nis No.
		notes	SALT	Nul.Bil	O2-Bil.No	CHL.Frac	CHL DIC/AIK	DOC	O18	Julie	Urea Part.	Prod	DON	Lomas	Lessard	Diane	Pat/Jared	Optics	Nis No.			
1	66	✓	52	182				✓														1
2	50	✓		189																		2
3	40	✓		190																		3
4	30	✓		191				✓														4
5	20	✓		192																		5
6	10	✓		193																		6
7	0																					7
8																						8
9																						9
10																						10
11																						11
12																						12

REMARKS: 4 off 72  
 MAX. DEPTH = 66m

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer09)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.:

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
535753	169	14.51	W	22	JUN	09	14	09	2.8			90.7%		02			304	17.8			46	N07

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: Standard Cast + Pat  
 MAX. DEPTH = 62 m

NIS DEPTH	Roset. notes	SALT	Nut. Bit	O2-Bit No	CHL	Frac	CHL	DIC/AIK	DOC	O18	Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/	Jarred	Optics	NIS No.
											Julie	Urea Part.	Prod	DON	Lomas	Lessard		TH				
1	62 ✓	553	2										X	X								1
2	62 ✓	553	2	162									X	X								2
3	50 ✓		3																			3
4	50 ✓		4																			4
5	40 ✓		4																			5
6	40 ✓		5										X	X								6
7	30 ✓		5																			7
8	30 ✓																					8
9	26 ✓																					9
10	20																					10
11	20																					11
12	10																					12

Rosette Notes:  
 Both on Crow Cam Tower  
 Crow 26

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG MIN	DEG MIN	DAY MO YR	HR MIN										
			JUN 09											

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL					Weingart		Sambroto			Moran/	Harvey	Diane	Pat/ Jared	Optics	Nis No.		
		No. DESIRED	notes	SALT	Nul. BU	O2-BIL No	CHL. Frac	CHL DIC/AIK	DOC	O18	Julie \$15N	Urea Part.	Prod	DON	Lomas	Lessard			TH
1	10	13																	1
2	0	14		8/02															2
3	0	15																	3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 45

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA NAME/ID
54	57	53	99 N	169	14	22	JUN	09	15	30		2.8		623			317	16	8/10		66	N27

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trp Sensor No. \_\_\_\_\_

REMARKS: *Good.*

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	Roset.	Hydro Team-PMEL					Waingart	Julie	Sambroto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Lared	Optics	No.
		SALT	Nut.Bil	O2-Bil.No	CHL. Frac	CHL/DIC/AIK			DOC	O18	Urea	Part.						
1	33		P1															1
2	33							X	X	X	X							2
3	33		D															3
4	33		P															4
5	26				P2													5
6	26							X	X	X	X							6
7	26		D															7
8	26		P															8
9	22				P3													9
10	22							X	X	X	X							10
11	17				P4													11
12	17							X	X	X	X							12

Rosette Notes:

33 26 22 17 11 7 7 7 0  
 33 26 22 17 11 7 7 7 0  
 33 26 22 17 11 7 7 7 0



VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
							09															

REMARKS

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. \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	Hydro Team-PMEL				DOC	Weingart. O18	Julie \$15N	Sambrotto				Moran/ Lomas	Harvey Lessard	Diane	Paul/Jared TH	Optics	No.
					CHL. Frac	CHL	CHL	CHL				Urea Part.	Prod	DON							
18																					1
14																					2
15																					3
16																					4
17																					5
18																					6
19																					7
20																					8
21																					9
22																					10
23																					11
24																					12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 46

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0555740		11	N	16931	08	W	22	JUN	09	2004	5.5	93%		0246306	158						70	NR-2

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trp Sensor No. \_\_\_\_\_

NIS DEPTH: Rosel.  
 No. DESIRED: \_\_\_\_\_  
 Hydro Team-PMEL  
 Weingart: \_\_\_\_\_  
 Julie: \_\_\_\_\_  
 Sambroto: \_\_\_\_\_  
 Moran/Lomas: \_\_\_\_\_  
 Harvey/Lessard: \_\_\_\_\_  
 Diane: \_\_\_\_\_  
 Pav/Jared: \_\_\_\_\_  
 Optics: \_\_\_\_\_  
 NIS No.: \_\_\_\_\_

No. DESIRED	notes	SALT	Nut Bil	O2-Bil.No	CHL. Frac	CHL DIC/AIK	DOC	O18	615N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	Pav/Jared	Optics	NIS No.
1	BT	554	9															1
2		554	10	212														2
3			11															3
4			12															4
5			13															5
6			14															6
7			15															7
8			16															8
9																		9
10																		10
11																		11
12																		12

Rosette Notes: Or 212 Chlor with 26 m

MAX. DEPTH = 66 m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer'09)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 47

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0565726	35	N	16947.56	W	22	JUN	09	21	53	3	6	34	6	34	6	34	6	34	6	34	6	65	NP-9

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: CTD 30m Bottom  
 MAX. DEPTH = 62 m

NIS DEPTH	Rosel. notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	Weingart		Sambrotto			Moran/	Harvey	Diane	Pat. Jared	Optics	NIS No.	
									Julie	Urea Part.	Prod	DON	Lomas	Lessard		TH				
1	BT	555																		1
2	BT		17																	2
3	50		18																	3
4	40		19																	4
5	30		20																	5
6	20		21	224																6
7	10		22																	7
8	8		23																	8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:  
 Chlor WAX  
 20m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 48

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
05757	12	51	N	170	01	22	23	JUN	09	00	32	3.3	95%	034	629	158						44	MP-10

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ Q2 Temp Sensor No. \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = 41 m

NIS DEPTH	Rosel	Hydro Team-PMEL										Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS		
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard		TH		No.				
1	BT				24				✓	531														1
2	30				25	211																		2
3	20				26				✓															3
4	10				556	27																	✓	4
5	0				28				✓	532														5
6																								6
7																								7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes: 04/211 no chlor MAX

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 49

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
0585658	57	17	17017.17	23	JUN	09	03	19	3.8	-	0445	302	148	71									NP-11

REMARKS: MAX. DEPTH = 68 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Lared	Optics	NIS No.						
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard			TH					
1	60	69	29					✓																1
2	60		557	30	003			✓																2
3	50			31				✓																3
4	40			32				✓																4
5	30			33				✓																5
6	20			34				✓																6
7	19																							7
8	10							✓																8
9	0							✓																9
10																								10
11																								11
12																								12

Rosette Notes:

Chlorophyll 21M

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (1.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: NP-12

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0595644		74	N	17	32	87	23	JUN	09	06	35	4.7	89%		644	6	294	19	8			108	Sta. 50

REMARKS: 4 m Bottom

MAX. DEPTH = 164 m

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 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/CAIK	DOC	O18	S15N	Sambrotto			Moran/ Lomas	Harvey/ Lessard	Diane	Pav./Jared	Optics	No.
										Urea Part.	Prod	DON						
1	Bot	558	37	226														1
2	Bot		37									X						2
3	75		38									X						3
4	50		39									X						4
5	40		40		/							X						5
6	30		41		/							X						6
7	20		42		/							X						7
8	10		43	198	/							X						8
9	0		44		/							X						9
10																		10
11																		11
12																		12

Rosette Notes:

chlor MAX 25 m

VESSEL R/V Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) PROJECT & LEG BEST/BSIERP Summer09 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive STATION NO. 51

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
060	56	30	91	N	17	04	7	23	JUN	09	09	22	4.9	89.59	664	27	11.7			128	MR-13

REMARKS: 15 OFF - rolling

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. \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

No	DESIRE	notes	SALT	Nut Bil	O2-Bil.No	CHL. Frac	CHL DIC/AIK	DOC	O18	Weingart	Julie	Sambrotto			Moran/Lomas	Harvey/Bessard	Diane	Paul/Jared	Optics	No.
												Urea Part.	Prod	DON						
1			463	45	108				533											1
2			100	46																2
3			75	47																3
4			50	48					534											4
5			40	49																5
6																				6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: c Max 135 10-12

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.:

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG MIN	DEG MIN	DAY MO YR	HR MIN										
			JUN 09											

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 Temp Sensor No. \_\_\_\_\_  
 NIS DEPTH: Roset. \_\_\_\_\_  
 Hydro Team-PMEL \_\_\_\_\_  
 Weingart \_\_\_\_\_  
 Julie \_\_\_\_\_  
 Sambroto \_\_\_\_\_  
 Moran/Lomas \_\_\_\_\_  
 Harvey/Lessard \_\_\_\_\_  
 Diane \_\_\_\_\_  
 Pat/Lared \_\_\_\_\_  
 Optics \_\_\_\_\_  
 No. \_\_\_\_\_  
 No. DESIRED \_\_\_\_\_ notes \_\_\_\_\_  
 SALT \_\_\_\_\_ Nut. Bil \_\_\_\_\_ O2-Bil. No. \_\_\_\_\_ CHL. Frac CHL DIC/CAIK \_\_\_\_\_ DOC \_\_\_\_\_ O18 \_\_\_\_\_  
 \$15N \_\_\_\_\_ Urea Part. \_\_\_\_\_ Prod \_\_\_\_\_ DON \_\_\_\_\_  
 Lomas \_\_\_\_\_ Harvey/Lessard \_\_\_\_\_  
 Diane \_\_\_\_\_ Pat/Lared \_\_\_\_\_  
 Optics \_\_\_\_\_ No. \_\_\_\_\_

No.	1	2	3	4	5	6	7	8	9	10	11	12
1	30	13										
2	30	14										
3	30	15										
4	30	16										
5	30	17										
6	30	18										
7	30	19										
8	30	20										
9												
10												
11												
12												

Rosette Notes:

10.69

MAX. DEPTH = \_\_\_\_\_ m



VESSEL: RVN Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer09)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 52

CONSC CAST # 61  
 DEG 56  
 MIN 17.03  
 N 17  
 LONGITUDE  
 DEG 2.04  
 MIN 23  
 DAY JUN 09  
 HR 13  
 MIN 18  
 TIME (GMT)  
 DRY BULB 5.2  
 WET BULB 89.49%  
 PRESSURE 663  
 SEA STATE \*  
 VISIBILITY \*  
 WIND DIRN 301  
 WIND SPD 15  
 CLOUD(am) \* \* \*  
 WEATHER \* \* \*  
 BOTTO M DEPTH 133  
 STA. NAME/ID NP14

REMARKS: MAX. DEPTH = 133 m  
 SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR S/N  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR S/N  
 O2 Temp Sensor No.

NIS DEPTH	Roset.	Hydro Team-PMEL	Weingart	Julie	Sambroto	Moran/	Harvey	Diane	Pat/Jared	Optics	NIS								
No. DESIRED	notes	SALT	Nul. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH			No.
1	133		54	143															1
2	100	464	55																2
3	75		56																3
4	50		57																4
5	40		58																5
6	30		59																6
7	20		60																7
8	20																		8
9	20																		9
10	20																		10
11	20																		11
12	10		61	242															12

62 1 1 1

For forward sampler

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N199J for PMEL CTD archive  
 STATION NO.: 53

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
6256	3	30	17	11	23	JUN	09	16	48	5.0	80.10		063			294	14			2780	NP15

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Senscn No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambrotto				Moran/	Harvey	Diane	Pal/Jared	Optics	Nis No.		
		No. DESIRE	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac			CHL DIC/AIK	DOC	O18	Urea Part.							Prod	DON
1	2500	✓	465	63	233		/													11	
2	2000	✓					/													11	
3	1500	✓		64	220		/													221	
4	1000	✓					/														
5	1000	✓		65	80		/													337	
6	1000	✓					/														
7	500	✓		66	218		/			530										4	
8	250	✓		67	155		/			537											
9	1000	✓		68	172		/			538										5	
10	100	✓		69			/			539										6	
11	75	✓		70			/													7	
12	50	✓		71			/			540											

REMARKS: MAX. DEPTH = 2000m

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP\_Summer09)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG MIN	DEG MIN	DAY MO YR	HR MIN										
			JUN 09											

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset.	Hydro Team-PMEL				Weingart	Julie	Sambrotto				Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.
		No. DESIRE	notes	SALT	NUL BH			O2-BIL No	CHL	Frac	CHL						
13																	1
14																	2
15																	3
16																	4
17																	5
18																	6
19																	7
20																	8
21																	9
22																	10
																	11
																	12

Rosette Notes:

205

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 53

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
13	56	3.39	N	71	18	5	09	19	20	5.5			072			287	106			278		NP15

REMARKS: Prod 1  
 MAX. DEPTH = m

NIS DEPTH	Roset.	SALT	Nut.Bil	O2-Bil.No	CHL.Frac	CHL/DIC/AIK	DOC	O18	Julie \$15N	Urea Part.	Prod	DON	Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS No.
1	26		P8															1
2	26																	2
3	26																	3
4	26																	4
5	26	P																5
6	18		P9															6
7	18																	7
8	18																	8
9	18	P																9
10	15																	10
11	15																	11
12	11																	12

Rosette Notes: P11  
 26 18 15 11 8 4 0  
 26 18 15 11 8 4 0  
 26 18 15 11 8 4 0  
 26 18 15 11 8 4 0  
 26 18 15 11 8 4 0

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer'09)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN																		

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

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	Rosel.	Hydro Team-PMEL						Weingart	Julie	Sambrotto				Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.			
		No DESIREL	notes	SALT	Nut.Btl	O2-Btl.No	CHL. Frac			CH DIC/AIK	DOC	O18	615N							Urea Part.	Prod	DON
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						
21																						
22																						
23																						
24																						

Rosette Notes:

VESSEL RV Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer09  
 PROJECT & LEG BEST/BSI/ERP Summer09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 53

CONSC CAST #	LATITUDE			LONGITUDE			TIME (GMT)	DRY BULB	WET BULB	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC												
645658	17	15	05	W	24	10	0129	5.5		0638	8	2	94	107			2770	NP-15

REMARKS: 29 hours station  
 See page 2  
 MAX. DEPTH = 210 m

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 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL							Weingart	Julie	Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS
		No. DESIRED	notes	SALT	Nut. BI	O2-Bit. No	CHL. Frac	CHL DIC/AIK			DOC	O18	Urea Part.						
1	200			466													X1		1
2	100																X2		2
3	75																X3		3
4	50																X4		4
5	40																X5		5
6	30																X6		6
7	18																		7
8	18																		8
9	18																X7		9
10	11																		10
11	11																		11
12	11																X8		12

Rosette Notes:  
 nubs 50m - 0m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 53

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
06456	58	74	N	71	15	05	W	24	JUN	09	01	29									2770	MP-15

REMARKS: 24 Station good cast  
 MAX. DEPTH = 2710 m  
 page 2 of 2

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambrotto				Moran/	Harvey	Diane	Pat/Jared	Optics	NIS			
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL			Frac CHL	DIC/AIK	DOC	O18							Urea	Part.	Prod
2	4				P-27																	1
3	4																					2
4	4																					3
5	0				P-28																	4
6	0																					5
7	0																					6
8	0																					7
9	0																					8
10	0																					9
11	0																					10
12	0																					11

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/SIERP Summer'09)  
 PROJECT & LEG: BEST/SIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 53

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID		
	DEG	MIN	SEC	DEG	MIN	SEC													DAY	MO
06555	56.9	7N		171.2	62	W	24	JUN	09	06	42	S.P.	5.6	06.3	83	16	12	8	2830	NR-15

REMARKS: 29 hour station  
 page 1 of 2  
 MAX. DEPTH = 210 m

NIS DEPTH No. DESIRED	Roset. notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/CAK	DOC	Weingart		Sambroto			Moran/	Harvey	Diane	Pat/ Jared	Optics	NIS No.
								O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard	TH			
1		200		x178														1
2		26		P-15														2
3		26																3
4		20		x151														4
5		18		P16														5
6		18																6
7		18																7
8		15		P17														8
9		15																9
10		11		P18														10
11		11																11
12		11																12

Rosette Notes:



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 53

CONSC CAST #		LATITUDE			LONGITUDE			TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID		
		DEG	MIN		DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)	
06555	56	97	N	17	11	12	24	JUN	09	06	42	.	.	.	.	.	.	.	2830	MP-15		

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 Temp Sensor No. \_\_\_\_\_

REMARKS: page 2 of 2  
 MAX. DEPTH = 210 m

NIS DEPTH	Rosel. notes	Hydro Tearm-PMEL										Weingart	Julie	Sambrotto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	NIS No.					
		No. DESIRED	SALT	Nut. Bl	O2-Bl. No	CHL	Frac CHL	DIC/ALK	DOC	O18	\$15N			Urea Part.	Prod	DON	TH							Jared				
7	8			P19																								1
14	8																											2
15	4			P20																								3
16	4																											4
17	4																											5
18	0			P21																								6
19	0																											7
20	0																											8
9																												9
10																												10
11																												11
12																												12

Rosette Notes:

VESSEL: RVV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer'09)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 53

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
66	55	53	nan	71	12	69	24	12	45	S.4			063			32	21	0		2984	NP-15

REMARKS: *large water*

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	Rosel.	Hydro Team-PMEL						Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	Optics/	Nis No.	
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bll. No	CHL Frac			CHL DIC/CAIK	DOC	O18							\$15N
1	ID																		1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 53

CONSC CAST # 0675553.23 N  
 LATITUDE 17113.11 W  
 DAY 24 JUN 09  
 HR 1320  
 TIME (GMT) 1320  
 DRY BULB 5.4 (°C)  
 WET BULB . (°C)  
 PRESSURE 1016.6 (mb)  
 SEA STATE 3  
 VISIBILITY 11  
 WIND DIRN 321 (deg)  
 WIND SPD. 11 (kts)  
 CLOUD(amt) TYPE WEATHER  
 BOTTO M DEPTH 2982 (m)  
 STA. NAME/ID NR-15

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS 24 hour Station 1 Prod  
 MAX. DEPTH = m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics	NIS
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL	Frac CHL	DIC/CAK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	Pat/Jared		
1	200V	4/68																				1
2	150V																					2
3	100V		77																			3
4	75		78																			4
5	50		79	208																		5
6	40		80																			6
7	30		81																			7
8	26		26																			8
9	26																					9
10	18																					10
11	18																					11
12	18																					12

Rosette Notes:

VESSEL RV Knorr		CRUISE ID 6N195-10 or 6N195J (for PMEL CTD)		PROJECT & LEG BEST/BSIERP Summer'09		Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive		STATION NO.																													
CONSC CAST #		LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB		WET BULB		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIN D SPD.		CLOUD(am)		WEATHER		BOTTO M DEPTH		STA. NAME/ID									
DEG		MIN		DEG		MIN		DAY		MO		YR		HR		MIN		°C		°C		(mb)		* * *		(deg)		(kts)		* * *		(m)					
		N				W		J		U		N		0		9																					
SBE 9+		FLUOR S/N		REMARKS		MAX. DEPTH =																															
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		Wengartl		Julie		Sambrotto		Moran/ Lomas		Harvey Lessard		Diane		Pat/Jared		Optics		Nis															
No. DESI/REL		notes		SALT		Nut. Bil		O2-Bil. No		CHL. Frac		CHL DIC/ALK		DOC		O18		\$15N		Urea Part.		Prod		DON		Lomas		Lessard		Diane		Pat/Jared		Optics		Nis	
1		15				P31																														1	
2		15																																2			
3		11				P32																												3			
4		11																																4			
5		11																																5			
6		8				P33																												6			
7		8																																7			
8		4				P34																												8			
9		4																																9			
10		6																																10			
11		0				P35																												11			
12		0																																12			

Rosette Notes:

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 54

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
6856	10	47	N	170	35	W	24	JUN	09	19	50		4.3	-	0838	345	668						132	5132

REMARKS: 129 + 3 04  
 MAX. DEPTH = 129 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Tmp Sensor No. \_\_\_\_\_

No. DESIRED	Notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL D/C/AIK	DOC	O18	Weingart		Sambrotto		DON	Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	No.	
									Julie \$15N	Urea Part.	Prod									
1	129	469	82	111																1
2	100		83																	2
3	75		84																	3
4	50		85																	4
5	40		86																	5
6	30		87																	6
7	20		88																	7
8	10		89																	8
9	0		90	142																9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 55

CONSC CAST # 06695617.59N  
 LATITUDE: 17.59N  
 DEGREE: 17, MINUTE: 59  
 LONGITUDE: 16952.35W  
 DEGREE: 169, MINUTE: 52, SECOND: 35  
 DAY: 24, MO: JUN, YR: 09  
 TIME (GMT): 2237  
 HR: 22, MIN: 37  
 DRY BULB (°C): 3.8  
 WET BULB (°C): ~~3.8~~  
 PRESSURE (mb): 0837350078  
 SEA STATE: \* \* \*  
 VISIBILITY: \* \* \*  
 WIND DIRN. (deg): 50  
 WIND SPD. (kts): 078  
 CLOUD(amt) TYPE: \* \* \*  
 WEATHER: \* \* \*  
 BOTTO M DEPTH (m): 114  
 STA. NAME/ID: SB-1

SBE 9+ \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: MAX. DEPTH = 110 m

Nis DEPTH	Rosel	Hydro Team-PMEL						Weingart	Julie	Sambroto				Moran/	Harvey	Diane	Pat/Jared	Optics	Nis
		No. DESIRED	notes	SALT	Nut Btl	O2-Btl No	CHL			Frac CHL	DIC/AIK	DOC	O18						
1	Bot			470	91	2144													1
2	75				92														2
3	50				93														3
4	40				94														4
5	30				95														5
6	20				96														6
7	10				97														7
8	0				98														8
9																			9
10																			10
11																			11
12																			12

Rosette Notes: Same 11 chlor MAX, = 14 m

VESSEL R/V Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09 PROJECT & LEG BEST/BSIERP Summer09 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive STATION NO. 55

CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DAY MO YR	HR MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIN SPD (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0705617	51 N	16952.6	24 JUN 09	2253											114	SB-1

SBE 9+ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: *Water was filtered in cast 069*

MAX. DEPTH = 7 m

Nis DEPTH	Rosel	Hydro Team-PMEL						Waingard	Julie	Sambrotto				Morain/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac			CHL DIC/CAIK	DOC	O18	615N						
1																		1	
2																		2	
3																		3	
4																		4	
5																		5	
6																		6	
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Rosette Notes:

**VESSEL** R/V Knorr **CRUISE ID** 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09 **PROJECT & LEG** BEST/BSIERP\_Summer09 **Ship Designation (I.D.)** 6N195-10 or 6N199J for PMEL CTD archive **STATION NO.** 56

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
071156	29	64	N	17130	17	W	25	JUN	09	05	02	5.4			0930			0938	342	088			168	SB-3

**REMARKS**  
 4 of 8. 164  
 MAX. DEPTH = 164 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prme) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Rosel. notes	Hydro Team-PMEL							Wingard	Julie	Sambroto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Lared	Optics	NIS			
		SALT	Nut:BI	O2-BI.No	CHL. Frac	CHI DIC/CAIK	DOC	O18			\$15N	Urea Part.	Prod	DON							TH	No.	
1	Bot	471	99	166																			1
2	100																						2
3	75				101																		3
4	50				102	175																	4
5	40				103																		5
6	30				104																		6
7	20				105																		7
8	10				106																		8
9	0				107																		9
10																							10
11																							11
12																							12

Rosette Notes: Chlor MAX Top 10 notes



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 57

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN																	
0725637583	N		17216.12	25	JUN	09	0755	5	6				101			003	48			148	58-4

REMARKS: 4 by album ->  
 SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Tmp Sensor No. \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (pr me) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_

Nis DEPTH	Rosel. notes	SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL	DIC	CAIK	DOC	O18	Weingard	Julie	Sambrotto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	Nis No.	
													Urea	Part.	Prod	DON							
1	144 ✓	472	108	127									X	X	X	X							1
2	100 ✓		109																				2
3	75 ✓		110										X	X	X	X							3
4	50 ✓		111										X	X	X	X							4
5	40 ✓		112																				5
6	30 ✓		113																				6
7	20 ✓		114										X	X	X	X							7
8	10 ✓		115										X	X	X	X							8
9	0		116										X	X	X	X							9
10																							10
11																							11
12																							12

Rosette Notes:

No Chlorine!

check MAX. DEPTH = 144 m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 58

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
735642	173	0.88	25	JUN	09	11	15	15	15	15	26.03	26.03	101	*	*	286	5			132	58-5

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Tmp Sensor No. \_\_\_\_\_

REMARKS: near buoy 91991 (deployed in May)  
 ITS posn: 5648.66 173.774  
 at 075Z 25 June 1987  
 MAX. DEPTH = 132 m

NIS DEPTH	Rosel	Hydro Team-PMEL						Weingard		Sambroto				Moran/	Harvey	Diane	Pat	Alared	Optics	NIS No.
		No. DESIRED	notes	SALT	Nut. Bl	O2-BU No	CHL. Frac	CHL. DIC/CAIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH	
1	128	1	473	117																1
2	100	1		118																2
3	75	1		119																3
4	60	1		120																4
5	40	1		121																5
6	30	1		122																6
7	20	1		123																7
8	10	1		124																8
9	0	1		125																9
10																				10
11																				11
12																				12

Rosette Notes:  
 blocked 10 pump → O2 T.S.  
 10 Salinity is back on ↓  
 sucked something in!  
 O2 below ~ 65' m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N199J for PMEL CTD archive  
 STATION NO.: 59

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
7457	0.18 N	17324.58 W	25 JUN 09 1436	5.6		081			221	108	3/4	C	166	SB-6

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 163+3 -> 166  
 MAX. DEPTH = 163 m

NIS DEPTH	Rosel	SALT	Nut Bil	Hydro Team-PMEL					Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	Optics	NIS No.
				O2-Bil.No	CHL	Frac CHL	DIC/ALK	DOC			OT18	§15N	Urea Part.						
1	163	473	126								M								1
2	100		127	120							M								2
3	175		128								M								3
4	50		129								M								4
5	40		130								M								5
6	30		131								M								6
7	20		132								M								7
8	10		133								M								8
9	0	474	134	088							M								9
10																			10
11																			11
12																			12

Rosette Notes:

*Handwritten scribble*

> Chlorophyll

1° OK

M is the header of sea depth run over at 163m depth

VESSEL: RVN Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 60

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
755716.75 N	17350.39 W	25 JUN 09	1657	4.6	.	072	2	245	11				185	SB-7

REMARKS: Std. Cast  
 MAX. DEPTH = 182 m

No. DESIRED	Roset. notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/CAK	DOC	O18	Weingart	Julie	Sambrotho			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS No.
											Urea	Part.	Prod						
1	180	135	135	235							X	X	X	X					1
2	150	136	136								X	X	X	X					2
3	150		137								X	X	X	X					3
4	120		137								X	X	X	X					4
5	120		138								X	X	X	X					5
6	75		138								X	X	X	X					6
7	75		139								X	X	X	X					7
8	50		139								X	X	X	X					8
9	40		140								X	X	X	X					9
10	30		141								X	X	X	X					10
11	20		142								X	X	X	X					11
12	10		143	112							X	X	X	X					12

130 144 X/O

Rosette Notes:

VESSEL R/V Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09 PROJECT & LEG 6N195-10 or 6N195J for PMEL CTD archive Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive STATION NO. 60

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
7657	16.75 N	17350.52 W	25 JUN 09 1753	5.2	.	072	24	5	11	74	4		185	58-7

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: *Red Cast*

MAX. DEPTH = \_\_\_\_\_ m

No.	Desired	Hydro Team-PMEL			Wiegart	Julie	Sambroto			Moran/Lessard	Harvey	Diane	Pay/Lared	Optics	No.
		Notes	SALT	Nut Bil			O2-Bil No	CHL. Frac	CHL/DIC/AIK						
1	38			P1											1
2	38														2
3	38														3
4	25			P2					X	X	X				4
5	25														5
6	25														6
7	20			P3											7
8	20														8
9	20														9
10	15			P4					X	X	X				10
11	15														11
12	15														12

Rosette Notes:

38 38 25 25 20 20 15 15 15  
 38 38 25 25 20 20 15 15 15  
 38 38 25 25 20 20 15 15 15  
 38 38 25 25 20 20 15 15 15  
 38 38 25 25 20 20 15 15 15  
 38 38 25 25 20 20 15 15 15

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N193J for PMEL CTD archive  
 STATION NO.

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY												

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Trip Senson No. \_\_\_\_\_

No. DESIRED	Rosel. notes	SALT	Nut. Bit	O2-Bil. No.	CHL. Frac	CHI DIC/AIK	DOC	O18	Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diame	Pal/Jared	Optics	No.
											Urea Part.	Prod	DON						
10			P5																1
10											X	X	X						2
10																			3
5	D																		4
5	D																		5
5	D																		6
5			P6								X	X	X						7
5																			8
5																			9
0																			10
0																			11
0																			12

Rosette Notes:

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer09  
 PROJECT & LEG: BEST/BIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 6-1

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	SEC	DEG	MIN	SEC													
775743	54	N		1733	51	06	2130	5.8					054	5	230	15	8	1169	SB-8

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Rosel.	Hydro Team-PMEL						Weingart/Julie		Sambroto			Moran/Lomas		Harvey/Lessard		Diana		Pat/Jared		Optics	Nis No.
		No DESIREL	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard	Diana	TH	Jared			
1	85		476	145	*202																	1
2	100			146																		2
3	75			147																		3
4	50			148																		4
5	40			149		*199																5
6	30			150																		6
7	20			151																		7
8	10			152																		8
9	0			153																		9
10																						10
11																						11
12																						12

REMARKS: 4 m bottom

MAX. DEPTH = 165 m

Rosette Notes:

Chlor MAX ~ 33 m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 62

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID			
078	58	03	13	N	17	4	02	97	W	26	JUN	09	01	15	5	6	18	03	45	2	30	188	136	SB-9

REMARKS: page 1 of 2  
 MAX. DEPTH = 137 m

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN

FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Trnp Sensor No.

Nis DEPTH	Rosel.	Hydro Team-PMEL							Weingard		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.	
		No DESIREL notes	SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL/DIC/AIK	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard		TH		
1	Bot	137	477		181															1
2	Bot				154															2
3	700				155															3
4	75				156	176														4
5	50				157															5
6	40				158															6
7	30				159															7
8	20				160															8
9	20																			9
10	15																			10
11	15																			11
12	10				161															12

Rosette Notes:

Strong Chlor MAX 20m

96



VESSEL: CRUISE ID: PROJECT & LEG: Ship Designation (I.D.): STATION NO. 62

RV Knorr: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09 6N195-10 or 6N19J for PMEL CTD archive

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0785803.13N			17402.97W			26	JUN	09	01	15												589	

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 Temp Sensor No. \_\_\_\_\_

REMARKS: poor 242  
 MAX. DEPTH = 137 m

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart			Julie			Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics/		Nis No.			
		No. DESIRE	notes	SALT	Nut. Bit	O2-Bit No.	CHL. Frac	CHL D/C/A/K	D/C/A/K	DOC	O18	615N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH	Jared	Optics	Nis No.												
13																																		1
14																																	2	
15																																	3	
16																																	4	
17						162																											5	
6																																	6	
7																																	7	
8																																	8	
9																																	9	
10																																	10	
11																																	11	
12																																	12	

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer09)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 63

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
6795843	01	N	174	5.43	26	JUN	09	06	07	5.7	91%		0248			002	128			170	SB-10

REMARKS: MAX. DEPTH = 167 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Julie		Sambrotto			Moran/	Harvey	Diane	Pat/	Jared	Optics	NIS No.
		No. DESIRED	notes	SALT	Nut.Bil	O2-Bil.No	CHL. Frac	CHL/DIC/AIK	DOC	O18	§15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH		
1	Bot		478	163	179						X	X	X								1
2	160			164							X	X	X								2
3	75			165							X	X	X								3
4	50			166																	4
5	40			167							X	X	X								5
6	30			168																	6
7	20			169																	7
8	10			170	195						X	X	X								8
9	0			171							X	X	X								9
10																					10
11																					11
12																					12

Rosette Notes:

Minor CHL or MAX = Top 15 m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSJERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 64

CONSC CAST #	0805825	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	45	N	175	20	50	W	26	JUN	09	10	16	5.6		043			325	138	1/2	C	184	SB-11

REMARKS: f barga water 182 + 4 126

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset.	SALT	Nut.Bil	Hydro Team-PMEL				Weingart	Julie	Sambroto			Moran/	Harvey	Diane	Paul	Jared	Optics	Nis No.
				O2-Bil.No	CHL	Frac CHL	DIC/AIK			DOC	O18	Urea							
1	182	479	172	193															1
2	150		173																2
3	100		174																3
4	75		175																4
5	50		176		6														5
6	40		177		5														6
7	30		178		4														7
8	20		179		3														8
9	10		180		2														9
10	7																		10
11	7																		11
12	7																		12

Rosette Notes:

7 m 12

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.:

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	SEC	DEG	MIN	SEC													

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 Trmp Senson No. \_\_\_\_\_

NIS DEPTH: Roset  
 No. DESIRED: notes  
 SALT  
 Nut Bil  
 O2-Bil. No  
 CHL. Frac CHL/DIC/AIK  
 DOC  
 O18  
 Weingard  
 Julie  
 Sambroto  
 Urea Part. Prod. DON  
 Moran/ Lomas  
 Harvey Lessard  
 Diane  
 Pat/ Jared  
 Optics  
 Nis No.

No.	1	2	3	4	5	6	7	8	9	10	11	12
7	7	7	7	7	7	7	7	7	7	0		
181												
174												



Rosette Notes:

21  
24

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 65

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
815828	18	55	N	174	19	72	W	2009	15	25	5.9	90.7%		0.73			327	11.7	7%		140	P14-6

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmittometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: P14  
 MAX. DEPTH = 137 m  
 137+3 140

NIS DEPTH	Rosel		Hydro Team-PMEL					Weingart		Julie		Sambroto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	NIS
	No. DESIRED	Nodes	SALT	Nut Bil	O2-BIL No	CHL. Frac	CHL DIC/AIK	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH			
1	130		420	182																1
2	100			183	197															2
3	75			184																3
4	50			185		5	5													4
5	40			186		4	4													5
6	30			187		3	3													6
7	10			188		2	2													7
8	0			189		1	1													8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: 66  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 66

CONSC CAST # 8258  
 LATITUDE 18.93 N  
 LONGITUDE 17435.42 W  
 DATE: 26 JUN 09  
 TIME (GMT): 1814  
 DRY BULB (°C): 6.1  
 WET BULB (°C): 5.1  
 PRESSURE (mb): 092  
 SEA STATE: 1  
 VISIBILITY: 1  
 WIND DIRN. (deg): 327  
 WIND SPD. (kts): 09  
 CLOUD (amt): 0  
 WEATHER: 1  
 BOTTO M DEPTH (m): 2096  
 STA. NAME/ID: P14-7

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (ptime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: *page 1 of 2*

N/S DEPTH	Roset.	SALT	Nut.BI	O2-BI.No	CHL.Frac	CHL/DIC/ALK	DOC	O18	δ15N	Sambrotto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	N/S No.
										Urea	Part.	Prod	DON						
1	500	481	190	190						X	X								1
2	500																		2
3	250		191							X	X								3
4	250																		4
5	200		192																5
6	200																		6
7	150		1193							X	X								7
8	100		2							X	X								8
9	75		2							X	X								9
10	50		3																10
11	40		4																11
12	30		5	Pa															12

Rosette Notes:

5

MAX. DEPTH = 500 m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer-09  
 PROJECT & LEG: BEST/BSIERP Summer-09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 66

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
825813.93	N	17435.42	W	26	JUN	09	18	14														814-7

REMARKS: *ppp 242*  
 MAX. DEPTH = 500 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/		Harvey		Diane		Paul		Optics	Nis No.
		No DESIREL	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	Paul	Jared	Optics					
1	20																									1
2	10																									2
3	0																									3
4	0																									4
5																										5
6																										6
7																										7
8																										8
9																										9
10																										10
11																										11
12																										12

13  
14  
15  
16

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 66

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
08358	13	75	N	174	35	90	W	26	JUN	09	19	17	6.2	9.7%	102			281	08	7/8		215	6	P14-7

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 Trmp Senson No. \_\_\_\_\_

REMARKS: Prod Cast

MAX. DEPTH = 50 m

No. DESIRED	Rosel. notes	SALT	Nut/Bil	Hydro Team-PMEL				DOC	O18	Weingart	Julie	Sambrotto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	No.				
				O2-Bil.No	CHL. Frac	CHL/DIC/Alk	DOC					Urea	Part.	Prod	DON										
1	23		P8																					1	
2	23																								2
3	23		P9																						3
4	15																								4
5	15																								5
6	15																								6
7	15																								7
8	1a		P10																						8
9	1a																								9
10	1a																								10
11	9		P11																						11
12	9																								12

Rosette Notes:  
 23  
 23  
 23  
 15  
 15  
 15  
 12  
 12  
 12  
 9  
 9  
 9  
 6  
 6  
 6  
 3  
 3  
 3  
 0.00



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer'09)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
83	58	13.75	N	174	35.9	D	W	26	J	U	N	0	9	19	17							2156	

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trip Sensor No. \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = 50 m

Nis DEPTH	Roset.	SALT	Nut Bil	Hydro Team-PMEL				DOC	Weingart O18	Julie S15N	Sambrotto			Moran/Lomas	Harvey Lessard	Diane	Paul/Jared TH	Optics	Nis No.	
				O2-Bil.No	CHL	Frac	CHL/DIC/AIK				Urea Part.	Prod	DON							
1	9																		1	
2	6		P12																	2
3	6																			3
4	6																			4
5	9																			5
6	3																			6
7	3																			7
8	3		P43																	8
9	3																			9
10	0		P44																	10
11	0																			11
12	0																			12

Rosette Notes:

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

VESSEL: **RV/ Knorr** CRUISE ID: **6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer09** PROJECT & LEG: **6N195-10 or 6N19J for PMEL CTD archive** STATION NO.: **67**

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
084	57	29	82	N	1	7	514	66	W	27	JUN	09	00	39	6.8	134	8	24	8	102	3490	P14-10

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 Temp Sensor No. \_\_\_\_\_

NIS DEPTH: Roset. \_\_\_\_\_  
 No. DESIRED: \_\_\_\_\_ notes: \_\_\_\_\_ SALT: \_\_\_\_\_ Nut Bil: \_\_\_\_\_ O2-Bil. No: \_\_\_\_\_ CHL. Frac CHL/DIC/ALK: \_\_\_\_\_ DOC: \_\_\_\_\_ Weingart: \_\_\_\_\_ O18: \_\_\_\_\_ Julie: \_\_\_\_\_ Urea Part: \_\_\_\_\_ Sambrotto: \_\_\_\_\_ Prod: \_\_\_\_\_ DON: \_\_\_\_\_ Moran/ Lessard: \_\_\_\_\_ Harvey: \_\_\_\_\_ Diane: \_\_\_\_\_ Pat. Jared: \_\_\_\_\_ Optics: \_\_\_\_\_ NIS No.: \_\_\_\_\_

No.	1	2	3	4	5	6	7	8	9	10	11	12
500	482	9	224									
250			18	213								
200					11							
100								12				
75								13				
50								14				
40								15				

REMARKS: *page 1 of 2*

MAX. DEPTH = 501 m

Rosette Notes: Chlor WFX ~30m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 61

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
08457	29	82	N	175	14	66	W	27	JUN	09	00	39											3490	P14-10

REMARKS: *page 209*

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Tmp Sensor No. \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	O18N	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	Pat/Jared	Optics	No.	Hydro Team: PMEL				
																				Weingart	Julie			
0																								
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

13  
14  
15  
16  
17  
18  
19  
20  
21

Rosette Notes: Chlor MAX 30m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL  
 STATION NO.: 68

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
85	57	44	11	75	0	8	27	1	08	42	6.5		162			249	1	24	2	203H	114-09

REMARKS: \$ MAX. DEPTH = 500 m

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 Temp Senson No. \_\_\_\_\_

NIS DEPTH	Rosel.	Hydro Team-PMEL										Weingart	Julie	Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS No.	
		No. DESIRED	notes	SALT	Nut. Blt	O2-Blt. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N			Urea Part.	Prod	DON							Lomas
1	500			48.3	20	211																	1
2	250				21																		2
3	200				22																		3
4	150				23																		4
5	100				24	162																	5
6	75				25																		6
7	50				26																		7
8	40				27																		8
9	30				28																		9
10	20				29																		10
11	10				30																		11
12	0				31	603																	12

Rosette Notes:

2037

2037

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 69

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
865759	11	7N	17447.26	27	13	89	4.6	16	243	15	2493												14-08

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: also P14N-3  
 Cast ~ to depth

MAX. DEPTH = 2638 m

NIS DEPTH	Rosel.	Hydro Team-PMEL										Wengart		Sambrotto			Moran/		Harvey		Diane		Pat		NIS No.
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH	§ared	Optics					
1	2638 ✓	484	32	226																				1	
2	2000 ✓		33																						2
3	1500 ✓		34	198																					3
4	1000 ✓		35	107																					4
5	500 ✓		36	069																					5
6	250 ✓		37	143																					6
7	100 ✓		38	242																					7
8	75 ✓		39																						8
9	50 ✓		40	219																					9
10	40 ✓		41																						10
11	30 ✓		42	232																					11
12	20 ✓		43																						12

Rosette Notes:  
 10 44 8  
 45 1 1500  
 200  
 500 250 100 75 50 40 30 20 10  
 (12m)

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer09)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 70

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
8758	15	19	N	74	33	35	W	07	J	U	N	09	17	35	4.8	.	173	250	13	F	2097	

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 Temp Sensor No. \_\_\_\_\_

REMARKS: Sed Trap Recovery  
 Prod East

MAX. DEPTH = 200 m

NIS DEPTH	Rosel.	Hydro Team-PMEL						Weingart	Julie	Sambrotto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Lared	Optics	NIS					
		No. DESIREL	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac			CHL. DIC/Alk	DOC	O18	Urea							Part.	Prod	DON		
1	100																							
2	50																							
3	29																							
4	29																							
5	25																							
6	25																							
7	19																							
8	19																							
9	19																							
10	15																							
11	15																							
12	11																							

100 50 29 25 19 19 19 15 11 11 8 3 4 4 0

Rosette Notes: 13

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG MIN	DEG MIN	DAY MO YR	HR MIN										
			JUN 09											

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL				Weingart	Julie	Sambroto			Moran/	Harvey	Diane	Pat/	Jarred	Optics	Nis No.
		No. DESIRE	notes	SALT	Nut. Bil			O2-Bil. No	CHL. Frac	CHL DIC/AIK							
1																	1
2					P19				X	X	X	X					2
3									X	X	X	X					3
4					P20/a2				X	X	X	X					4
5																	5
6																	6
7																	7
8					P21/a1					X							8
9																	9
10																	10
11																	11
12																	12

13  
14  
15  
16  
17  
18  
19  
20  
21

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP Summer'09  
 PROJECT & LEG: BEST/SIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 71

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
08858	43	10	N	174	06	12	W	27	JUN	09	20	49	4.5	/	184	3	25	11	18			138	R14-5

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Tmp Sensor No. \_\_\_\_\_

REMARKS: 4 m bottom  
 Fos  
 MAX. DEPTH = 134 m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/ Jared	Optics	NIS No.				
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/ALK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard			TH			
1	807		485	46																	1	
2	100			47																		2
3	75			48		*217																3
4	50			49																		4
5	40			50																		5
6	30			51		080																6
7	20			52																		7
8	10			53																		8
9	0			54																		9
10																						10
11																						11
12																						12

Rosette Notes: Chlor MAX 14 m



VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG BEST/BSIERP Summer09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 914-4

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
089	58	57.76	N	173	52.41	W	27	JUN	09	22	25	6	193	4	236	11	8				121	72

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 Trmp Senson No. \_\_\_\_\_

REMARKS  
 3 STD bottom  
 FOS  
 page 1 of 2  
 MAX. DEPTH = 119 m

NIS DEPTH	Roset	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	Julie	Sambrotto	Moran/	Harvey/	Diane	Pat/Jared	Optics	NIS
No. DESIRED	Indies								\$15N	Urea Part.	Prod	DON	Lomas	Lessard	TH	No.
1	80	486	55							X	X	X				1
2	100		56							X	X	X				2
3	75		57							X	X	X				3
4	50		58	172						X	X	X				4
5	40		59	155						X	X	X				5
6	30		60							X	X	X				6
7	26									X	X	X				7
8	20		61							X	X	X				8
9	10		62							X	X	X				9
10	5															10
11	5															11
12	5															12

Rosette Notes:  
 Chlor MAX 26

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 72

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
0895857.76			173	52.41	27	JUN	09	22	50		4.8										120	P14-4

REMARKS: max 202  
 MAX. DEPTH = 119 m

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 Senson No. \_\_\_\_\_

Nis DEPTH	Rosel. notes	Hydro Team-PMEL						Weingart	Julie	Sambroto				Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.			
		SALT	Nut Bil	O2-Bil.No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH						
1																						12
2																						11
3																						10
4																						9
5																						8
6																						7
7																						6
8																						5
9																						4
10																						3
11																						2
12																						1

63  
 productivity  
 NOT  
 Harvest

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. **73**

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
090	59	12.36 N	173	38.73 W	28 JUN 09 01:39	5.0	✓	2034	240	04	8			110	P14-3	

REMARKS: *304 B.T.T. max*  
 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 Temp Sensor No. \_\_\_\_\_

MAX DEPTH = 107 m

No. DESIRED	notes	SALT	Nut.Bil	O2-Bil.No	CHL. Frac	CHL/DIC/AIK	DOC	Weingart		Julie		Sambroto		Moran/	Harvey	Diane	Pat/Jared	Optics	NIS No.
								018	S15N	Urea Part.	Prod	DON	Lomas	Lessard		TH			
1	Bot	487	63	*205															1
2	100		64																2
3	75		65																3
4	50		66																4
5	40		67																5
6	30		68																6
7	20		69																7
8	10		70	*86															8
9	0		71																9
10																			10
11																			11
12																			12

Rosette Notes: *Smell above MAX 25m*

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 74

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
0915	9	26.99	N	173	25.01	W	28	JUN	09	03	36	4.7	—	2033	3	210	08	8			162	P14-2

REMARKS: 3-4 m of 80T 6m  
 FOS  
 MAX. DEPTH = 98 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 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 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Rosel.	Hydro Team-PMEL						Weingartl.	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac			CHL DIC/Alk	DOC	O18						
1	80T		488	72														1
2	75			73														2
3	50			74		113												3
4	40			75														4
5	30			76														5
6	20			77		*60												6
7	10			78														7
8	8			79														8
9																		9
10																		10
11																		11
12																		12

Rosette Notes: no chlor MAX

VESSEL: RVN Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 75

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
092	59	41.64	N	173	11.30	W	28	JUN	09	05	18		3.3		2031			170	078			94	P14-1

REMARKS: Fog  
 MAX. DEPTH = 91 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Trp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil.	O2-Bil. No.	CHL. Frac	CHL/DIC/AIK	DOC	O18	Wetgart	Julie	Urea Part.	Prod	DON	Moran/Lomas	Harvey/Lessard	Diane	Pat/Lared	Optics	No.
1		489	80																1
2			81																2
3			82																3
4			83	322															4
5			84																5
6			85																6
7			86																7
8			87																8
9																			9
10																			10
11																			11
12																			12

Rosette Notes: Chlor Max 36m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer09  
 PROJECT & LEG: BEST/BSI/ERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 76

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
09358	58	54	17	22	3	09	28	JUN	09	11	48	5.6		21		27	6	09			110	SAT

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (ptime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR S/N \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: SAT - Water for bryo

MAX. DEPTH = 35 m

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambroto			Moran/	Harvey	Diane	Pat	Jared	Optics	Nis	
		No. DESIRE/notes	SALT	Nut. Bil	O2-Bil/No	CHL	Frac CHL			DIC/AIK	DOC	O18								615N
1	35																			1
2	35																			2
3	7																			3
4	7																			4
5	7																			5
6	7																			6
7	7																			7
8	7																			8
9	7																			9
10	7																			10
11	7																			11
12	7																			12

13  
14  
7

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 77

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
945638	83	N	173	27	11	W	29	JUN	09	0954	6.6		153			154	178				2300	XB-18

REMARKS: (T6 was SA1 for bmgc)

MAX. DEPTH = 1500 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Rosel.	Hydro Team-PMEL						Weingard		Julie		Sambrotto		Moran/	Harvey	Diane	Pat	Jared	Optics	Nis No.	
		No. DESIRED	notes	SALT	Nut.Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH		
1	1500	✓		195	88															IT	1
2	1000	✓			89															CT	2
3	750	✓			90															ST	3
4	500	✓			91																4
5	250	✓			92																5
6	100	✓			93																6
7	75	✓			94																7
8	50	✓			95																8
9	40	✓			96																9
10	30	✓			97																10
11	20	✓			98																11
12	ID				99																12

Rosette Notes: 750  
 1500  
 2500  
 43 + Col 1 hr  
 10-12  
 ID (126)

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DAY MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
			JUN	09														

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prme) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR S/N \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trp Sensor No. \_\_\_\_\_

REMARKS: Pa

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	Roset. notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	Hydro Team-PMEL											
								Weingard	Julie	Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis	
								O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard		TH			No.
1	10																		1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11	↖																		11
12	0	490	100	165	1														12

Rosette Notes:



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 78

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
955654	21	N	73	11	75	W	29	JUN	09	14	07	6.6		143		151	18			145	X1317

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Trp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	Hydro Team-PMEL				DOC	Weingart		Julie		Sambrotto			Moran/		Harvey	Diane	Pat/ Jared	Optics	No.
					CHL	Frac CHL	DIC/CAIK	O18		§15N	Urea	Part.	Prod	DON	Lomas	Lessard							
1		491	102	200																			1
2		491	102	200																			2
3			103																				3
4			104																				4
5			105																				5
6			106																				6
7			107																				7
8			108																				8
9			109																				9
10																							10
11																							11
12																							12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SBIERP Summer'09  
 PROJECT & LEG: BEST/SBIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 79

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC	HR	MIN											
9657	9	46	N	72	56	09	16	08	6.4		143			152	16			114	XB16

REMARKS

MAX. DEPTH = 110 m

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 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Rosel.	Hydro Team-PMEL						Weingart		Julie		Sambroto				Moran/	Harvey	Diane	Pat	Optics	Nis No.
		No DESIRE	notes	SALT	Nut.Bil	O2-Bil.No	CHL.Frac	CHL	DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH	
1	h			492	110							✓	✓		✓						1
2	100			171								✓	✓		✓						2
3	175			112								✓	✓		✓						3
4	100																				4
5	75																				5
6	50																				6
7	40																				7
8	30																				8
9	20																				9
10	10																				10
11	0																				11
12	0																				12

Rosette Notes:

110

Pat

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) / BEST/BIERP Summer'09  
 PROJECT & LEG: BEST/BIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO: 49

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD (amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
9757	9	76	N	17	25	6	JUN	09	17	04	6.4		14			147	16			120	XB16

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 Trp Sensor No. \_\_\_\_\_

REMARKS: Food

MAX. DEPTH = 50 m

No. DESIRED	Roset.	SALT	Nut. Bil	O2-Bil. No	Hydro Team-PMEL				DOC	O18	Sambroto		DON	Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	No.
					CHL	Frac	CHL	DIC/ALK			Urea Part.	Prod							
1	26		P1																1
2	26										X	X	X						2
3	26										X	X	X						3
4	17		P2								X	X	X						4
5	17																		5
6	17																		6
7	13																		7
8	13										X	X	X						8
9	13																		9
10	10		P4																10
11	10																		11
12	10										X	X	X						12

Rosette Notes:

Handwritten notes on the right side of the page, likely corresponding to the Rosette Notes column:

26, 26, 17, 17, 13, 13, 10, 10, 7, 7, 26, 26, 13, 13, 10, 10, 7, 7, 26, 26, 13, 13, 10, 10, 7, 7, 26, 26, 13, 13, 10, 10, 7, 7

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE DEG	MIN	LONGITUDE DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
						J	U	N	0	9												

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

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 Trmp Sensor No. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut. Bit	O2-Bil. No	Hydro Team-PMEL				DOC	Weingart		Sambrotto			Moran/		Diane	Pat/ Jared		Optics	No.
					CHL. Frac	CHL	DIC	CAIK		Julie	Urea	Part.	Prod	DON	Lessard	TH		Jared			
1	7																				1
2	7										X	X	X								2
3	7										X	X	X								3
4	7																				4
5	7																				5
6	7																				6
7	7																				7
8	7																				8
9	3																				9
10	0										X	X	X								10
11	0																				11
12	0																				12

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 80

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
985725	15 N	17240.00 W	29 JUN 09 1956	6.3	✓	1556	154	208					118	X215

REMARKS: MAX. DEPTH = 115 m

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 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	S13N	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat Jared	Optics	No.
										Urea Part.	Prod	DON						
1	BT	493	119															1
2	100		120															2
3	75		121															3
4	50		122	*016														4
5	40		123															5
6	30		124															6
7	20		125															7
8	10		126															8
9	0		727	221														9
10																		10
11																		11
12																		12

Rosette Notes:

Chlor MAX = 21 m - 25 m

Bottom cap on BT 8  
 may have been closed for cast

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SI/ERP Summer09  
 PROJECT & LEG: BEST/SI/ERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 81

CONSC CAST #	LATITUDE			LONGITUDE			DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
09957	40	28	N	172	24	39	W	29	JUN	09	21	45	6.7	✓	1557	1	5	153	19	8		103	XR-14

REMARKS: MAX. DEPTH = 101 m

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 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut Bil	O2-Bil.No	Hydro Team-PMEL			DOC	O18	Waingart	Julie	Sambroto			DON	Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	No.
					CHL	Frac CHL	DIC/AIK					Part.	Prod	TH							
1	Bot	494	128																		1
2	Bot																				2
3	168		129																		3
4	35		130																		4
5	56		131	136																	5
6	40		132																		6
7	30		133																		7
8	20		134																		8
9	10		135																		9
10	0		136																		10
11																					11
12																					12

Rosette Notes: Chlor MAX 30u

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 822

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1005755	59 N	17208.47 W	30 JUN 09 0032	16.5	15.5	1065	7	144	23	6			106	X8-B

REMARKS: MAX. DEPTH = 102 m

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Rosel.	Hydro Team-PMEL				Weingart.	Julie	Sambroto				Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
		No. DESIRE/notes	SALT	Nut. Bil	O2-Bil. No			CHL.	Frac CHL	DIC/AIK	DOC						
1	80T		495	137	*167												1
2	75			138													2
3	50			139													3
4	48			140													4
5	30			142													5
6	20			143													6
7	10			144													7
8	0			145													8
9																	9
10																	10
11																	11
12																	12

Rosette Notes:

Chlor MAX 31µm

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG BEST/BSIERP\_Summer09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 53

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
10158	10	86	N	17	15	2	09	02	32	6.3	92%	165	8	156	227					100	X8-12

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 Temp Sensor No. \_\_\_\_\_

NIS DEPTH Rosel. \_\_\_\_\_  
 No. DESIRE/notes \_\_\_\_\_ SALT \_\_\_\_\_ Nut. Bil \_\_\_\_\_ O2-Bil. No. \_\_\_\_\_ CHL. Frac. CHL/DIC/AIK \_\_\_\_\_ DOC \_\_\_\_\_ O18 \_\_\_\_\_ O15N \_\_\_\_\_ Urea Part. \_\_\_\_\_ Prod \_\_\_\_\_ DON \_\_\_\_\_ Lomas \_\_\_\_\_ Harvey \_\_\_\_\_ Diam \_\_\_\_\_ Pat. Jared \_\_\_\_\_ Optics \_\_\_\_\_ Nis No. \_\_\_\_\_

No.	1	2	3	4	5	6	7	8	9	10	11	12
1	ROX	RS	SO	40	36	30	20	10	0			
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

MAX. DEPTH = 96 m

Rosette Notes: Chlor W-AK 35m



VESSEL: RVN Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 84

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIN D SPD (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
102	58	26	28	N	17	13	7	12	30	JUN	09	06	47	5.4	7.1	1165	4	140	208		96	XB-11

REMARKS: F05  
 MAX. DEPTH = 92 m

SBE 9+  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Trip Sensen No.

Nis DEPTH	Rosel. notes	Hydro Team-PMEL										Weingart		Julie		Sambroto			Moran/	Harvey	Diana	Pat/	Jared	Optics	Nis No.		
		SALT	Nut Bil	O2-Bil. No	CHL	Frac CHL	DIC/Aik	DOC	O18	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard	TH	TH	TH	TH	TH						
1	Bot	497		*88																							1
2	Bot			155																							2
3	75			156																							3
4	50			157																							4
5	90			158																							5
6	30			159																							6
7	20			160																							7
8	10			161																							8
9	0			162		100																					9
10																											10
11																											11
12																											12

Rosette Notes:  
 no chl or MAX

VESSEL: RVN Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 85

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
103	58	41	74 N	171	21	51 W	30	JUN	09	06	48		5.2		1745			148	178			86	X8-10

REMARKS: *page 1 of 2*  
 MAX. DEPTH = 83 m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	δ15N	Sambroto			DON	Moran/ Lomas	Harvey Lessard	Diane	Paul Jared TH	Optics	Nis No.
										Urea Part.	Prod								
1	Bot	498	163																1
2	75																		2
3	75																		3
4	75																		4
5	75																		5
6	75																		6
7	75																		7
8	75																		8
9	75																		9
10	75																		10
11	75																		11
12	75																		12

Rosette Notes:

Small Chlor MAX. 37 m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 85

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
103	58	41.74	N	17	12	15	09	06	48													XB-10

REMARKS: page 2 of 2

MAX. DEPTH = m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sencen No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ TH	Jared	Optics	Nis No.
		No DESIRED notes	SALT	Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	615N			Urea Part.	Prod	DON							
13		75																					1
14		75																					2
15		75																					3
16		75																					4
17		75																					5
18		75																					6
19		50																					7
20		40																					8
21		30																					9
22		20																					10
23		10																					11
24		0																					12

Surgeon BTL #24  
 Did not finish!

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N199J for PMEL CTD archive  
 STATION NO.: 86

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1045857		11	N	71	5	30	JUN	09	09	48	15.3		173	*	*	142	178	7/8		79	XB-9

REMARKS: MAX. DEPTH = 75 m

SBE 9+ \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Trmp Sension No. \_\_\_\_\_

Nis DEPTH	Rosel.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/	Harvey	Diane	Pa/ Jared	Optics	Nis No.		
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/ALK	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard	TH					
1	78	✓	499	170	178																			1
2	50	✓		171		6																		2
3	40	✓		172		5																		3
4	30	✓		173		4																		4
5	20	✓		174		3																		5
6	10			175		2																		6
7	8																							7
8	8																							8
9	8																							9
10	8																							10
11	8																							11
12	8																							12

Pressure problem on ↓ ~ 30m  
 (Pressure is shifted pressure  
 part by ~ 1 m?)

Rosette Notes:

VESSEL: RV/Knoir  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | BEST/BSIERP\_Summer09  
 PROJECT & LEG: Ship Designation (I.D.)  
 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND D SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN																		

REMARKS

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (pname) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR S/N \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Tmp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL.	Frac CHL	DIC/Aik	DOC	O18	Wingart		Sambrotto			DON	Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
										Julie	\$15N	Urea	Part.	Prod							
1																					1
2																					2
3																					3
4																					4
5																					5
6																					6
7																					7
8																					8
9																					9
10																					10
11																					11
12																					12

13  
14  
15  
16  
17

176 (circled) 1

X  
↑

Rosette Notes:

VESSEL R/V Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09 PROJECT & LEG BEST/BSIERP Summer09 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive STATION NO. 87

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
10559	12	39	N	70	50	30	JUN	09	13	05	5.2		173			132	17			78	X8-8

REMARKS: L1 + 69 73

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 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Rosel.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS		
		No. DESIRED	notes	SALT	Nut. BI	O2-BI/No	CHL	Frac	CHL	DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH			No.
1	69	✓	500	177																				1
2	50			178	147	6																		2
3	40			179		5																		3
4	30			180		4																		4
5	20			181		3																		5
6	10			182		2																		6
7	0			183	111	1																		7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

N10

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer'09 | Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive | STATION NO.: 88

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1665927	170	34	417 W	30	JUN	09	15	09	5	2	96.1	96.1	183	3	139	188	4	68	X-B-7			

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Trmp Senson No. \_\_\_\_\_

No	DESIREL	notes	SALT	Nut Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	Weingart		Sambrotto		DON	Moran/Lomas	Harvey/Lessard	Diane	Pav/TH	Jared	Optics	Nis No.
											Julie	Urea Part.	Prod	TH								
1	64		501	184																		1
2	50			185																		2
3	40			186																		3
4	30			187																		4
5	30			188																		5
6	10			189																		6
7	0			190																		7
8																						8
9																						9
10																						10
11																						11
12																						12

64 + 4

MAX. DEPTH = 64 m

Rosette Notes:

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG BEST/BSIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 89

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1075943	08 N	7018.64 W	30 JUN 09 1707	4.8	4.2	1.19	1	100	14				63	X13-6

REMARKS  
 58 Cast below pld d cast  
 No air crossing w/ 70m line  
 MAX. DEPTH = 58 m

Nis No.	Nis DEPTH	Rosel. notes	SALT	Nut. Bil	O2-Bil (nc)	CHL	Frac CHL	DIC/AIK	DOC	O18	δ15N	Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.
												Urea Part.	Prod	DON	Lomas	Lessard				
1	508	✓	508	191	175															1
2	50	✓		197																2
3	40	✓		192																3
4	30	✓		193																4
5	20	✓		194																5
6	10																			6
7	10																			7
8	10		508	02/6/106																8
9	0			02/106																9
10																				10
11																				11
12																				12

Rosette Notes:

3 at 10



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1085943	43.95	N 170 18.97	W 30	JUN	09	17	44		4.6		19			118	13				65	XB6

REMARKS: ? Prod

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 \_\_\_\_\_ Q2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL. DIC/CAIK	DOC	O18	S15N	Urea	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	No.
											Prod	DON	Lomas						
1	46	0																	1
2	46	0																	2
3	46	0																	3
4	46	0																	4
5	46	0																	5
6	46	0																	6
7	30	0																	7
8	30	0																	8
9	30	0																	9
10	24	0																	10
11	24	0																	11
12	24	0																	12

Rosette Notes:

46 30 24 18 12 6 0  
 46 30 24 18 12 6 0  
 46 46 46 46

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #		LATITUDE		LONGITUDE			TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD TYPE	WEATHER	BOTTO M DEPTH	STA. NAME/ID
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)	
		N				9													

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_

PRESS SN \_\_\_\_\_ SBE43-Oxy (parina) \_\_\_\_\_

PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_

SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_

PRI COND SN \_\_\_\_\_ PAR S/N \_\_\_\_\_

SEC COND SN \_\_\_\_\_ O2 Temp Seson No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingard		Sambrotto			Moran/Lomas		Harvey/Lessard		Diane		Pat/Jared		Optics	Nis No.
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL/DIC/Alk	DOC	O18	615N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH					
13			P11																				1
14											X	X	X										2
15																							3
16			P12																				4
17																							5
18																							6
19																							7
20											X	X	X										8
21																							9
22											X	X	X										10
23																							11
24			DID																				12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO: 9D

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I
1095958	17	00	2.77	W	30	JUN	09	20	30		4.2	—	20.4	6	1	46	208				56	KB-5

REMARKS: F05 MAX. DEPTH = 53

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 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 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset. notes	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat	Lared	Optics					
		SALT	Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard	TH						
1	8&X	503	198	*127																			
2	40		199																				
3	30		260																				
4	20		201																				
5	10		202																				
6	0		203																				
7																							
8																							
9																							
10																							
11																							
12																							

Chlor MAX 45  
 elevated D 3m a B. 2009

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 91

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID					
1106014		14		82	N	16	9	46	30	W	30	J	U	N	0	9	22	19	4.0	95%	20	48	136	55	49	XB-4

REMARKS: MAX. DEPTH = 46 m

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						Weingart	Julie	Sambrotto				Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.				
		SALT	Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/Alk			DOC	O18	Urea	Part.							Prod	DON		
1	Bot	504	204						X	X			X										1
2	40		205								X												2
3	30		206							X	X			X									3
4	20		207																				4
5	10		208	144							X	X		X									5
6	0		209								X	X											6
7																							7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes: Chlor MAX 40

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 92

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I
1116029.34			N	16930.97		01	JUL	09	00	36		4.5		2137			132	146			46	X8-3

REMARKS: MAX. DEPTH = 43

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Rosel.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/	Jared	Optics					
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard		TH					
1	Bot			505	210	208																	
2	30				211																		
3	20				212																		
4	10				213																		
5	0				214																		
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Chlor MAX 40-30m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 93

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I	
	DEG	MIN	DEG	MIN																		
11260	44	.64	N	169	15	76	W	01	JUL	09	02										42	XB-2

REMARKS: MAX. DEPTH = 39

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_

PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_

PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_

SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_

PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_

SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL					Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/ Jared	Optics	
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/ALK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard	TH
1	BT			506	215	239											
2	30																
3	30				216												
4	20				217												
5	18				218												
6	0				219												
7																	
8																	
9																	
10																	
11																	
12																	

239  
 Chlor MAX = 38

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 94

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/	
	DEG	MIN	DEG	MIN																		
113	60	59.94	N	169	00.02	W	01	JUL	09	04	20	5.1	21.37	7	137	107					39	X8-1

REMARKS: MAX. DEPTH = 36

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN

FLUOR S/N  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR S/N  
 O2 Trmp Senson No.

Nis DEPTH	Roset.	Hydro Tearn-PMEL					Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics									
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No			CHL. Frac CHL	DIC/AIK	DOC						O18	\$15N	Urea Part.	Prod	DON	TH			
1	905		507	220	112																				
2	20			211	112																				
3	10			211	112																				
4	0			211	112																				
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

Chlor MAX 36m









VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 97

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I		
116579	53	96	N	169	12	10	W	1	JUL	09	17	03	3.7			223	*	*	124	158	6/8	46	MAN-3 97

REMARKS:   
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	No. DESIRED	Poset. notes	Hydro Team-PMEL						Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics					
			SALT	Nut. Bl	O2-Bil. No	CHL. Fac	CHL. D/C/A/K	DOC			O18	§15N	Urea						Part.	Prod	DON	TH	
1	41		510	9		5					X	X											
2	41										X												
3	30			10		4					X	M											
4	30																						
5	20				11		3				X	M											
6	20																						
7	10				12		2					M											
8	10											M											
9	0				13		1					M											
10	0																						
11																							
12																							

NET!

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N199J for PMEL CTD archive  
 STATION NO.: 97

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1175953	79 N	16912.54 W	1 JUL 09 1741	3.9		22			128	7			46	MN-3

REMARKS: ? Red MN-3

MAX. DEPTH = m

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 Temp Senson No. \_\_\_\_\_

Nis DEPTH	Rosel. notes	Hydro Team-PMEL						Weingart	Julie	Sambrotto				Moran/ Lomas	Harvey Lessard	Diame	Pat/ Jared	Optics	Nis No.
		SALT	Nut Bil	O2-Bil.No	CHL. Frac	CHL/DIC/AIK	DOC			O18	\$15N	Urea	Part.						
1	38																		1
2	21		P13																2
3	21																		3
4	21																		4
5	14		P14																5
6	14																		6
7	14																		7
8	11		P15/02																8
9	11																		9
10	11																		10
11	8		P16																11
12	8																		12

Rosette Notes:

38 - 21  
 21 - 14  
 14 - 11  
 11 - 8  
 8 - 5  
 5 - 2  
 2 - 1

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.:

CONSC CAST # \_\_\_\_\_

LATITUDE: DEG \_\_\_\_\_ MIN \_\_\_\_\_

LONGITUDE: DEG \_\_\_\_\_ MIN \_\_\_\_\_ DAY \_\_\_\_\_ MO \_\_\_\_\_ YR \_\_\_\_\_

TIME (GMT): HR \_\_\_\_\_ MIN \_\_\_\_\_

DRY BULB (°C): \_\_\_\_\_ WET BULB (°C): \_\_\_\_\_

PRESSURE (mb): \_\_\_\_\_ SEA STATE: \_\_\_\_\_ VISIBILITY: \_\_\_\_\_

WIND DIRN (deg): \_\_\_\_\_ WIND SPD (kts): \_\_\_\_\_

CLOUD (amt): \_\_\_\_\_ TYPE: \_\_\_\_\_ WEATHER: \_\_\_\_\_

BOTTO M DEPTH (m): \_\_\_\_\_ STA. NAME/ID: \_\_\_\_\_

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_

PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_

PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_

SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_

PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_

SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No.	DESIREL	Rosel	Hydro Team-PMEL					Weingard	Julie	Sambrotto				Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	No.
			SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL. DICA/K			DOC	O18	\$15N	Urea Part.						
1	2																		1
2	5																		2
3	5																		3
4	5																		4
5	2																		5
6	2																		6
7	2																		7
8	2																		8
9	2																		9
10	2																		10
11																			11
12																			12

bottom to get 2 m

Rosette Notes:

13  
14  
15  
16  
17  
18  
19  
20  
21  
22

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 98

CONSC CAST #	LATITUDE			LONGITUDE			DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I
	DEG	MIN	SEC	DEG	MIN	SEC																	
1185953	33	96	N	169	48	09	W	11	JUL	09	19	42	4.5		22			138	19			52	MN-4

REMARKS: 48+4  
 MAX DEPTH = 48

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trp Sensor No. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL. CHL	DIC/ALK	DOC	O18	Julie \$15N	Urea Part.	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics						
												Prod	DON												
1	48 ✓	511	14	143	6		✓	✓																	
2	40 ✓		15	5			✓	✓																	
3	30		16	4			✓	✓																	
4	50	30	Jared																						
5	5	30																							
6	80		17	3																					
7	10		18	2																					
8	0		19	1			✓	✓																	
9																									
10																									
11																									
12																									

2 bottles for Sarsol & max size top part of each

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 99

CONSC CAST # 1195954  
 DEG 16 N  
 MIN 17023.77  
 W 01 JUL 09  
 HR 2323  
 MIN 5.3  
 WET BULB 91%  
 PRESSURE 2147.34  
 SEA STATE 207  
 VISIBILITY 63  
 WIND DIRN. 134  
 WIND SPD. 207  
 CLOUD(amt) 0  
 WEATHER  
 BOTTO M DEPTH 63  
 STA. NAME/

LONGITUDE  
 TIME (GMT)  
 DRY BULB (°C)  
 WET BULB (°C)  
 PRESSURE (mb)  
 SEA STATE  
 VISIBILITY  
 WIND DIRN. (deg)  
 WIND SPD. (kts)  
 CLOUD(amt)  
 WEATHER  
 BOTTO M DEPTH (m)  
 STA. NAME/

REMARKS  
 MAX. DEPTH = 60

Nis DEPTH	Roset.	Hydro Team-PMEL				Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics																						
		No. DESIRED	notes	SALT	NUT BIT	O2-Bit. No	CHL. Frac	CHL	CHL	DIC/AIK	DOC	O18	§15N	Urea	Part.	Prod	DON	Lomas		Lessard	Diane	Pat/Jared	Optics																		
1	60T			512	20	219				✓	✓																														
2	50				21																																				
3	40				22					✓	✓																														
4	30				23					✓	✓																														
5	40																																								
6	30																																								
7	20				24																																				
8	20																																								
9	10				25					✓	✓																														
10	10																																								
11	0																																								
12	0				26					✓	✓																														

219 Chlor WTRK

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 170

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I							
	DEG	MIN	DEG	MIN																								
120	S	95	W	171	00	02	W	02	J	U	L	0	9	01	39	S	8	4	.	20	5	8	13	0	17	6	70	WV-6

REMARKS: poor 192

MAX. DEPTH = 66

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Tmp Sensor No. \_\_\_\_\_

No. DESIRED	Roset.	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	O15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	Pat/ Jared	Optics	Hydro Team-PMEL	
																		Weingart	Julie
1	Rot	513	27	242	✓	✓	✓												
2	Rot																		
3	50			28	✓														
4	50																		
5	40			29	✓														
6	40																		
7	30			30	✓														
8	30																		
9	20			31	✓														
10	20																		
11	10			32	✓														
12	10																		

242 no real chl or nit





VESSEL RV Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09 PROJECT & LEG BEST/BSIERP\_Summer09 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive STATION NO. 101

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/I	
1211	59	54.00	N	171	35.6	2w	02	JUL	09	0856	6.0	7	1958	127	216	71	WIN-7

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 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 Temp Sensor No. \_\_\_\_\_

REMARKS page 1 of 2

MAX. DEPTH = 67

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	
		No. DESIRED	notes	SALT	Nut. BI	O2-BI. No	CHL.	Frac CHL	DIC/AIK	DOC	O18	§15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH		
1	Bot			514	34	269			X	X												
2	Bot																					
3	60				41																	
4	50								X	X												
5	50																					
6	40								X	X												
7	40																					
8	30								X	X												
9	30																					
10	30										X	X	X									
11	20																					
12	20																					

no CHL or MAX







VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP\_Summer'09)  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 104

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I		
	DEG	MIN	DEG	MIN																				
1245	9	54.02	N	72	47.99	W	2	JUN	20	9	10	40	5.9			18							76	MN-9

REMARKS: Dongo water  
Turn on  
H+S  
 MAX. DEPTH =

Nis DEPTH	Foset.	Hydro Team-PMEL						Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics								
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac			CHL. DIC/AIK	DOC	O18						Urea	Part.	Prod	DON	TH			
1	71		514	56																					
2	50		517	57		220																			
3	40			58																					
4	30			59																					
5	30																								
6	30																								
7	30																								
8	30																								
9	30																								
10	30																								
11	30																								
12	30																								

10 8  
 10 30  
 part of 20m



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 105

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/
1255954	13	N	173	23	21	Jul	09	14	20		5.2		163			119	20				91	MN-10
																					85	

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR SN  
 SBE43-Oxy (ptime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Tmp Sensor No.  
 REMARKS: 82+3  
 MAX. DEPTH = 82

No DESIRED	Nis DEPTH	Roset. notes	Hydro Team-PMEL					Weingart	Julie	Sambrotto			Moran/	Harvey	Diane	Pat/	Vared	Optics					
			SALT	Nut Bil	O2-Bil.No	CHL.Frac	CHL DIC/AIK			DOC	Urea Part.	Prod							DON	Lomas	Lessard	TH	
1	82		518	63																			
2	50			64		6																	
3	40			65		5																	
4	30			66		4																	
5	30	D																					
6	20			67		3																	
7	20	D																					
8	10			68		2																	
9	10	D																					
10	0			69		1																	
11																							
12																							

Coast Guard II  
 10031 on board



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/SIERP\_Summer'09)  
 PROJECT & LEG: BEST/SIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 106

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I
265953	9	53	N	174	2	JUL	09	16	33	1633	5.5	.	154	.	.	116	208	4	100	100	MN-11

REMARKS: *96*  
 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 Temp Sensor No. \_\_\_\_\_

No. DESI/RELI	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	S15N	Urea	Sambroto			Lomas	Harvey	Diane	Pat/Jared	Optics
											Part.	Prod	DON					
1		519	70	N 200		11				✓	✓	✓					X1	
2			75	71	082	11				✓	✓	✓					X2	
3			75			11				✓	✓	✓					X2	
4			50	72		11												
5			50															
6			40	73		11											X3	
7			40			11											X4	
8			30	74		11											X4	
9			30														X5	
10			20	75	00												X6	
11			20															
12			10	76														

*No water colli BZ FM submers*



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO: MWOT106

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/I	
1	27	59	54.00	173	55.52	2	JUL	09	17	19	5.4												MWU

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 Trmp Sensor No. \_\_\_\_\_  
 REMARKS: *Red Diane dnd not take water - NO fluor. in water*  
 MAX. DEPTH = 50

Nis DEPTH	Roset.	Hydro Team-PMEL					Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics								
		No. DESIRED	notes	SALT	Nut. Bit	O2-Bit No			CHL. Frac	CHL DIC/ALK	DOC						O18	\$15N	Urea Part.	Prod	DON	TH		
1	46				P19																			
2	46																							
3	46				P1																			
4	20																							
5	30																							
6	30																							
7	24				P2																			
8	24																							
9	24																							
10	18				P3																			
11	18																							
12	12																							

*46 30 24 18 12 6 0*



VESSEL: P/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSI/ERP\_Summer09)  
 PROJECT & LEG: BEST/BSI/ERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 107

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/	
	DEG	MIN	DEG	MIN																		
1285954	22	N	174	36	18	Jul	09	21	12	5.3	95%	-	1356	107	258						111	MD12

REMARKS: MAX. DEPTH = 107

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 Trmp Sensor No. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL. C/AIK	DOC	O18	Jule	Sambrotto			Lomas	Harvey	Diane	Pat. Jared	Optics
										Urea	Part.	Prod					
1	Rot	520	78	112			X	X									
2	75		79														
3	50		80				X	X									
4	40		81														
5	30		82														
6	20		83														
7	10		84														
8	0		85				X	X									
9																	
10																	
11																	
12																	

no CLK-MAX

VESSEL: RV/ Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 108

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/I	
129	59	54.44	N	175	11.86	W	02	JUL	09	23	20	5.7	94%	1166	*	*	112	26	8	*	*	119	mn-13

REMARKS: page 1 of 2  
 MAX. DEPTH = 116

No. DESIRED	Roset	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics							
		notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH							
1	90X		521	86			X	X																
2	75			87			X	*	581															
3	60			88			X																	
4	50			89			X	X	552															
5	40			90			X	X																
6	40																							
7	30			91			X	X	553															
8	20			92																				
9	20																							
10	20																							
11	10			93	155		X	X	554															
12	10																							

155  
 + 2 at Chlor MAX = 20



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 109

CONSC CAST #	LATITUDE			LONGITUDE			DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	SEC	DEG	MIN	SEC																		
1305954	19	N		17548	02	W	03	JUL	09	03	11		6.6	-	0684	105	308						129	MMN-14

REMARKS: Rain MAX. DEPTH = 126 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trip Sensor No. \_\_\_\_\_

No. DESIRED	Roset.	SALT	Nut BH	O2-BH/No	CHL	Frac	CH	DIC/AIK	DOC	O18	Julie	Sambrotto			Moran/ Lomas	Harvey/ Lessard	Diane	Par/ Jared	Optics	Nis
												Prod	DON	TH						
1	BT	522	95	205				X	X									X1		1
2	75	522	96															X2		2
3	55		97					X	X									X3		3
4	40		98															X4		4
5	36		99															X5		5
6	20		100															X6		6
7	10		101															X7		7
8	0		102					X	X									X8		8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: Chlor WFK 20-30



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 110

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIR/N	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1315954	17	07	17	23	03	JUL	09	05	30		5.9	1.1	025	4	08	8	20	8		139	MM-15

REMARKS: Rain  
 MAX. DEPTH = 136 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Lared		Optics	Nis No.	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil.No	CHL. Frac	CHL DIC/Aik	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard			TH			
1	Bot			163				X		X	X												1
2	75		S23	104		86		X			X												2
3	75										X												3
4	50			165				X														X	4
5	50																						5
6	40			106																			6
7	35																					X	7
8	30			107				X			X												8
9	20			108				X			X												9
10	10			109				X			X												10
11	0										X											X	11
12	0			110				X			X												12

Rosette Notes: 86 no chlor wAX

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 111

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
13259	53	98	N	77	0	03W	03	JUL	09	837	5.3		95.8		954			73	28			137	WN-16

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 13274

MAX DEPTH = 132 m

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Lared	Optics	Nis							
		No. DESIRE	notes	SALT	Nut. Bl	O2-Bll. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea	Part	Prod	DON	Lomas	Lessard			TH					
1	132			111				/																1	
2	100			112																					2
3	75			113																					3
4	50			114																					4
5	40			115																					5
6	30			116																					6
7	20			117																					7
8	10			118																					8
9	0			119																					9
10																									10
11																									11
12																									12

Rosette Notes:  
 2-310  
 345

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 112

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
133	59	53.99	N	77	36.00	W	3	JUL	09	1059	5.2		894			89	16			137	MN-17

REMARKS: Baro 133 + 4  
 MAX. DEPTH = 133 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Rosal.	Hydro Team-PMEL										Wiegand		Sambroto			Moran/		Harvey		Diane	Pav/ Jared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bll. No	CHL	Frac CHL	DIC/ALK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard	TH					
1		525	120					1	1	1													1	
2		525	120	199				1	1	1													1	
3		100	121					1	1	1													2	
4		75	122					1	1	1													3	
5		75	122					1	1	1													3	
6		50	123					1	1	1													4	
7		50	124					1	1	1													4	
8		40	124					1	1	1													5	
9		30	125					1	1	1													6	
10		20	126					1	1	1													6	
11		20	127					1	1	1													7	
12		10	127					1	1	1													8	

the Notes:

8m 10 bottles

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	SEC	DEG	MIN	SEC													DAY

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Trmp Senson No. \_\_\_\_\_

No. DESIRED	Roset.	Hydro Team-PMEL						Wingart	Julie	Sambroto			Morav	Harvey	Diane	Pat/Jared	Optics	Nis
		SALT	Nut.Bil	O2-Bil.No	CHL.	Frac CHL	DIC/AIK			DOC	O18	Urea Part.						
1	8																	1
2	8																	2
3	8																	3
4	8																	4
5	8																	5
6	8																	6
7	8																	7
8	8																	8
9	8																	9
10	8																	10
11	0																	11
12	0																	12

22  
23  
24

13

Rosette Notes:

138  
NOTED



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SLEEP Summer'09  
 PROJECT & LEG: BEST/SLEEP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N194 for PMEL CTD archive  
 STATION NO. 113

134	CONSC	LATITUDE	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
134		1845954.04 N			17847.85 W		3	JUL	09	15	42	9770	5.2	.	853	.	282	138	4	.	.	160	MN-19

REMARKS: 232 d  
 MAX. DEPTH = 151 m  
 Deploy Sud Trap

No.	DESIGN	notes	SALT	Nut Bil	O2-Bil No	CHL	Frac CH	DIC/Alk	DOC	O18	S15N	Sambroto				DON	Moran/		Diane	Pav/ared	Optics	No.		
												Urea	Part.	Prod	Thom		Harvey	Lessard						
1	150		5208	129				/				X			X									1
2	150		5206	129	176			/				X			X									2
3	100							/					X											3
4	100				130			/					X											4
5	75							/						X										5
6	75							/					X											6
7	50							/						X										7
8	50							/							X									8
9	40							/								X								9
10	40							/					X											10
11	30							/																11
12	30							/																12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY												

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

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 Temp Sensor No. \_\_\_\_\_

No	DESIREL	notes	SALT	Nut Bil	O2-Bil No	CHL	Frac	CHL	DIC/Aik	DOC	Weingart		Sambrotto			Moran/		Diane	Pav/	Lared	Optics	Nis
											O18	\$15N	Urea	Part.	Prod	DON	Lomas					
1	20	13		135					/													1
2	20	14		135					/													2
3	10	15		136					/													3
4	10	16		136					/													4
5	0	17		137					/													5
6	0	18		137					/													6
7																						7
8																						8
9																						9
10																						10
11																						11
12																						12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 113

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	96.19	PRESSURE (mb)	863	SEA STATE	VISIBILITY	WIND DIRN. (deg)	24	WIND SPD. (kts)	11.5	CLOUD (amt)	8	WEATHER	BTTO M DEPTH (m)	STA. NAME/ID	MN-19
--------------	-----	-----	-----	-----	-----	----	----	----	-----	------------	---------------	---------------	-------	---------------	-----	-----------	------------	------------------	----	-----------------	------	-------------	---	---------	------------------	--------------	-------

1355953.91 N 17845.75 W 3 JUL 09 1710 5.3 . 863 24 11.5 8

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trp Sensor No. \_\_\_\_\_

REMARKS: Pod Cast

MAX DEPTH = 40 m

Nis	No. DESIRED	Roset. notes	SALT	Nut. Bit	Hydro Team-PMEL				DOC	O18	\$15N	Sambrotto				Lomas	Lessard	Diane	TH	Optics	No.
					O2-Bit. No	CHL. Frac	CHL/DIC/ALK	Wengart				Julie	Urea Part.	Prod	DON						
1	27																				1
2	23			PR																	2
3	23																				3
4	23																				4
5	15			PR																	5
6	15																				6
7	15																				7
8	12			PR																	8
9	12																				9
10	12																				10
11	9			PR																	11
12	9																				12

Rosette Notes:

23  
23  
23  
15  
15  
12  
12  
9  
9  
9  
100  
333

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP Summer'09  
 PROJECT & LEG BEST/SIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
						J	U	L	0	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 \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.	
		No.DESIRE/notes	SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH					
1	9	13																					1
2	6	14		P11																			2
3	6	15																					3
4	6	16		22P2																			4
5	3	17																					5
6	3	18																					6
7	3	19		D																			7
8	3	20		D																			8
9	3	21		D																			9
10	0	22																					10
11	0	23																					11
12	0	24			Q1M12																		12

Rosette Notes:



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 114

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
136	59	53	97N	178	11	84W	03	JUL	09	20	42	5.9	96.6	96.6	925			200	228			140	MN-18

REMARKS: page 1 of 2  
 MAX. DEPTH = 136 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis No.	No. DESIRED	Roset. notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/CAIK	DOC	O18	δ15N	Sambrotto			DON	Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
											Urea Part.	Prod	TH							
1	Bot		527	138	181		X	X	559		X	X	X							1
2	75						X	X	560		X	X	X							2
3	75						X	X			X	X	X							3
4	75										X	X	X							4
5	50																			5
6	46																			6
7	30																			7
8	30										X	X	X							8
9	20																			9
10	20																			10
11	20																			11
12	10																			12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 114

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
1365953.97N	178	11.84	W	03	J	U	L	09	20	42	.	.	.	.	.	.	.	.	.	.	.	MM-18

REMARKS: page 2 of 2  
 MAX. DEPTH = 136 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trip Sensor No. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	S15N	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	No.
										Urea	Part.	Prod						
0																		1
0			145								XX							2
																		3
																		4
																		5
																		6
																		7
																		8
																		9
																		10
																		11
																		12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO: 115

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
13759	53	78	N	179	22	81	W	04	JUL	09	03	19	6.7	+	9768	170	308				2750	MN-20

REMARKS: *page 1 of 2*  
 MAX. DEPTH = 1558 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset	Hydro Team-PMEL										Weingart		Sambrotto			Moran/	Harvey	Diane	Pat	Lared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	\$ISN	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	TH	Lared	Optics	
1	Bot			146	133				X	X	562												1
2	1000			528	147	213			X	X	563												2
3	1000																						3
4	1000																						4
5	750			148	144				X	X	564												5
6	500			149	193				X	X	565												6
7	250			150	202				X	X	566												7
8	150			151					X	X	567												8
9	100			152					X	X	568												9
10	75			153					X	X	569												10
11	50			154																			11
12	40			155					X	X	570												12

Rosette Notes: *Chlor max 20-26 m*

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 115

CONSC	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
13759	53	78	N	179	22	8	10	03	19													MM-20

REMARKS: page 2 of 2

MAX. DEPTH =

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut Bil	O2-Bil.No	CHL	Frac CH	DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Hydro Team-PMEL				TH	No.			
															Weingart	Julie	Sanbroto	Moran/			Harvey	Diane	Optics
13	30		156				X	X	511													1	
14	24																						2
15	20		157																				3
16	10		158	*179			X	X	512														4
17	10																						5
18	0																						6
19	0		159				X	X	513														7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 116

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA NAME/ID
138	60	8.08N	78	36.53W	04	JUL	09	10	09	6.2	95.00		044			174	278	6		179	SB-02

REMARKS: Board call at SB-12 but dim not sure that's correct  
 Bong 0  
 MAX. DEPTH = 175 m

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto				Moran/	Harvey	Diane	Pal/Jared	Optics	Nis No.			
		No. DESIRED	notes	SALT	Nut. Bl	O2 Bl. No	CHL. Frac	CHL DIC/ALK	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard		TH				
1	175			529	160																	1
2	150				161																	2
3	100				162																	3
4	75				163																	4
5	50				164																	5
6	40				165																	6
7	30				166																	7
8	20				167																	8
9	10				168																	9
10	8																					10
11	8																					11
12	8																					12

Rosette Notes:

8 10 bottles

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC												
				N														

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trmp Sension No. \_\_\_\_\_

REMARKS \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	O15N	Urea	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
												Part.	Prod	DON						
1	8	13																		1
2	8	14																		2
3	8	15																		3
4	8	16																		4
5	8	17																		5
6	8	18																		6
7	8	19																		7
8	0	20			197	169	1													8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer'09  
 PROJECT & LEG: BEST/BIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 117

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
1395959		01	N	17847		71	W	4	JUL	09	1347	6.2		05		10629					148	Bad Tray Brewer

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmittometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: *Bad Tray Brewer - depth 20094*  
 MAX. DEPTH = \_\_\_\_\_ m

NIS DEPTH	Foset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/	Harvey	Diane	Paul	Lared	Optics	NIS	
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil/No	CHL	Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON				Lomas
1		140		530	57	190														1
2		100			58															2
3		75			59															3
4		50			60															4
5		40			61			5												5
6		30			62			4												6
7		20			63			3												7
8		10			64			2												8
9		0			65			1-												9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 118

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC												
140	59	59	.45N	172	47	.76W	4 JUL 09 16:12	6.1	.	065	.	.	168	24	26%			

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: Pod at 4  
 Sed Trap Recovery

No.	DESIREP	notes	SALT	Nut. BH	O2-Btl. No.	CHL	Frac	CHL/DIC/ALK	DOC	O18	δ13N	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	Optics	Nis
												Urea	Part.	Prod						
1	30																			1
2	22			P14																2
3	22																			3
4	22																			4
5	22																			5
6	12			P15																6
7	12																			7
8	12																			8
9	10			P16																9
10	10																			10
11	10			P17																11
12	7																			12

Rosette Notes:  
 30 22 12 10 7 5 2 D. at core level (20)  
 22 12 10 7 5 2 22 22 22



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC												

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 Temp Sensor No. \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

No DESIRED	Roset. notes	SALT	Nut Bil	O2-Bil. No	Hydro Team-PMEL				DOC	O18	S15N	Sambroto				DON	Moran/Lomas		Harvey/Lessard	Diane	Pat/Lared	Optics	Nis No.	
					CHL	Frac	CH	DIC/Alk				Urea	Part.	Prod	TH		Optics							
7																								1
7																								2
5																								3
5																								4
5																								5
5																								6
2																								7
2																								8
2																								9
2																								10
0																								11
0																								12

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

Rosette Notes:  
 Rolling ~ am

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/SIERP - Summer09)  
 PROJECT & LEG: BEST/SIERP - Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO: 118

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(am)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
141	141	59	28.72N	178	10.65	W	04	JUL	09	21	06	6.4	92%	1057	7	187	238				27	5313

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = 267 m

Nis DEPTH	Foset.	Hydro Team-PMEL										Wiegart		Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics		Nis No.
		No DESIREF	notes	SALT	Nut. Bl	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	O18	Julie	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	TH	TH	Optics	Nis			
1	Bot			531	66	*211																					1
2	150				67																						2
3	75				68																						3
4	50				69																						4
5	40				70																						5
6	30				71																						6
7	20				72																						7
8	10				73																						8
9	0				74																						9
10	0																										10
11																											11
12																											12

Rosette Notes: Chl a MAX 20-30 m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09 | Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive | STATION NO.: 119

CONSC CAST #	58 LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
14284	59.95 N	17756.05 W	065 JUL 09 0113	16.5	13.5	1357	1	199	208				140	X82-15

REMARKS: page 172  
 MAX. DEPTH = 135 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL							Weingart		Sambroto			Moran/		Harvey	Diane	Pat/Jared	Optics	NIS No.
		No. DESIREL	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHI/DIC/AIK	DOC	O18	815N	Urea	Part.	Prod	DON					
1	Bot		532	75																1
2	Bot																			2
3	75				76	162														3
4	75																			4
5	75																			5
6	75																			6
7	75																			7
8	75																			8
9	75																			9
10	75																			10
11	75																			11
12	75																			12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD/BEST/BSIERP\_Summer09)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 119

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
142	59	59	95 N	177	56	05 W	05	JUL	09	01	13													X62-15

REMARKS: *page 2072*

MAX. DEPTH = 135 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Wingart		Sambrotto			Moran/		Diane	Pat/Jared	Optics	Nis No.			
		No. DESIREL	notes	SALT	Nut. Bt	O2-Btl. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard								
13	75																								1
14	75																								2
15	75																								3
16	75																								4
17	50																								5
18	40																								6
19	30																								7
20	20																								8
21	20																								9
22	10																								10
23	0																								11
24	0																								12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 120

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
143	59	11	09	N	17	7	01	13	W	05	J	U	L	09	0521	6.1	1557	189	218			148	X62-14

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS \_\_\_\_\_  
 MAX DEPTH = 145 m

NIS DEPTH	Roset.	Hydro Team-PMEL										Weingart		Julie		Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics		NIS No.	
		No. DESIRE	Notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/Alk	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard													
1	Bot			533	63																									1
2	100				84	212																							2	
3	75				85																								3	
4	50				86																								4	
5	40				87																								5	
6	30				88																								6	
7	20				89																								7	
8	10				90																								8	
9	0				91																								9	
10	0																												10	
11																													11	
12																													12	

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 121

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
144	S	22	44 N	76	6.75	05	JUL	09	08	36		9.69		17.9			187	13.8			140	X182-13
																					136	

REMARKS: 133 + 3  
 MAX DEPTH = m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambroto			Moran/	Harvey	Diane	Pat	Jared	Optics	NIS	
		No DESIRE	notes	SALT	Nut: Bil	O2-Bil No	CHL			Frac CHL/DIC/AIK	DOC	O18								δ15N
1	133			534	92															1
2	100				93	224														2
3	75				94															3
4	56				95															4
5	40				96															5
6	30				97															6
7	20				98															7
8	20			Nex	99															8
9	10				99															9
10	0				100															10
11																				11
12																				12

Rosette Notes: NO chror on this line

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 122

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1455933	3.81 N	17512.00 W	5 JUL 09 13:25.6	25.6		173			152	10			136	X132-12

REMARKS: Just Chmax water - NOT Sld Cast  
 MAX DEPTH = 50 m

No.	DESIRET/notes	SALT	NUL.Btl	O2-Btl.No	CHL.Frac	CHL.CALK	DOC	O18	S15N	Sambroto			DON	Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	NIS
										Urea	Part	Prod							
1	50																		1
2	50																		2
3	50																		3
4	20																		4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes: 1 at 10 m Alexe  
 10 Chmax Eli  
 2 Chmax Jared  
 3 ~~Chmax~~ Meghan  
 ~50 m

VESSEL: RV/ Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN													

REMARKS: \_\_\_\_\_

MAX DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_

PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_

PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_

SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_

PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_

SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut. Bl	Hydro Team-PMEL				DOC	Weingart O18	Julie \$15N	Sambroto				Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared TH	Optics	Nis No.
				O2-Bil.No	CHL. Frac	CHL	CHL/DIC/AIK				Urea Part.	Prod	DON							
1	20A																		1	
2	20																		2	
3	20																		3	
4	10																		4	
5																			5	
6																			6	
7																			7	
8																			8	
9																			9	
10																			10	
11																			11	
12																			12	

13  
14  
15  
16

Handwritten notes: "STARED" and "KERO" with arrows pointing to rows 2 and 4 respectively.

Rosette Notes:



VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP Summer'09  
 PROJECT & LEG BEST/SIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 122

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
14659	33	20	N	75	11	93	W	5	JUL	09	14	41	5.6	.	173	134	88	6	C	B2	132	X82-12

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: Std Cant  
127+4

MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Foset.	Hydro Team-PMEL								Weingart	Julie	Sambroto				Moran/ Lomas	Harvey/ Lessard	Diane	Pat/ Jared	Optics	Nis No.			
		No. DESIRED	notes	SALT	Nut. Btl	O2-Btl. No	CHL	Frac	CHL/DIC/Alk			DOC	O18	δ15N	Urea							Part.	Prod	DON
1	127			535	101	226																		1
2	127											X												2
3	100					102																		3
4	100																							4
5	75					103																		5
6	75											X	X											6
7	50																							7
8	50											X	X											8
9	50																							9
10	40																							10
11	40											X	X											11
12	30																							12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC												

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No DESIRED	Roset. notes	SALT	Nut.Bil	O2-Bil.No	CHL	Frac	CHL/DIC/AIK	DOC	O18	S15N	Urea Part.	Sambroto			DON	Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	Nis No.
												Prod	TH								
1		30																			1
2		20		107																	2
3		20																			3
4		10		108/011																	4
5		10																			5
6		0																			6
7		0		109/023																	7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes:

VESSEL RV Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) PROJECT & LEG BEST/BIERP\_Summer09 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive STATION NO. 122

CONSC CAST # 1475933.80 N 17511.94 W 5 JUL 09 1445 5.6 162 111 108 4

DEG MIN DEG MIN DAY MO YR HR MIN TIME (GMT) DRY BULB WET BULB PRESSURE SEA STATE VISIBILITY WIND DIRN. WIND SPD. CLOUD (amt) TYPE WEATHER BOTTO M DEPTH STA. NAME/ID

SBE 9+ FLUOR SN SBE43-Oxy (prime) SBE43-Oxy (sec) Transmissometer PAR SN O2 Temp Sensor No. REMARKS 2 Pool 2 MAX. DEPTH = m

No. DESIRED	Roset. notes	Hydro Team-PMEL						Wingart		Sambroto			Moran/		Diane	Pat/Jared	Optics	Nis
		SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON				
1	35																	1
2	22		P1							X	X	X						2
3	22									X	X	X						3
4	22									X	X	X						4
5	12			P2														5
6	12										X							6
7	12																	7
8	10			P3						X	X	X						8
9	10																	9
10	10																	10
11	7			P4								X						11
12	7																	12

Rosette Notes:

35 22 12 10 7 5 2 0

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE		LONGITUDE			TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	WIND CLD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN								
						J	U	L	0	9							

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prme) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	Roset. notes	SALT	Nut. Bit	O2-Bit. No.	CHL	Frac	CHL/DIC/AIK	DOC	O18	Weingart		Sambroto			Moran/		Diare	Pat/	Jared	Optics	Nis No.
										Julie	Urea	Part.	Prod	DON	Lomas	Harvey					
7	✓																				1
5			PS								X	X	X	X							2
5																					3
2			P6																		4
2																					5
2																					6
2																					7
2																					8
2																					9
2			P7																		10
0																					11
0																					12

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 123

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIN D SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
148	60	02	59	N	17	5	11	09	19	30	4.9	95.9%	152	083	128	180	X30-11	180			

REMARKS: 112 + 3  
 MAX. DEPTH = 112 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Senson No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Wingart		Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics	
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil./No	CHL	Frac	CH/DIC/AIK	DOC	O18	Urea	Part.	Prod	DON	Lomas	Lessard			TH		
1	112		536	110	003																	1
2	75			111																		2
3	50			112																		3
4	40			113																		4
5	30			114																		5
6	20			115																		6
7	10			116																		7
8	0			117																		8
9																						9
10																						10
11																						11
12																						12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 124

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
149	60	31	55	N	17	5	12	11	W	05	JUL	09	22	28	4.3	92%	143	70	71	08	105	X82-10

REMARKS: MAX DEPTH = 102 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ Q2 Trmp Senson No. \_\_\_\_\_

Nis DEPTH	Roset	Hydro Team-PMEL						Weingard		Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.		
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard			TH	
1	80ft		537	118																1
2	75			119																2
3	50			120																3
4	40			121																4
5	30			122																5
6	20			123																6
7	10			124																7
8	40																			8
9	30																			9
10	20																			10
11	0			125	198															11
12																				12

Rosette Notes: no chlor MAX

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer'09  
 PROJECT & LEG: BEST/BIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 125

CONSC CAST # 1506100.04 N  
 LATITUDE: 17512.07 W  
 LONGITUDE: 066 JUL 09  
 TIME (GMT): 0207  
 DRY BULB TEMP (°C): 3.7  
 WET BULB TEMP (°C): -  
 PRESSURE (mb): 1235  
 SEA STATE: 064  
 VISIBILITY: 108  
 WIND DIRN: 108  
 WIND SPD: 108  
 WEATHER: Rain  
 BOTTO M DEPTH: 97  
 STA. NAME/ID: X82-9

DEG MIN DEG MIN DAY MO YR HR MIN  
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: Rain  
 MAX. DEPTH = 94 m

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Diane	Pav/	Jared	Optics	Nis	
		No. DESIRED	notes	SALT	Nut Btl	O2-Btl/No	CHL	Frac	CHL	DIC/AIK	DOC	O18	\$15N	Urea						Part.
1	8.5		538	126																1
2	75			127	143															2
3	50			128																3
4	40			129																4
5	35			130																5
6	30			131																6
7	30	05																		7
8	20			132																8
9	20	05																		9
10	10			133																10
11	0																			11
12	0			134																12

Rosette Notes: Chlor MAX 35 m  
 BTLS

VESSEL: RV/ Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 126

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
151	60	59.98	N	17	43	0	67	W	66	JUL	09	0504	4.0	-	1137	088	058				89	X62-8

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 MAX DEPTH = 84 m

No. DESIRE/notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/CAIK	DOC	O18	O15N	Urea Part.	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared TH	Optics	Nis No.
										Prod	DON							
1	539	135																1
2																		2
3																		3
4																		4
5																		5
6																		6
7																		7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes:



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 127

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN																		
1526059	87	N	17349	15	06	JUL	09	07	19		4.2	-	1136	113	068						79	XB2-7

REMARKS: For  
 MAX. DEPTH = 76 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ Q2 Trip Sensor No. \_\_\_\_\_

No	DESIREL	notes	SALT	Nut.Bil	O2-Bil.No	CHL	Frac	CHL/DIC/Alk	DOC	Weingart		Julie		Sambroto		Moran/	Harvey	Diane	Pat/Jared	Optics	No.
										O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH		
1	85		540	143	242																1
2	50			144																	2
3	40			145																	3
4	30			146																	4
5	30																				5
6	28																				6
7	20			147																	7
8	10			148																	8
9	0			149																	9
10	0																				10
11																					11
12																					12

Rosette Notes: Small blue net 28-

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 128

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC											
15361	0	0	8N	17	3	8.12W	6 JUL 09	932	3.9	.	112	151	158	4	C	75	

REMARKS: 67+3  
 MAX. DEPTH = 67 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL	Frac CHL	DIC/Aik	DOC	O18	Wengart		Julie		Sambroto		Morarv/		Diane	Pav/	Lared	Optics	No.
										Hydro Team-PMEL	Wengart	Julie	Urea	Part.	Prod	DON	Lomas					
1	65	541	150	669																		1
2	50		151		1																	2
3	40		152		2																	3
4	30		153		3																	4
5	30																					5
6	20		154		4																	6
7	20																					7
8	10		155		5																	8
9	10																					9
10	0		156		6																	10
11	0																					11
12																						12

Rosette Notes:

0 10 20 30  
 descender

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 129

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
154	61	0.00	N	172	26	6/	W	5	JUL	09	1257	3.5	.	112	.	124	10	.	.	68	XB2-5

REMARKS: Rain  
 MAX DEPTH = 66  
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No	DESIRE/notes	SALT	Nut. Bil	O2-Bil.No	CHL	Frac	CHL	DIC/AIK	DOC	O18	\$15N	Urea	Sambrotto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Jared	Optics	NIS
													Part.	Prod	DON						
1	61	542	157	107	6																1
2	40		152		5																2
3	40	D																			3
4	30		159		4																4
5	20		160		3																5
6	14	D																			6
7	10	D	161		2																7
8	8																				8
9	8																				9
10	8																				10
11	8																				11
12	8																				12

Rosette Notes: 10 at 8 10 m



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP\_Summer09)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 130

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
15561	0	67	N	71	45	28	W	7	0	9	15	18	4.0			102					65	XB2-4

REMARKS: 58 + 4  
 MAX. DEPTH = 9 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL.	Frac CH	DIC/AIK	DOC	O18	δ15N	Urea Part.	Sambrotto			Moran/		Diane	Pat/ Jared	Optics	No.
												Prod	DON	Lomas	Harvey	Lessard				
1	57 ✓	543	163	232	16															1
2	40 ✓		164		5															2
3	40 ✓																			3
4	35 ✓																			4
5	20 ✓		165		4															5
6	25 ✓																			6
7	20 ✓		166		3															7
8	10 ✓		167		2															8
9	10 ✓		167																	9
10	0		168/02		1															10
11																				11
12																				12

Rosette Notes:

10 25 35 40

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 130

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	SEC	DEG	MIN	SEC												
15661	0	02	N	17	14	5.3	1615	14.1		102			120	16		F	65	X82-4

REMARKS: 9  
 9 Red Cast

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	Roset.	Hydro Team-PMEL						Wengert		Julie		Sambrotto		Moran/	Harvey	Diane	Pat/Lared	Optics	No.
		SALT	Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard		TH		
1	55																		1
2	55																		2
3	55																		3
4	29																		4
5	29																		5
6	29																		6
7	29																		7
8	29																		8
9	29																		9
10	29																		10
11	29																		11
12	29																		12

Rosette Notes: 9 at

29 19 15 11 8  
 29 19 15 11 8  
 40  
 40

8  
 40  
 40

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG MIN	DEG MIN	DAY MO YR	(°C)	(°C)		*		(deg)	(kts)	*	*		
			JUL 09											

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE #4: \_\_\_\_\_  
 PRESS SN: \_\_\_\_\_  
 PRI TEMP SN: \_\_\_\_\_  
 SEC TEMP SN: \_\_\_\_\_  
 PRI COND SN: \_\_\_\_\_  
 SEC COND SN: \_\_\_\_\_

FLUOR SN: \_\_\_\_\_  
 SBE43-Oxy (prime): \_\_\_\_\_  
 SBE43-Oxy (sec): \_\_\_\_\_  
 Transmissometer: \_\_\_\_\_  
 PAR SN: \_\_\_\_\_  
 O2 Temp Sensor No.:

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics	NIS No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH		
13		19	13		P2																	1
14		15	14		P3																	2
15		15			P4																	3
16		16			PMEL																	4
17		17																				5
18		18																				6
19		19																				7
20		20																				8
21		21																				9
22		22																				10
23		23																				11
24		24																				12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP-Summer'09)  
 PROJECT & LEG: BEST/BSIERP-Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 130

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
15761	0	00	N	171	45	33	W	6	JUL	09	1738	41.2	.	102	.	131	78	5		46	XB2-4

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: P202 Cast-2 (62)

MAX. DEPTH = \_\_\_\_\_ m

NIS DEPTH	Roset.	Hydro Team-PMEL							Weingard	Julia	Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS		
		No. DESIREL	notes	SALT	Nut. Bil	O2-Bil No	CHL. Frac	CHL/DIC/AIK			DOC	O18	δ15N							Urea	Part.
1	35																				1
2	29										X	X		X							2
3	29																				3
4	29																				4
5	25																				5
6	19											X									6
7	19																				7
8	19																				8
9	15																				9
10	15											X									10
11	15																				11
12	11																				12

Rosette Notes:

29 19 15 11 8 4 0



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
							09															

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS \_\_\_\_\_  
 MAX DEPTH = \_\_\_\_\_ m

NIS DEPTH	Poset.	Hydro Team-PMEL					Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	Optics	NIS No.
		SALT	Nut.BI	O2-BI.No	CHL. Frac	CHL/DIC/AIK			DOC	O18	\$15N						
1	11																1
2	11																2
3	8																3
4	8																4
5	8																5
6	9																6
7	9																7
8	9																8
9	0																9
10	0																10
11	0																11
12																	12

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 131

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
15861	10	07	N	171	4	05	W	6	JUL	09	19	53	4.5	.	108	.	.	144	178	6	9	57	X132-3

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH Roset: \_\_\_\_\_  
 Hydro Team-PMEL \_\_\_\_\_  
 Weingart \_\_\_\_\_  
 Julie \_\_\_\_\_  
 Sambrotto \_\_\_\_\_  
 Moran/ \_\_\_\_\_  
 Harvey \_\_\_\_\_  
 Diane \_\_\_\_\_  
 Pat/ \_\_\_\_\_  
 Jared \_\_\_\_\_  
 Optics \_\_\_\_\_  
 No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	615N	Urea Part.	Prod	DON	Lomas	Lessard	TH	No.
1	53	544	169	220												1
2	40		170													2
3	30		171													3
4	30	DS														4
5	20		172													5
6	20	DS														6
7	10		173													7
8	10	DS														8
9	0		174													9
10	0															10
11																11
12																12

REMARKS: 53+3

Rosette Notes: 0 10 20 30

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N199J for PMEL CTD archive  
 STATION NO.: 133

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
159	61	06	104 N	170	22	18 W	06	JUL	09	22	17	4.11	98%	114	4	134	188					51	X32-2

REMARKS: *Exs*  
 MAX. DEPTH = 48 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL										Weingart		Julie		Sambrotto			Moran/		Harvey	Diane	Pat/Jared	Optics	NIS No.	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Fac	CHL/DIC/AIK	DOC	O18	515N	Urea	Part.	Prod	DON	Lomas	Lessard		TH							
1	Bot			175																						1
2	46			545	176	217																				2
3	30				177																					3
4	30																									4
5	20				178																					5
6	20																									6
7	10				179																					7
8	10																									8
9	0																									9
10	0				180																					10
11																										11
12																										12

Rosette Notes: *CHK on WAK 45M*





VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 135

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	WIND D	CLOUD(amt)	WEATHER TYPE	DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN																		
16262	0	00 N	171	7.90 W	07	JUL	09	9	17	4	5	96.8%	112	2	123	16	8	6	8	C	54 BOTTO M	SLN-4

REMARKS: 46 + 4  
 MAX. DEPTH = 47 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingart		Sambroto			Moran/	Harvey	Diane	Pat/	lared	Optics	Nis
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard		
1	46		SWR	193	6															1
2	40			194	5															2
3	30			195	4															3
4	20			196	3															4
5	10			SWR 197	2															5
6	0			198	1															6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: S no b on B on 10  
 b 10 on 5

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 136

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
16362	5	73	N	171	30	7	JUL	09	10	54	4.0	96.7%		102	*	*	112	16	*	*	50	SLN-5

REMARKS: MAX. DEPTH = 46 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Tmp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac			CHL/DIC/AIK	DOC	O18						
1	416		549	199														1
2	40			200														2
3	35																	3
4	35																	4
5	35																	5
6	35																	6
7	35																	7
8	35																	8
9	35																	9
10	35																	10
11	35																	11
12	35																	12

35

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN																		

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Waingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics/ Nis
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Fac	CHL	DIC	CAIK	DOC	O18	515N	Urea	Part.	Prod	DON	Lomas	Lessard			TH		
1	30				201	4	4																		1
2	20				202	3	3		/																2
3	10				203	2	2																		3
4	0				204	1	1		/																4
5	0				178																				5
6																									6
7																									7
8																									8
9																									9
10																									10
11																									11
12																									12

Rosette Notes:



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 137

CONSC CAST # 16462  
 LATITUDE 12.04 N  
 LONGITUDE 71.53.43 W  
 TIME (GMT) 07:44  
 DRY BULB (°C) 31.6  
 WET BULB (°C) 27.9  
 PRESSURE (mb) 1010  
 SEA STATE VISIBILITY  
 WIND DIRN. (deg) 131  
 WIND SPD. (kts) 19.8  
 CLOUD(am) TYPE WEATHER  
 BOTTO M DEPTH (m) 48  
 STA. NAME/ID: 02t50y6

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (p/line) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmittometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 44+4  
 MAX. DEPTH = 44 m

Nis	DEPT#	Foset.	Hydro Team-PMEL					Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis			
			No. DESIRED	notes	SALT	Nut/Btl	O2-Btl/No	CHL	Frac	CHL/DIC/ALK	DOC	O18	\$15N	Urea	Part.	Prod	DON		Lomas	Lessard	
1	44		550	205	208							X	X	X						1	1
2	44		550	205	208							X	X	X						2	2
3	30			206																3	3
4	30																			4	4
5	20				207															5	5
6	20																			6	6
7	10				208															7	7
8	10				208															8	8
9	10				209															9	9
10	0				209															10	10
11	0				209															11	11
12																				12	12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 137

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
16562	12.12	N	7153.32	W	7	JUL	09	1527	3.3	103	1	1	125	18	0	C	48	5L0-6

REMARKS: Rod Cast / Ray also took water for van oxygen experiment (at 23m)  
 MAX. DEPTH = 0 m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambroto				Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS
		No. DESIRED	notes	SALT	Nut. Bit	O2-Bil. No	CHL. Frac			CHL/DIC/Alk	DOC	O18	815N						
1	35																		1
2	29			P2															2
3	29																		3
4	23	D																	4
5	23	D																	5
6	23	D																	6
7	23			P9															7
8	23																		8
9	23																		9
10	23																		10
11	15			P10															11
12	15																		12

Rosette Notes: 29 22 15 11 8 3 vs ch max { D10 } 4 0  
 1 at 10m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.:

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)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN							
					J	U	L	0	9							

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	notes	Hydro Team-PMEL						Weingart O18	Julie \$15N	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Lared	Optics	No.
		SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Aik	DOC			Urea	Part.	Prod						
1	11		P11															1
2	11									X	X	X						2
3	11																	3
4	8		P12															4
5	8																	5
6	4		P13							X	X	X						6
7	4																	7
8	0		P14															8
9	0																	9
10																		10
11																		11
12																		12

13  
14  
15  
16  
17  
18  
19  
20  
21

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 138

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIR/N. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1666212	12	09	N	17	21	7	JUL	09	17	07	21	9	28.12		09			124	18			55	5L-7

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: W 5074

MAX. DEPTH = 9 m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/		Harvey		Diane		Pat/Lared		Optics		
		notes	SALT	Nut. Bl	O2-BI.No	CHL.	Frac CHL	DIC/Alk	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH			No.
1	50		551	210		6	6	/	579														1
2	50																						2
3	40			211		5	5																3
4	35	D																					4
5	30			212		4	4	/															5
6	20	D				1	1																6
7	20			213		3	3																7
8	10	D																					8
9	10			214		2	2																9
10	0			215	147	1	1	/	580														10
11	0							/															11
12								/															12

Rosette Notes:

10 20 35

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 139

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)	WEATHER	BOTTO M DEPTH	STA. NAME/ID		
	DEG	MIN		DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	(m)	
16762	11	95	N	172	42	4	JUL	09	18	47	2.8		093			130	19		57	

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 52 m MAX. DEPTH = 52 m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/	Harvey	Diane	Pat/ Jared	Optics	NIS No.	
		No. DESIRED	notes	SALT	Nut. Bit	O2-Bil. No	CHL. Frac	CHL DIC/Aik	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		
1	56			552	216	1106	6				X	X		X					1
2	54																		2
3	40				217		5				X	X		X					3
4	30				218		4				X	X		X					4
5	20				219		3												5
6	10				220		2												6
7	0				221		1				X	X		X					7
8	0																		8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP Summer'09  
 PROJECT & LEG: BEST/BSI/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 140

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID		
	DEG	MIN	SEC	DEG	MIN	SEC													DAY	MO
16862	12	04	N	173	06	W	07	JUL	09	20	18	2.9	-	09	43	130	19	8	59	SL-9

REMARKS: page 1 of 2  
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team: PMEL										Weingart		Sambroto			Moran/		Harvey		Diane		Pat/ Jared		Optics	NIS No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Aik	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH	Jared	Optics						
1	Bot			553	222	09			X		X														1	1
2	Bot																								2	2
3	50					223																			3	3
4	50																								4	4
5	40					224																			5	5
6	40																								6	6
7	30																								7	7
8	30																								8	8
9	26																								9	9
10	26																								10	10
11	20																								11	11
12	20																								12	12

Rosette Notes: CH1 Bot MAX = 26

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 140

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIN SPD.	CLOUD (amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
16862	12	54	N	173	06	75W	07	JUL	09	20	18												519	SL-9

REMARKS: *page 2 of 2*

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

MAX. DEPTH = 56 m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	δ15N	Sambrotto			Lomas	Harvey	Diane	Pat/Jared	Optics	No.
										Urea	Part.	Prod						
13			3															1
15			4															2
16								X										3
17																		4
18																		5
19																		6
20																		7
21																		8
22																		9
23																		10
24																		11
25																		12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 141

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	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID				
	DEG	MIN	SEC	DEG	MIN	SEC												DAY	MO	YR	HR
169	62	12.0	2N	173	31	23	W	07	J	U	L	09	23	29	3.2	/	0843	145	188	60	SL-10

REMARKS: Fog  
 MAX. DEPTH = 57 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ Q2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Harvey		Diane	Pat/Lared	Optics	NIS
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas				
1	Bot	554																		1
2	Bot		5				X	X												2
3	50		6				X	X												3
4	40		7				X	X												4
5	30		8				X	X												5
6	20		9				X	X												6
7	10		10				X	X												7
8	0		11	120																8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: 120 Chlor MAX = 30m







VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 143

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIN D SPD.	CLOUD (amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
DEG	MIN	DEG	MIN	DEG	MIN	(mb)	*	*	(deg)	(kts)	*	*	(m)	
17162	12.12N	17420.52W	08 JUL 09 0227	3.0	-	684	3	13	8	2	18		69	SL-12

REMARKS: Fog  
 MAX. DEPTH = 66 m  
 SBE 9+ \_\_\_\_\_ FLUOR S/N \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Waingard	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat Jarrad	Optics	Nis No.
		No. DESIRE/notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL			DIC/Alk	DOC	O18						
1	96X			19				X										1
2	50		556	20				X										2
3	40			21				X										3
4	30			22				X										4
5	30																	5
6	20				23			X										6
7	20																	7
8	10				24			X										8
9	0				25	239		X										9
10	0																	10
11																		11
12																		12

Rosette Notes: 239  
 color may 30:32m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 144

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
17262	11	9	174	39	08	JUL	09	09	44	0844	3.4	-	0845	5	150	158					73	Sk-13

REMARKS: *Depth/tyd mooring 09-8A*  
 MAX. DEPTH = 70 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bl	O2 Bl. No	CHL. Frac	CHL DIC/Alk	DOC	O18	\$15N	Urea Part.	Sambroto			Lomas	Harvey	Diane	Pat/Jared	Optics	Nis
											Prod	DON	Moran/						
1	Bot	557	26				X												1
2	Bot																		2
3	50			27															3
4	40			28															4
5	30			29			X												5
6	30																		6
7	20			30															7
8	20																		8
9	10			31	127														9
10	10																		10
11	0			32			X												11
12	0																		12

Rosette Notes:  
 107  
 CH/05 MSc 25-28

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP\_Summer'09  
 PROJECT & LEG: BEST/BIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 145

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID			
	DEG	MIN	DEG	MIN				HR	MIN														
173	62	12.00	N	175	09	35	W	08	JUL	09	06	36	3	5	.	08	43	144	158			79	SL-14

REMARKS: Fog  
 MAX. DEPTH = 76 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL							Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS No.
		No. DESIRE/notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/ALK			DOC	O18	δ15N						
1	BoT		558	33				X											1
2	50			34	144			X											2
3	40			35				X											3
4	30			36				X											4
5	30																		5
6	20			37				X											6
7	20																		7
8	10			38				X											8
9	10																		9
10	0			39				X											10
11																			11
12																			12

Rosette Notes: CH10r MAX Surveys to 32m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 146

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD(amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
17462	11	95	N	175	33	71	W	08	J	U	L	09	08	10	3	7	.	088	153	14	G	88	SL-15

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 77+5  
*no chd max*

MAX DEPTH = \_\_\_\_\_ m

Nis	DEPTH	Roset.	Hydro Team-PMEL							Weingart		Sambroto			Moran/		Diane	Pat/Lared	Optics	Nis			
			No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/Alk	DOC	O18	815N	Urea	Part.	Prod					DON	Lomas	Lessard
1	77		403	40	208																		1
2	50			41		6																	2
3	40			42		5																	3
4	30			43		4																	4
5	20			44		3																	5
6	10			45		2																	6
7	0			46		1																	7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 147

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
175	62	11	175	58	31	8	JUL	09	09	46	4.2	4.2	083	1	5	5	13	4	94	94	5L-16	

REMARKS: 5th Cast 86#4  
 MAX. DEPTH = 86 m

No	DESIREL	notes	Hydro Team-PMEL						Wingard	Julie	Sambroto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Lared	Optics	No.					
			SALT	Nut.BI	O2-BI	No	CHL	Frac			CHL	DIC	CAIK							DOC	O18	Urea	Part.	Prod
1	87	✓	47	111								X	X	X	X						1			1
2	75	✓	48									X	X	X	X						2			2
3	50		49									X	X	X	X						3			3
4	40		50									X	X	X	X						4			4
5	30		51																		5			5
6	20		52																		6			6
7	10		53	101																	7			7
8	10																				8			8
9	10																				9			9
10	8																				10			10
11	8																				11			11
12	8																				12			12

Rosette Notes:

10m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE		LONGITUDE			TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY												

REMARKS: \_\_\_\_\_  
 SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Wingard	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Lared	Optics	NIS No.
		No. DESIREL	notes	SALT	Nut. Blt	O2-Blt. No	CHL. Frac			CHL DIC/CAIK	DOC	O18						
1	8																	1
2	8																	2
3	8																	3
4	8																	4
5	8																	5
6	8																	6
7	8																	7
8	0		High	59	100	1	1											8
9																		9
10																		10
11																		11
12																		12

Rosette Notes:



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 147

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
176	62	11	98	N	8	JUL	09	12	45		4.5		102			146	13		A	91	SL-16

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 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. \_\_\_\_\_

REMARKS: *N=21.7*  
*1000*

MAX. DEPTH = 9 m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL.	Frac CHL	DIC/AIK	DOC	O18	Wengart		Sambrotto			Moran/		Diane	Pat/ Jared	Optics	No.
										Julie	Urea	Part.	Prod	Don	Lomas	Harvey				
1	38		P1																	1
2	38																			2
3	38		P2																	3
4	25																			4
5	25																			5
6	25																			6
7	20		P3																	7
8	20																			8
9	20																			9
10	15		P4																	10
11	15																			11
12	15																			12

Rosette Notes: 38 25 20 15 10 5 0 (10m)

**VESSEL** R/V Knorr **CRUISE ID** 6N195-10 or 6N195J (for PMEL CTD) **PROJECT & LEG** BEST/RSIERP\_Summer09 **Ship Designation (I.D.)** 6N195-10 or 6N19J for PMEL CTD archive **STATION NO.**

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
							09															

**REMARKS**  
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trmp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	TH	Optics	Nis
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac			CHL DIC/AIK	DOC	O18							
1	10				P5														1
2	10																		2
3	10																		3
4	5				P6														4
5	5																		5
6	5																		6
7	0				P7														7
8	0																		8
9	0																		9
10																			10
11																			11
12																			12

13  
14  
15  
16  
17  
18  
19  
20  
21

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 148

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
17762	18	04	N	174	45	09	W	8	JUL	09	16	19	3.7			123		202	17		79	70m 58

REMARKS: 70 74 71  
 MAX DEPTH = 20 m

NIS DEPTH	Roset.	Hydro Team-PMEL					Weingart		Sambrotto			Moran/	Harvey	Diane	Pat	Lared	Optics	NIS	
		No. DESIRE	notes	SALT	Nut. Bl	O2-Bll No	CHL. Frac	CHL DIC/ALK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane		TH
1	b		465	55	112														1
2	b																		2
3	50			56		6	4	2	3										3
4	40			57		5	5	3	3										4
5	30			58		4	4	3	3										5
6	20			59		3	3	3	3										6
7	10	D																	7
8	10	D																	8
9	10	D																	9
10	10			60		2	2	4	4										10
11	0			61		1	1	5	5										11
12																			12

Rosette Notes: 3 bottles com Diane  
 5 DIC  
 Peeres

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 149

CONSC CAST #	17862	LATITUDE DEG MIN	41.10 N	LONGITUDE DEG MIN	174.38.00 W	DAY MO YR	8 JUL 09	TIME (GMT) HR MIN	1730	DRY BULB (°C)	2.9	WET BULB (°C)		PRESSURE (mb)	103	SEA STATE	2	VISIBILITY	20	WIND DIRN. (deg)	227	WIN SPD. (kts)	17	CLOUD(amt) TYPE	5	WEATHER	5	BOTTO M DEPTH (m)	78	STA. NAME/ID	70M57
--------------	-------	------------------	---------	-------------------	-------------	-----------	----------	-------------------	------	---------------	-----	---------------	--	---------------	-----	-----------	---	------------	----	------------------	-----	----------------	----	-----------------	---	---------	---	-------------------	----	--------------	-------

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 70 + 4

MAX. DEPTH = 5 m

Nis DEPTH	Roset.	Hydro Team: PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.																
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH														
1		6		40662																														1
2		50			63		6																											2
3		40			64		5																											3
4		30			65																													4
5		20			66		3																											5
6		10			67		2																											6
7		0			68																													7
8																																		8
9																																		9
10																																		10
11																																		11
12																																		12

Rosette Notes:

00 sun

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 150

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1796156	56	56	174	22	8	JUL	09	18	51		3.9		143			219	15			77	70m56

REMARKS: SBE 9+ FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissionmeter \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trip Sensor No. \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

NIS DEPTH	Roset	Hydro Team-PMEL				Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS					
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas		Lessard	Diane	TH	No.	
1	69		467	69	195				585												1
2	50			70																	2
3	40			71																	3
4	30			72																	4
5	20			73																	5
6	10			74																	6
7	0			75					584												7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes:

VESSEL: F/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer'09  
 PROJECT & LEG: BEST/BIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 151

CONC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
18061	52	65	N	174	02	52	W	08	JUL	09	20	44	3.7	164	2	220	188				71	70M55

REMARKS: For MAX. DEPTH = 68 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/	Harvey	Diane	Pat	Jared	Optics	Nis No.		
		SALT	Nut Bil	O2-Bil No	CHL	Frac CHL/DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH				
1	61	468	76	199			6	6													1
2	65										X	X									2
3	50												X								3
4	40																				4
5	30																				5
6	30										X	X									6
7	24																				7
8	20																				8
9	10												X								9
10	0										X	X									10
11	0																				11
12																					12

Rosette Notes: Chlor MAX = 24M

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 152

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
181	61	44	18	N	17	35	1	47	08	JUL	09	22	04	3.4	-	174	42	40	15	8		71	Tom 54

REMARKS: For MAX. DEPTH = 67 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Trp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset	Hydro Team-PMEL										Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/		Optics	Nis No.
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frag	CHL DIC/AIK	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH								
1	807			83																					1	
2	50			84																					2	
3	40			85																					3	
4	30			86																					4	
5	20			87																					5	
6	10			88	469	181																			6	
7	0			89																					7	
8																									8	
9																									9	
10																									10	
11																									11	
12																									12	

Rosette Notes:  
 181

Chlor WPK = 32 M

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 153

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
18261	35	08	N	173	42	15	58	JUL	09	23	19		3.8		19.36			226	108			70	70m53

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = 67 m

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Lared		Optics		Nis No.	
		NO. DESIRE/REI	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH								
1	Bot		470	90	202			8	8																			1
2	50			91																								2
3	40			92																								3
4	30			93																								4
5	20			94																								5
6	10			95																								6
7	0			96																								7
8																												8
9																												9
10																												10
11																												11
12																												12

Rosette Notes: 202

Chlor MAX 23



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer09  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 154

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
18261	24	84	N	173	42	05	W	09	JUL	09	00	49	04	6	1935	253	148			71	70m52

REMARKS: F08  
 MAX. DEPTH = 71 m  
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat/ Jared	Optics	Nis No.	
		No. DESIRE/	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/Alk	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH				
1	Bot			471	97	109																	1
2	Bot																						2
3	50				98																		3
4	40				99																		4
5	30				100																		5
6	30																						6
7	20					101																	7
8	20																						8
9	10					102																	9
10	0																						10
11	0					103																	11
12																							12

Rosette Notes:

VESSEL RV Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG BEST/BSIERP\_Summer09  
 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 155

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
184	61	14.70	N	173	42.84	W	09	JUL	09	0209	4.7	7.8	2.27	6	22	11	08			73	70m51

REMARKS: Fog  
 MAX. DEPTH = 70 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trip Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Lared	Optics	NIS			
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH	
1	Bot		472	104				10	10												1
2	50			105				11	11												2
3	40			106																	3
4	30																				4
5	30																				5
6	20																				6
7	10																				7
8	●																				8
9																					9
10																					10
11																					11
12																					12

Rosette Notes: 10m  
 chlon WAX 26m  
 oil sheen on surface at start of cast

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSI/ERP\_Summer09  
 PROJECT & LEG: BEST/BSI/ERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 156

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
	DEG	MIN	DEG	MIN							(°C)	(°C)	(mb)			(deg)	(kts)			(m)	
1856104	59	N	17346	15	W	09	JUL	09	03	30	4.9	-	2046	2	17	108				76	70MS0

REMARKS: MAX. DEPTH = 73 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Lared	Optics	Nis No.
		No. DESIRED notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH				
1	Bot	473	111																			1
2	50		112	174																		2
3	40		113																			3
4	30		114																			4
5	20		115																			5
6	10		116																			6
7	0		117																			7
8																						8
9																						9
10																						10
11																						11
12																						12

Rosette Notes: CH10W MAX 30m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 157

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1866054.56			173	48	9	JUL	09	05	20	4.9	98%	214	5	2	19	10	8			80	70M49

REMARKS: FOS  
 MAX. DEPTH = 77 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingart		Sambroto			Moran/		Harvey		Diane		Pat/Lared		Optics		Nis No.
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH					
1	Bot		474	118				15	15			X	X	X										1
2	Bot										X	X	X											2
3	50			119																				3
4	40			120																				4
5	40										X	X	X											5
6	30			121																				6
7	30																							7
8	20			122							X	X	X											8
9	10			123																				9
10	0										X	X	X											10
11	0			124				16	16															11
12																								12

Rosette Notes: CK) or MAR 30

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 158

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
187604	5	54	N	73	39	83	W09	JUL	09	06	20	4.8	-	213	6	230	17	8			74	70m48

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: Fog MAX. DEPTH = 71 m

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart				Sambroto			Moran/		Harvey		Diane		Pat/Jared		Optics	
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bll. No	CHL. Frac	CHL/DIC/Alk	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH				No.
1	65		475	125	211				586															1
2	50			126																				2
3	40			127																				3
4	30			128																				4
5	30																							5
6	20			129																				6
7	10			130																				7
8	0			131					587															8
9																								9
10																								10
11																								11
12																								12

Rosette Notes: Chlor MAX 27m

018

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: 6N195-10 or 6N195J for PMEL CTD archive  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 159

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIR/N. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1886035	18	26	N	73	39	30	09	JUL	09	0746	04.9	—	2235	2	202	11	8			70	70m47

REMARKS: MAX. DEPTH = 66 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Lared	Optics	NIS		
		NO. DESIRE	notes	SALT	Nut. Bl	O2-Bll. No	CHL.	Frac CHL	DIC/Alk	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas		Lessard	TH
1	Bot		476	132				17	17											1
2	50			133				6												2
3	40			134				5												3
4	30			135				4												4
5	20			136				3												5
6	20	D						—												6
7	10			137				2												7
8	0			138	133	1		18	18											8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

133

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) / BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 160

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
1896025	25	27	N	73	35	52	W	09	JUL	09	0945	5.0		032		193	128	5		70	76M46

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 61+4

MAX DEPTH = \_\_\_\_\_ m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto				Moranv/	Harvey	Diane	Pat/Jared	Optics	NIS		
		No. DESIRED	notes	SALT	Nut. Bil	O2 Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH	
1	61		477	139	213																1
2	50			140		6	6														2
3	40			141		5	5														3
4	30			142		4	4														4
5	20			143		3	3														5
6	10			144		2	2														6
7	0			145		1	1														7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes: 10 Sal odd on ↑  
 20 Sal same ↓  
 near 50'

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 161

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
1906015.37	N	17331.32	W	09	JUL	09	1056	5.0			93.6		232		203	11					73	70M45
																					70	

REMARKS: borgo  
66 + 4  
 MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Lared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac			CHL/DIC/AIK	DOC	O18						
1	66		478	14	(197)		19	19										1
2	50			147		6												2
3	40			148		5												3
4	33						20	20										4
5																		5
6																		6
7																		7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes: 10m bcp



VESSEL: RV/Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | BEST/BSIERP\_Summer09  
 PROJECT & LEG: 6N195-10 or 6N195J for PMEL CTD archive  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 108

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
<del>1</del>																							
							JUL	09															

REMARKS: \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL					Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Lared	Optics	NIS	
		No. DESIREL	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas		Lessard
1	↓																	1
2	30				149		41											2
3	20				150		3											3
4	10				151		2											4
5	0				152		1											5
6																		6
7																		7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSI/ERP Summer09)  
 PROJECT & LEG: BEST/BSI/ERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 162

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
19160	6	56N	173	19.84W	9	JUL	09	13	04	4.6	94.12		232			189	15			75	70m44
																				72	

REMARKS: 67+4  
 MAX DEPTH = 67 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prfme) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Diane	Pat/Lared	Optics	Nis		
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	615N	Urea	Part.	Prod					DON	Lomas
1	67		479	153	162															1
2	50			154		6														2
3	40			155		5														3
4	30			156		4														4
5	20			157		3														5
6	10			158		2														6
7	0			159		1														7
8																				8
9																				9
10																				10
11																				11
12																				12

Offset 8m ↓, 4m ↑, 46m T, 47m

Rosette Notes:

VESSEL: RV Knorr      CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)      PROJECT & LEG: BEST/BSIERP\_Summer09      Shp Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive      STATION NO.: 163

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
17260	2	82	N	173	1	58	W	9	JUL	09	14	17	4.6			242	207	108			70	70m 43

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_      REMARKS: 53 + 4 (71)  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset. notes	Hydro Team-PMEL						Weingarth/Julie			Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS No.	
		SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHI DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH				
1	63		160				2222													1
2	50		480	161	212	6	6													2
3	40			162		5	5													3
4	30			163		4	4													4
5	20			164		3	3													5
6	10			165		2	2													6
7	0			166		1	1													7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

~ 2m offset to 9'

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 164

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
1935959		07	N 17243.27			9	JUL	09				4.6		242			200	68	6			70	70M42

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 64 + 3.5 + 1  
 69

MAX DEPTH = 68 m

NIS DEPTH	Roset.	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL. DIC/AIK	DOC	O18	Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS No.
									Julie	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard			
1	64	<del>78</del>	167																1
2	50	481	168																2
3	40		169	224															3
4	30		170																4
5	30	D																	5
6	20																		6
7	20	D																	7
8	10																		8
9	10	D																	9
10	0																		10
11																			11
12																			12

Rosette Notes:

10 20 30

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO: 1655

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA NAME/ID
1945954	31 N	17225.41 W	9 JUL 09 1654	4.3		24.8	184	88%					77	70M 41

REMARKS: 71 + 8 m  
 dur flow 91993 after 71 + 3  
 STD cast for section

NLS DEPTH	Roset:	Hydro Team-PMEL					Weingart			Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NLS No.	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas	Lessard		Diane
1	71			482	174	113		24	24										1
2	71																		2
3	60				175		60	25	25										3
4	60																		4
5	50																		5
6	40				176		5												6
7	40				177		4	26	26										7
8	30																		8
9																			9
10	20				178		3	27	27										10
11	20																		11
12	10				179	101	2												12

Rosette Notes:

VESSEL RV Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) PROJECT & LEG BEST/BSIERP\_Summer'09  
 Ship Designation (I.D. ) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	*	(m)		

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer: \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ Q2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambrotto			Moran/	Harvey	Diane	Pav/	Jared	Optics	NIS
		No. DESIRED	notes	SALT	Nutr. Bil	O2-Bil. No	CHL. Frac			CHL DIC/ALK	DOC	O18							
1																			1
2					180/02	1													2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

REMARKS \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09 | Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive | STATION NO.: 165

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID				
195	59	54	31	N	17	25	31	W	9	JUL	09	11	74	7	4	3		24	2		167	56	41	75	70M41

REMARKS: Red  
 SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingart	Julie	Sambroto			Moran/ Lomas	Harvey/ Lessard	Diane	Pat/ Jared	Optics	Nis No.		
		No. DESIRED	notes	SALT	Nut. Bit	O2-Bil. No	CHL. Frac	CHI DIC/Alk			DOC	O18	δ15N							Urea Part.	Prod
1	30																			1	
2	29																				2
3	29																				3
4	29																				4
5	19																				5
6	19																				6
7	19																				7
8	15																				8
9	15																				9
10	15																				10
11	11																				11
12	11																				12

Rosette Notes:

29 19 15 11  
 41 41 44

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG MIN	DEG MIN	DAY MO YR	HR MIN	(°C)	(°C)	(mb)	*	(deg)	(kts)	*	*	(m)	
			JUL 09											

REMARKS: MAX. DEPTH = m

SBE 9+  
 FLUOR SN  
 SBE43-Oxy (prime)  
 PRESS SN  
 SBE43-Oxy (sec)  
 PRI TEMP SN  
 SBE43-Oxy (sec)  
 SEC TEMP SN  
 Transmissometer  
 PRI COND SN  
 PAR SN  
 SEC COND SN  
 O2 Temp Sensor No.

NIS DEPTH	Roset.	Hydro Team-PMEL					Weingart		Sambroto			Moran	Harvey	Diane	Pat/Jared	Optics	NIS	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	\$15N	Urea	Part.	Prod	DON	Lomas		Lessard
1		11																1
2		8			P12													2
3		8																3
4		8																4
5		4	DS															5
6		4	DS															6
7		4	DS															7
8		4			P13													8
9		4																9
10		0			P14													10
11		0																11
12		0																12

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

Rosette Notes:



VESSEL: RVV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 166

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	TIME (GMT)		DRY BULB ('C)	WET BULB ('C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN				HR	MIN											
1965950	50	80	N	172	6	22	W	09	JUL	09	1907	4.0			242				79	70m40

REMARKS: 71 + 4 ft

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ Q2 Temp Sensor No. \_\_\_\_\_

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	Hydro Team-PMEL			DOC	O18	δ15N	Sambrotto			DON	Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	No.
					CHL	Frac CHL	DIC/AIK				Prod	TH								
1	74	482	181						588											1
2	50		183		6	6														2
3	40		183		5	5														3
4	30		184		4	4														4
5	20																			5
6	BD		185		3	3														6
7	10		186	069	2	2														7
8	0		187		1	1			589											8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 167

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
1975949.79 N			17146.02 W		09	JUL	09	20	22	22	3.9	1.1	2436	173	098						73	70m39

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: Fac MAX DEPTH = 70 m

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS			
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	\$15N	Urea	Part	Prod	DON	Lomas	Lessard			TH	No.
1	Bot		484	188			29	29													1
2	50			189	222																2
3	40			190																	3
4	30			191																	4
5	20			192																	5
6	10			193																	6
7	0			194																	7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes:

Chlorophyll a

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 168

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA NAME/ID
198	59	46.8	171	27.0	2	7	09	2	14	1	3.6	3.6	243	6	158	11	8			73	70M38

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = 69 m

No.	DESIRE	notes	SALT	Nut. Bl	O2 Bl. No	CHL. Frac	CHL DIC/ALK	DOC	O18	\$15N	Urea	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS
												Part.	Prod	DON						
1	BT		485	195																1
2	50			196																2
3	40			197																3
4	30			198																4
5	20			199																5
6	10			200	74															6
7	0			201																7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: 74

Chlor MAX 24

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 169

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
199	59	43.15	N	71	08.37	09	JUL	09	22	57	3.4	7.1	2537	1	4	6	08	8		711	70W37

REMARKS: MAX DEPTH = 68 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Harvey		Diane		Pat	Lared	Optics	NIS
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL D/C/AIK	DOC	O18	\$15N	Urea	Part	Prod	DON	Lomas	Lessard	Diane				
1	65			202						X	X		X									1
2	50			486	203	58																2
3	40				204																	3
4	30				205																	4
5	30																					5
6	20				206																	6
7	10				207																	7
8	0										X	X										8
9	0				208																	9
10																						10
11																						11
12																						12

Rosette Notes: Ch101 MAX @ 12-20

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 170

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2005935		35	1	30	10	JUL	09	00	14	03.5	98.4	78	2537			176	168			70	70m36

REMARKS: MAX. DEPTH = 67 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS		
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard			TH	No.
1	B.o.T		487	209	182															1
2	50			210																2
3	40			211																3
4	30			212																4
5	20			213																5
6	15	DS.																		6
7	10			214																7
8	0			215																8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: CHlor MAX 15-17 m

182

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/SIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 171

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
20159	25	92	N	170	53	44	W	10	JUL	09	01	39	4.0	-	2538	175	087			72	70m35

REMARKS: MAX. DEPTH = 68 m

SBE 9+  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Tmp Sensor No.

NIS DEPTH	Roset	Hydro Team-PMEL						Weingart			Sambrotto			Moran/		Diane	Pat/Jared		Optics	NIS No.	
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas		Lessard	TH			Jared
1	807		488	216			34	34													1
2	50			217																	2
3	48			218																	3
4	30			219																	4
5	20			220																	5
6	10			221	165																6
7	0			222																	7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes: 165  
 CHL or MAX = 19-32

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 172

CONSC CAST #	LATITUDE		LONGITUDE		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID			
2025919	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)	70M34
					10	JUL	09	03	00	3.5	✓	2537	157	078		69				

REMARKS: MAX. DEPTH = 66 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut Bil	O2-Bil.No	CHL. Frac	CHL DIC/AIK	DOC	O18	δ15N	Urea	Sambrotto			Moran/Lomas	Harvey/Lessard	Diane	Pav/ Jared	Optics	Nis
											Part.	Prod	DON						
1	Bot	489	223																1
2		489	224	016															2
3			225																3
4			226																4
5			227																5
6			228																6
7			229																7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes: Ch) or max 20-25

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/RSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 173

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
203	59	15.62	N	170	22	68	W	10	JUL	09	04	21	3.4	-	25.37	147	078				67	70M33

REMARKS: MAX. DEPTH = 64 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset	Hydro Team-PMEL						Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Lared	Optics	NIS
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL			Frac CHL	DIC/AIK	DOC						
1	ROT		490	230				36	36									1
2	SO			231														2
3	40			232				37	37									3
4	30			233														4
5	20			234														5
6	10			235		200												6
7	0			236				38	38									7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes: 1 m 20' chlor MAX 16-17



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 174

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	94%	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
2045906.65		N	17014.30		W	10	JUL	09	05	48	03.5				25337086088								68	70m32

REMARKS: \_\_\_\_\_  
 MAX. DEPTH = 64 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trnp Sension No. \_\_\_\_\_

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CH. DIC/AIK	DOC	O18	Hydro Team-PMEL		Sambrotto		DON	Moran/ Lomas	Harvey Lessard	Diane	Pav/ Jared	Optics	Nis No.	
									Wingart	Julie	Prod	Th								
1	Bot	491	237	206				1590												1
2	50		238																	2
3	40		239																	3
4	30		240																	4
5	20		241																	5
6	10		242																	6
7	0		243					591												7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

470  
 018  
 CH/r MAX 13-18m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 175

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
2055857	17	05	17	01	19	35	W	10	JUL	09	07	10	2.8	94%	25.3	21	12	08			70	78m31

REMARKS: MAX. DEPTH = 67 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trmp Sensor No. \_\_\_\_\_

No. DESIRED	Notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	S15N	Urea	Sambrotto			DON	Lomas	Harvey	Diane	TH	No.
											Wengart	Julie	Prod						
1	Bot	492	244				39	39											1
2	50		245	196															2
3	40		246																3
4	30		247																4
5	20		248																5
6	10		249																6
7	0		250																7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:

Chlor MPX, 14-22

25 196

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 176

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2065847	7	00	N	17	43	W	10	JUL	09	825	3.1		252		113	68	68			75	70M30

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trng Senson No. \_\_\_\_\_

REMARKS: 68 + 3 + 1

MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	Roset.	SALT	Nut Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	Wingart		Julie		Sambrotto		Moranv	Harvey	Diane	Pat	Jared	Optics	No.
										Hydro Team-PMEL	Wingart	Julie	Urea	Part.	Prod	DON	Lomas	Lessard	Diane	TH	No.	
1	68	493	251	281	6	6																1
2	50		252		5	6																2
3	40		253		4	5																3
4	30		254		3	4																4
5	20		255		2	3																5
6	10		256		1	2																6
7	0		257			1																7
8																						8
9																						9
10																						10
11																						11
12																						12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer'09)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 177

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
20758	36	62	N	170	16	28	W	16	JUL	09	941	3.7	.	242	.	128	5	.	.	76	TOW29

REMARKS: 69 + 3 f  
 MAX. DEPTH = 69 m

NIS DEPTH	Roset.	Hydro Team-PMEL					Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Lared	TH	Optics	NIS No.				
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No			CHL. Frac	CHL DIC/Alk	DOC								O18	\$15N	Urea Part.	Prod
1	69		494	258																	1	
2	50			259	(136)	6																2
3	40			260		5																3
4	30			261		4																4
5	20			262		3																5
6	10			263		2																6
7	8																					7
8	8																					8
9	8																					9
10	8																					10
11	8																					11
12	8																					12

Rosette Notes:

10 at 8m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.

CONSC CAST #	LATITUDE		LONGITUDE			TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)
						09												

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 Trnp Sensor No. \_\_\_\_\_

REMARKS \_\_\_\_\_  
 MAX. DEPTH = \_\_\_\_\_ m

No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	Weingart		Sambrotto			Moran/		Diame	Pav. Jared	Optics	No.
									Julie	Urea Part.	Prod	DON	Lomas	Harvey Lessard					
1	8																		1
2	8																		2
3	8																		3
4	8																		4
5	0			264		1		45	45										5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

13  
14  
15  
16  
17

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer'09  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 178

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
20858	26	74	17	01	09	JUL	09	12	32	14.2			232			128	8			76	70m 28

REMARKS: 3 bottles for bongos ~~2~~ 40  
 12 for sand 50m  
 MAX. DEPTH =

No. DESIRED	Notes	SALT	Nutr Bil	O2-Bil. No	CHL. Frac	CHL DIC/ALK	DOC	O18	δ15N	Urea Part.	Prod	DON	Hydro Team-PMEL				TH	No.					
													Weingart	Julie	Moran/ Harvey	Diane							
1		70		495	265	167																1	
2		50		265		6																	2
3		50																					3
4																							4
5																							5
6																							6
7																							7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #		LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
		DEG	MIN	DEG	MIN						(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	*	(m)	
						JUL	0	9														

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (ptime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Trmp Sension No. \_\_\_\_\_

NIS DEPTH: Roset  
 Hydro Team-PMEL  
 Weingart Julie  
 Sambroto  
 Morav/ Harvey  
 Diane  
 Paul Jared  
 Optics Nis

No. DESIRED	notes	SALT	Nut Bit	O2-Bit. No	CHL	Frac CH	DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	Paul Jared	Optics	Nis
1																			1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

13  
14  
15  
16  
17  
18  
19  
20  
21  
22

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 179

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
20958	16	98	N	70	5	34	W	10	JUL	09	13	49	4.1			282					75	Tom 27

REMARKS: 68 + 4 + 21  
 MAX. DEPTH = 68 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Lared	Optics	Nis No.	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard		TH
1	68			496	272			46	46										1
2	50				273	050	6	6											2
3	40				274		5	5											3
4	30				275		4	4											4
5	20				276		3	3											5
6	10				277		2	2											6
7	0				278		1	1	47	47									7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/RSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 180

CONSC	CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
	21058	8	62N	169	54	10	JUL	09	15	09	4.10	97.42		232			137	68			74	70M26

REMARKS: 67 + 4 + 1  
 MAX. DEPTH = 67 m

No. DESIRED	Roset.	SALT	Nutr Bil	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	Weingart	Jule	Urea Part.	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pav. Jared	Optics	No.
												Prod	DON							
1	67	497	279																	1
2	50		280	232	6															2
3	40		281		5															3
4	30		282		4															4
5	20		283		3															5
6	10		284		2															6
7	0		285		1															7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/RSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 181

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
21158	2	24	N	169	39	10	JUL	09	16	31	4.0		232			121	78 1/2			73	70m25

REMARKS: 67 + 371  
 MAX. DEPTH = 67

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingart	Julie	Sambroto			Moran/Lomas	Harvey/Lessard	Diane	Pat/Lared	Optics	Nis No.		
		No. DESIRED	notes	SALT	NUT Btl	O2-Btl. No	CHL	Frac CHL			DIC/AIK	DOC	O18							δ15N	Urea Part.
1	67		498	286				48	48											1	
2	67																				2
3	50			287																	3
4	50																				4
5	40			288																	5
6	40																				6
7	30			289																	7
8	30																				8
9	20			290																	9
10	20																				10
11	10			291																	11
12	10																				12

Rosette Notes:  
 13 0 292 1 49 49  
 14 0

VESSEL R/V Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) PROJECT & LEG BEST/BIERP\_Summer09 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive STATION NO. 181

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID			
	DEG	MIN	DEG	MIN													DAY	MO	YR
21258	2	86	N	16738	07	W	10	JUL	09	17	10	4	0	222	101	88	5	73	Tomás

REMARKS: 21300  
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trmp Sension No. \_\_\_\_\_

NIS DEPTH	Roset	Hydro Team-PMEL							Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pav/ Jared	Optics	NIS No.
		SALT	Nut Bil	O2-Bil. No	CHL. Frae	CHL DIC/AIK	DOC	O18			\$15N	Urea Part.	Prod						
1	46		P1																1
2	46																		2
3	46																		3
4	30		P2																4
5	30																		5
6	30																		6
7	24			P3															7
8	24																		8
9	24																		9
10	18			P4															10
11	18																		11
12	18																		12

Rosette Notes: 46, 30, 24, 18, 10, 13, 10, 466

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP Summer/09  
 PROJECT & LEG: BEST/BSIERP Summer/09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.

CONSC CAST #		LATITUDE		LONGITUDE		DAY		MO		YR		TIME (GMT)		DRY BULB		WET BULB		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD.		CLOUD(amt)		TYPE WEATHER		BOTTO M DEPTH		STA. NAME/ID	
		DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	*	*	(m)													

REMARKS: \_\_\_\_\_

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trip Sensor No. \_\_\_\_\_

No.	DESIREL	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL DIC/ALK	DOC	O18	S15N	Urea Part.	Sambroto		Lomas	Harvey	Diane	TH	Jared	Optics	No.	
												Prod	DON								
13	12			P5										✓							1
14	10																				2
15	10																				3
16	6	D																			4
17	6	D																			5
18	6	D																			6
19	6			P6																	7
20	6																				8
21	6													✓							9
22	6																				10
23	6			P7																	11
24	6													✓							12

NIS DEPTH: Roset. Hydro Team-PMEL. Weingart-Julie. Moran/ Harvey. Diane. Pav. Jared. Optics. No.

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD/BEST/BSIERP\_Summer09)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 182

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
21957	58	42	N	169	21	40	W	10	JUL	09	1830	4.2	9.662	0.222	0.222	109	108	7/1	70m24			69	

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 Senson No. \_\_\_\_\_

REMARKS: 0573 #1

MAX. DEPTH = 65 m

No. DESIRED	notes	SALT	Nut. Bl	O2 Bl. No	CHL. Frac	CHL. DIC/Alk	DOC	O18	\$15N	Urea	Sambrotto			Lomas	Harvey	Diane	Pat/Jared	Optics	NIS
											Part.	Prod	DON						
1		499	293																1
2		50	294	243	6	6													2
3		40	295		5	5													3
4		40																	4
5		30	296		4	4													5
6		30																	6
7		20	297		3	3													7
8		10	298		2	2													8
9		0	299		1	1													9
10		0																	10
11																			11
12																			12

Rosette Notes:

0 30 40

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 183

CONSC CAST #  
 DEGR MIN  
 DEGR MIN  
 DAY MO YR  
 TIME (GMT)  
 DRY BULB (°C)  
 WET BULB (°C)  
 PRESSURE (mb)  
 SEA STATE  
 VISIBILITY  
 WIND DIRN (deg)  
 WIND SPD (kts)  
 CLOUD (amt)  
 WEATHER  
 BOTTO M DEPTH (m)  
 STA. NAME/ID

2145754.59 N  
 169 3.73 W  
 10 JUL 09  
 1950  
 4.1  
 .  
 222  
 106  
 58  
 71

REMARKS: 667371  
 MAX. DEPTH =

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN  
 FLUOR S/N  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR S/N  
 O2 Temp Sensor No.

Nis DEPTH	Roset.	SALT	Nut. Bil	O2-Bil No	CHL	Frac CH	DIC/Alk	DOC	O18	S15N	Urea Part.	Prod	DON	Lomas	Moran/ Harvey	Diane	Pav/ Jared	Optics	Nis No.	
																				Hydro Team-PMEL
1	66	500	300				50	50	592											1
2	50		301																	2
3	40		302																	3
4	30		303				51	51												4
5	20		304																	5
6	10		305	69																6
7	0		306				52	52	593											7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: TMB

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 184

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID		
215	15	57	50	9	11	N	16	8	51	20	W	10	JUL	09	22	10	4	9	-	2133	150	078	70M22
																					71		

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trip Sensor No. \_\_\_\_\_

NIS DEPTH: Roset  
 No. DESIRED: notes  
 SALT  
 Nut Bil  
 O2-Bil. No  
 CHL. Frae CH/DIC/AIK  
 DOC  
 O18  
 δ15N  
 Urea Part.  
 Prod  
 DON  
 Lomas  
 Lessard  
 Diane  
 TH  
 Pat/Jared  
 Optics  
 No.

Hydro Team-PMEL												Weingart	Julie	Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	Nis
												δ15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH			No.
1	60x		501	307	143																	1
2	50			308																		2
3	40			309																		3
4	30			310																		4
5	20			311																		5
6	10			312																		6
7	0			313																		7
8																						8
9																						9
10																						10
11																						11
12																						12

REMARKS: F09 MAX. DEPTH = 68 m

Rosette Notes: 143 CHLOR MARC 213

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 185

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
2116	57	43.74	N	168	51.71	W	10	JUL	09	23	11	5.4	21	26	097	058					65	70m 21

REMARKS: Fog MAX. DEPTH = 66 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat	Jared	Optics	Nis No.			
		No DESIRED	notes	SALT	Nut Bit	O2-Bit No	CHL	Frac CHL	DIC/Aik	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard		TH						
1	Bot			502314						53	53															1
2	50			315																						2
3	40			316																						3
4	30			317																						4
5	20			318																						5
6	10			319	03																					6
7	0			320																						7
8	0																									8
9																										9
10																										10
11																										11
12																										12

Rosette Notes: Chlor MAX = 20



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 186

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
2175737	37	65	N	18	49	57	W	11	JUL	09	00	04	5.5	-	2127	093	068				62	70M20

REMARKS: MAX. DEPTH = 66 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_

PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_

PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_

SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_

PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_

SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/AIK	DOC	O18	Wiegart	Julie	Sambroto	Moran/	Harvey	Diane	Pat/	Jared	Optics	Nis No.
1	bst	503	321																1
2	50		322	217															2
3	40		323																3
4	30		324																4
5	20		325																5
6	10		326																6
7	0		327																7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes:

Chlor M AX 14m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 187

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
218	57	31.38	N	188	36.80	W	11	JUL	09	01	23	5.8	-	2022	098	05	8					7D	70M19

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: Fog MAX. DEPTH = 67 m

NIS DEPTH	Roset	SALT	Hydro Team-PMEL				DOC	O18	Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS No.
			Nut Bil	O2-Bil. No	CHL	Frac CHL					DIC/Aik	Prod	DON						
1	Bot		328			55	55											1	
2	50	504	329	220		56	56											2	
3	40		330			57	57											3	
4	30		331			58	58											4	
5	20		332			59	59											5	
6	10		333															6	
7	0		334															7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Rosette Notes: S/SS 220 Chlon MAX 18 + 80ft sw

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 188

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2195730.05	N	16	18.3	W	11	JUL	09	06	24	5.5	-	1922	098088							70M18	

REMARKS: Fog  
 MAX. DEPTH = 67 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingard		Julie		Sambroto		Moran/	Harvey	Diane	Pat/Jared	Optics	Nis No.	
		No. DESIRED	notes	SALT	Nut.Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	S15N	Urea Part.	Prod	DON	Lomas	Lessard	TH		
1	Bot		505	235																1
2	50			336																2
3	40			1																3
4	30			2																4
5	20			3																5
6	10			4	226															6
7	0			5																7
8																				8
9																				9
10																				10
11																				11
12																				12

Rosette Notes: Chlor Max 17  
 22-6

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 189

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
22057	30	00	N	167	59	09	W	11	JUL	09	0436	05.3	192	2	131	058					71	70M17

REMARKS: FCS MAX. DEPTH = 68 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Trp Senson No. \_\_\_\_\_

Nis DEPTH	Roset	Hydro Team-PMEL										Weingart		Julie		Sambroto		Moran/		Harvey		Diane		Pat/Jared		Optics		Nis No.		
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL	Frac CHL	DIC/Aik	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard					TH							
1	Rf			506	6				60	60																				1
2	So				7																									2
3	40				8																									3
4	30				9																									4
5	20				10																									5
6	10				11			219																						6
7	0				12							61	61																	7
8																														8
9																														9
10																														10
11																														11
12																														12

Rosette Notes:

Chlor MAX = 27

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer09  
 PROJECT & LEG: BEST/BIERP Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 190

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN																		
2215732.03	N	16739.95	W	11	JUL	09	05	52			5.2	-	1924	1600	68						70m16	

REMARKS: Fog MAX. DEPTH = 69 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	Hydro Team-PMEL						Weingart	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS No.
		No. DESIRED notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK			DOC	O18	S15N						
1	Bot		507	13	198													1
2				14														2
3				15														3
4				16														4
5				17														5
6				18														6
7				19														7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes:

CHLOROPHYLL 22-25

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 191

CONSC CAST # 2225729.99 N  
 DEG MIN 167 20.77 W  
 DAY MO YR HR MIN 11 JUL 09 07 53  
 TIME (GMT) 05.10  
 DRY BULB WET BULB 98%  
 PRESSURE 1922.170088  
 SEA STATE VISIBILITY  
 WIND DIRN. SPD. (kts) 170088  
 WIND DIRN. SPD. (kts) \* \* \* \* \*  
 CLOUD(amt) TYPE WEATHER  
 BOTTO M DEPTH STA. NAME/ID 70m 15  
 MAX. DEPTH = 68 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis No.	Nis	Optics	Jarred	Pat/	TH	Diane	Harvey	Lessard	Moran/	Lomas	Sambroto				DON	Lomax	Harvey	Diane	Pat/	Jarred	Optics	Nis
											Urea	Part.	Prod	Don								
1	Bot																					1
2	50																					2
3	47																					3
4	30																					4
5	20																					5
6	10																					6
7	0																					7
8																						8
9																						9
10																						10
11																						11
12																						12

Rosette Notes: Chlor MBX 28-30

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 192

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
223573	11	35	N	167	2	34	W	11	JUL	090815				1						6 F	74	70M14

REMARKS: *Booster Temp: 0°C*  
*Not available*  
*67+3+1*  
 MAX. DEPTH = 67 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Foset.	Hydro Team-PMEL						Weingart				Sambroto			Moran/	Harvey	Diane	Pat/	Uared	Optics	Nis No.
		SALT	Nut Bil	O2-Bil/No	CHL	Frac	CHL/DIC/Aik	DOC	O18	S15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH				
1	67	509	27	172																	1
2	50		28		6																2
3	40		29		5																3
4	30		30		4																4
5	20		31		3																5
6	10		32		2																6
7	0		33		1																7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 193

CONSC CAST #	LATITUDE			LONGITUDE			TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND D SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
	DEG	MIN	SEC	DEG	MIN	SEC	DAY	MO												YR
221	57	25	.40	N	16	48	.38	W	11	JUL	09	09	35						73	70M13

REMARKS: See we down 1 m w/s  
 67 + 37  
 MAX DEPTH = 67 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH No DESIRE	REF notes	SALT	Nut. Bil	O2-Bil No	CHL	Frac	CHL	DIC/Alk	DOC	O18	S15N	Sambrotto				Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jarred	Optics	Nis No.
												Urea	Part.	Prod	DON						
1	67	510	34					65	65												1
2	50		35	155	6																2
3	40		36		4																3
4	30		37																		4
5	20		38		3																5
6	10		39		0																6
7	0		40		1																7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes:



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Shp Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 194

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
205	57	26.58	N	166	31.35	W	11	JUL	09	10	42				1							70	70M12

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

REMARKS: *Samples down to 100M 66 + 3 T1*

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat	Jared	Optics	Nis	
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHI	DIC	CAIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH			
1	66			511	41	205																		1
2	50				42		6	4																2
3	40				43		5	5																3
4	30				44		4	4																4
5	20				45		3	3																5
6	10				46		2	2																6
7	0				47		1	1																7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 195

CONSC CAST #	LATITUDE	LONGITUDE	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
DEG	MIN	DEG	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(kts)	*	*	(m)	
22657	19.12 N	16619.61 W	11 JUL 09	11.57									73	70M 11
													70	

REMARKS: Server down, no WX  
 654471  
 MAX. DEPTH = 65 m

Nis DEPTH	Roset.	Hydro Team-PMEL										Wingart	Julie	Sambrotto			Moran/Lomas	Harvey/Lessard	Diane	Pav/Jared	Optics	Nis No.
		SALT	Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	δ15N	Urea Part.			Prod	DON	Lomas						
1	65	512	48	49	086	6	67	67												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		

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 196

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID
2275719	18	N	166	0	63	W	11	JUL	09	13	23				1		152	4			72	70m 10
																					69	

REMARKS: Surface NO WX  
 SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 MAX DEPTH = 65 m

NIS DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambrotto			Moran/		Diane	Pat/Lared	Optics	NIS		
		No. DESIRED	notes	SALT	Nut. Blt	O2-Blt No	CHL.	Frac	CHL/DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard					TH	No.
1	65	513	55	088																				1
2	50		56		6																			2
3	40		57		5																			3
4	30		58		4																			4
5	20		59		3																			5
6	10		60		2																			6
7	0		61		1																			7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: Ship Designation (I.D.)  
 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 197

CONSC CAST #	2285715	LATITUDE	69 N	LONGITUDE	6544.83 W	DAY	11	MO	JUL	YR	09	TIME (GMT)	1435	DRY BULB (°C)	4.3	WET BULB (°C)	.	PRESSURE (mb)	1911	SEA STATE	.	VISIBILITY	.	WIND DIRN. (deg)	195	WIN SPD. (kts)	78	CLOUD (amt)	.	WEATHER	.	BOTTO M DEPTH (m)	73	STA. NAME/ID	70m 09
--------------	---------	----------	------	-----------	-----------	-----	----	----	-----	----	----	------------	------	---------------	-----	---------------	---	---------------	------	-----------	---	------------	---	------------------	-----	----------------	----	-------------	---	---------	---	-------------------	----	--------------	--------

REMARKS: 65 + 4 + 1  
 SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Sambroto			Moran/	Harvey	Diane	Pat/Lared	Optics	Nis No.														
		No. DESIRED	notes	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL DIC/AIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH																	
1	65			514	62	100	6	6	70	70																										1
2	50				63		5	6	71	71																										2
3	40				64		4	5	72	72																										3
4	30				65		3	4	73	73																										4
5	20				66		2	3	73	73																										5
6	10				67		1	2	74	74																										6
7	0				68			1	74	74																										7
8																																				8
9																																				9
10																																				10
11																																				11
12																																				12

Rosette Notes: + climb 210 m

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 198

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
02957	6.	48	N	16536.	82	W	11	JUL	09	1549	4.6		191			178	8			74	70m 08

REMARKS: 67 + 3 + 1  
 MAX. DEPTH = 67 m

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_

FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL										Weingart		Julie			Sambroko			Moran/Lomas		Harvey/Lessard		Diame		Pat/Jared		Optics		Nis No.
		No DESIRED	notes	SALT	Nut Bit	O2-Bit No	CHL	Frac CHL	DIC/AIK	DOC	O18	515N	Urea Part.	Prod	DON	Lomas	Lessard	Diame	TH	Jared	Optics	No.								
1	67			575	69					596											1									
2	50				70			6													2									
3	40				71			5													3									
4	30				72			4													4									
5	20				73			3													5									
6	10				74			2													6									
7	0				75			1		597											7									
8																					8									
9																					9									
10																					10									
11																					11									
12																					12									

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 199

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
23057	6	52	116	52	11	JUL	09	7	12		5.8	9.8	1.9			181	6			75	70M07

REMARKS: 68 + 1  
 MAX. DEPTH = 68 m

SBE 9+  
 PRESS SN  
 PRI TEMP SN  
 SEC TEMP SN  
 PRI COND SN  
 SEC COND SN

FLUOR SN  
 SBE43-Oxy (prine)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Trmp Seson No.

Nis DEPTH	Roset.	Hydro Team-PMEL										Wingard	Julie	Sambroto			Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	Optics	Nis No.		
		No. DESIRED	notes	SALT	Nut.BI	O2-BI.No	CHL	Frac CHL	DIC/AIK	DOC	O18			\$15N	Urea	Part.							Prod	DON
1	68		516	76					75	75														1
2	50			77	178	6																		2
3	40			78		5																		3
4	30			79		4			76	76														4
5	20			80		3																		5
6	10			81		2																		6
7	0			82		1			77	77														7
8																								8
9																								9
10																								10
11																								11
12																								12

Rosette Notes:

VESSEL: RVV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) / BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 200

CONSC CAST #	LATITUDE		LONGITUDE		DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD. (kts)	CLOUD(amt) TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID		
	DEG	MIN	DEG	MIN																			
231	56	53	69	N	16	5	8	15	W	11	JUL	09	18	35	6.6		19	1	45	5		76	70m 06

REMARKS: 70 + 3 + 1  
 SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Imp. Sensor No. \_\_\_\_\_

Nis No. DESIRED	DEPTH m	Roset.	Hydro Team-PMEL					Weingart	Julie	Sambroko			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
			NO. OF ROSETTES	SALT	NUTR BIT	O2-BI. NO.	CHL. FRAC			CHL DIC/AIK	DOC	O18						
1	70		517	83	83	6	5	6										1
2	50			84		6	5	6										2
3	40			85		4	5	4										3
4	30			86		3	3	3										4
5	20			87		2	2	2										5
6	10			88		1	1	1										6
7	0			89														7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes:

VESSEL: RV Knorr CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) PROJECT & LEG: BEST/BSIERP\_Summer09 Station No. 201  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2325654	54.55 N	16449.99 W	11 JUL 09 1951	6.8		191			148	2			73	70M05

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

REMARKS: 68+491  
 MAX. DEPTH = \_\_\_\_\_ m

Nis DEPTH	Roset.	Hydro Team-PMEL						Wingart		Julie		Sambroto			Moran/	Harvey	Diane	Pav/	Jared	Optics	Nis No.
		No. DESIRE	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	TH			
1	68			518	90	147		78	78												1
2	50				91																2
3	40				92																3
4	30				93																4
5	30																				5
6	28																				6
7	20																				7
8	10																				8
9	0																				9
10	0																				10
11																					11
12																					12

Rosette Notes:

0 25 30



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 202

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(am)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
2335	0	93	N	164	34	36	11	JUL	09	2107	7.7	7.7	1922	115	128						74	70M04

REMARKS: Fog MAX. DEPTH = 71 m  
 7173?

SBE 9+ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambroto			Moran/		Harvey		Diane		Pat	Optics	Nis No.
		SALT	Nut Bil	O2-Bil.No	CHL	Frac CHL	DIC/AIK	DOC	O18	Urea	Part.	Prod	DON	Lomas	Lessard			TH			
1	605	519	97	106																	1
2	50		98																		2
3	40		99																		3
4	30		100																		4
5	20		101																		5
6	10		102																		6
7	0		103																		7
8																					8
9																					9
10																					10
11																					11
12																					12

Rosette Notes: 106  
 Chl-a MAX 22 M

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 203

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
2345649	164	18.70	W	11	JUL	09	22	14	8.0	8.0	98%	1926	140	104	72						70	M03

REMARKS: MAX. DEPTH = 69 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL						Weingart		Sambrotto			Morari/	Harvey	Diane	Pat/	Jared	Optics	Nis No.
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH	
1	605			S20	104			80	80										1
2	50				105														2
3	40				106														3
4	30				107			81	81										4
5	20				108														5
6	10				109	09													6
7	0				110			82	82										7
8																			8
9																			9
10																			10
11																			11
12																			12

Rosette Notes: 009 TMB CH/or MPX 23m

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 204

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2355652	56 N	16403.23 W	11 JUL 09 2325	7.5	7.1	1922	144	098					71	76M02

REMARKS: *0. FET \* 80003 11 lead for PMEL CTD*

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Trip Sensor No. \_\_\_\_\_

MAX. DEPTH = 68 m

Nis DEPTH	Roset	Hydro Team-PMEL					Weingart		Julie		Sambroto		Morav	Harvey	Diane	Pat/Jared	Optics	Nis No.
		SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	\$15N	Urea Part.	Prod	DON	Lomas	Lessard		TH		
1	807	521	111															1
2	50		112															2
3	1/0		113															3
4	30		114															4
5	20		115															5
6	10		116	120														6
7	0		117															7
8																		8
9																		9
10																		10
11																		11
12																		12

Rosette Notes: 120  
 color MAX 30 to BOTTOM

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer09  
 PROJECT & LEG: BEST/BSIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 205

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2365646	26	N	16357.58	W	12	JUL	09	00	27	7.7	98%	19.24	120056	71								70M01

REMARKS: Fog  
 MAX. DEPTH = 68 m  
 SBE 9+  
 FLUOR SN  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Trip Sensor No.

Nis DEPTH	Roset	Hydro Team-PMEL						Wetgart		Sambrotto			Moran/		Harvey		Diane		No.		
		No. DESIRED	notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac	CHL/DIC/AIK	DOC	O18	§15N	Urea Part.	Prod	DON	Lomas	Lessard	Diane	Par/Jared		Optics	
1	Bot			522	118	175		83	83	598											1
2	50					119		84	84												2
3	40					120		85	85												3
4	38																				4
5	30					121															5
6	28																				6
7	22																				7
8	20					122		86	86												8
9	20																				9
10	18																				10
11	12																				11
12	10					123		87	87												12

Rosette Notes: 5883  
 CK10r MAX 30 to Bot om

VESEL RV Knorr CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) PROJECT & LEG BEST/BSIERP\_Summer-09 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive STATION NO. 205

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID	
236	6	46	26	N	16	35	7	5	5	0027											71	70M01

REMARKS page 2 n 2  
 MAX. DEPTH = 68 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	Hydro Team-PMEL					Wengart.	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.
		notes	SALT	Nut Bil	O2-Bil. No	CHL. Frac			CHL DIC/AIK	DOC	O18						
1	5																1
2	0																2
3	0																3
4	0			124													4
5																	5
6																	6
7																	7
8																	8
9																	9
10																	10
11																	11
12																	12

Rosette Notes:

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD BEST/BSIERP Summer'09)  
 PROJECT & LEG BEST/BSIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO. 206

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD(amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
2375642	16	34	16	30	12	JUL	09	02	38	8.5	-	-	19.28	09	1094	73					73	CN-8

REMARKS  
 MAX. DEPTH = 70 m

SBE 9+ \_\_\_\_\_  
 FLUOR SN \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_

No. DESIRE/notes	Roset	SALT	Nut. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/Alk	DOC	O18	Weingart		Sambrotto				Moran/		Harvey		Diane	Pat/Jared	Optics	No.
									Julie	Urea	Part.	Prod	DON	Lomas	Lessard	TH						
1	801	523	1																			1
2	50		2																			2
3	40		3																			3
4	30		4																			4
5	20		5																			5
6	10		6																			6
7	0		7																			7
8																						8
9																						9
10																						10
11																						11
12																						12

Rosette Notes: Chlor MAX = 2.2 M

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 207

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
2385633	81	N	1645	4.24	W	12	JUL	09	04	23	8.9	8.9	1828	106	104						77	CN-9

REMARKS: MAX. DEPTH = 73 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prine) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset	Hydro Team-PMEL						Wiegand		Julie		Sambroto			Moran/		Harvey		Diane		Pat/Jared	Optics	NIS No.
		No. DESIRED	notes	SALT	Nur. Bil	O2-Bil. No	CHL. Frac	CHL DIC/CAK	DOC	O18	δ15N	Urea Part.	Prod	DON	Lomas	Lessard				TH			
1	Bot		524	8																			1
2	50			9																			2
3	40			10																			3
4	30			11																			4
5	20			12																			5
6	10			13																			6
7	0			14																			7
8																							8
9																							9
10																							10
11																							11
12																							12

Rosette Notes:

Chlor MAX 25m + Bottom

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SIE/ERP Summer'09  
 PROJECT & LEG: BEST/SIE/ERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 208

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
23956	25	30N	165	17	12	JUL	09	06	12		8.9	-	17.28	114	083						84	CN-10

REMARKS: MAX. DEPTH = 81 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset	SALT	Nul. Bil	O2-Bil. No	CHL	Frac CHL	DIC/CAIK	DOC	O18	Weingart		Julie		Sambroto			Moran/	Harvey	Diane	Pat/Jared	Optics	NIS No.
										Julie	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard		TH			
1	80f	525	15																			1
2	50		16																			2
3	40		17																			3
4	30		18																			4
5	20		19																			5
6	10		20																			6
7	0		21																			7
8																						8
9																						9
10																						10
11																						11
12																						12

Rosette Notes: CHL of MAX ≈ 40m



VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/SIERP Summer'09  
 PROJECT & LEG: BEST/SIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 209

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)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
2405616	16.72N	165.41.96W	12 JUL 09 0802	9.3		16			113	123			96	CN-11

REMARKS: 88+471  
 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 Temp Sensor No.  
 STATION DEPTH = 82 m

NIS DEPTH	Roset.	Hydro Team-PMEL					Waingard		Julie		Sambrotto			Moran/		Harvey		Diane		Pat/Jared	Optics	NIS No.
		No. DESIRE/notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	615N	Urea	Part.	Prod	DON	Lomas	Lessard			TH			
1	88		526	22																		1
2	75			23																		2
3	50			24																		3
4	40			25																		4
5	30			26																		5
6	20			27																		6
7	10			28																		7
8	0			29																		8
9																						9
10																						10
11																						11
12																						12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/RSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 210

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
24156	8	18	166	6	21	JUL	09	9	54	9:54	9.8	97.3%	162	1	1	177	11			113	CU-12

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 Sanson No. \_\_\_\_\_  
 REMARKS: 106+4+1  
 MAX. DEPTH = 106 m

Nis DEPTH	Roset	Hydro Team-PMEL						Weingart		Sambrotto			Moran/		Harvey		Diane		Pat/Jared		Optics	Nis No.
		SALT	Nul. Bil	O2-Bil. No	CHL. Frac	CHL. DIC/CAIK	DOC	O18	δ15N	Urea	Part.	Prod	DON	Lomas	Lessard			TH				
1	106	587	30																			1
2	75		31																			2
3	50		32																			3
4	40		33																			4
5	30		34																			5
6	20		35																			6
7	10		36																			7
8	0		37																			8
9																						9
10																						10
11																						11
12																						12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD)  
 PROJECT & LEG: BEST/BSIERP Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N195J for PMEL CTD archive  
 STATION NO.: 211

CONSC CAST # 24255  
 DEG 55 MIN 59.63 N  
 LONGITUDE DEG 166 MIN 30.15 W  
 DAY 12 MO JUL YR 09  
 TIME (GMT) 11:42  
 DRY BULB (°C) 8.1  
 WET BULB (°C) 7.2  
 PRESSURE (mb) 1014  
 SEA STATE \* \* \*  
 VISIBILITY \* \* \*  
 WIND DIRN. (deg) 159  
 WIND SPD. (kts) 16.3  
 CLOUD (amt) \* \* \*  
 WEATHER \* \* \*  
 BOTTO M DEPTH (m) 124  
 STA. NAME/ID CN-13

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

Nis DEPTH	Roset.	SALT	Nul. Bil	O2-Bil. No	CHL. Frac	CHL. DIC/CAIK	DOC	O18	S15N	Urea	Sambroto			Moran/ Lessard	Harvey	Diane	Pat/ Jared	Optics	Nis No.
											Prod	DON	Lomas						
1	124	528	38																1
2	100		39																2
3	75		40																3
4	50		41																4
5	40		42																5
6	30		43																6
7	20		44																7
8	10		45																8
9	0		46																9
10																			10
11																			11
12																			12

REMARKS: 124 + 4 ft  
 MAX. DEPTH = 124 m

Rosette Notes: 2° Sal 5 dly on ↓, near 5 we fou - Careful, head f

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP\_Summer'09  
 PROJECT & LEG: BEST/BIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 212

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER TYPE	BOTTO M DEPTH (m)	STA. NAME/ID
213	55	51	166	54	12	JUL	09	13	37	7.8			123			140	21.8	6/8	Cloud	138	CN-14

REMARKS: Server down -  
 Wx ~ 40 min later 129 74 + 1  
 MAX. DEPTH = 129 m

Nis DEPTH	Roset.	Hydro Team-PMEL							Weingart	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	Nis No.		
		No. DESIRED	notes	SALT	Nul. Bil	O2-Bil. No	CHL. Frac	CHL/DIC/Alk			DOC	O18	\$15N							Urea	Part
1	129		529	47																	1
2	100			48																	2
3	75			49																	3
4	50			50	N																4
5	40			51																	5
6	30			52																	6
7	20			53																	7
8	10			54																	8
9	0			55																	9
10																					10
11																					11
12																					12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP\_Summer'09  
 PROJECT & LEG: BEST/BIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 213

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
244	55	42.36	N	167	18.20	W	12	JUL	09	1530	7.6		1.23			152	2.08	5			136	CN-15

REMARKS: 4? MAX. DEPTH = 130 m

SBE 9+ \_\_\_\_\_ FLUOR SN \_\_\_\_\_  
 PRESS SN \_\_\_\_\_ SBE43-Oxy (prime) \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_ SBE43-Oxy (sec) \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_ Transmissometer \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_ PAR SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_ O2 Temp Sensor No. \_\_\_\_\_

NIS DEPTH	Roset.	SALT	Nut. Bil	O2-Bil No	CHL	Frac CHL	DIC/CAIK	DOC	O18	Julie	\$15N	Sambroto				Moran/ Lomas	Harvey Lessard	Diane	Pat/Jared	Optics	NIS No.	
												Urea Part	Prod	DON	TH							
1	130	530	56																			1
2	100		57																			2
3	75		58																			3
4	50		59	1	6																	4
5	40		60		5																	5
6	30		61		4																	6
7	20		62		3																	7
8	10		63		2																	8
9	0		64		1																	9
10																						10
11																						11
12																						12

Rosette Notes:

VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) | BEST/BIERP\_Summer09  
 PROJECT & LEG: BEST/BIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N194 for PMEL CTD archive  
 STATION NO.: 214

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (kts)	CLOUD (amt)	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID
245	55	33	48	N	18	JUL	09	17	27	7.5		98.2%	104			141	22.5			141	CN-16

REMARKS: *partly foggy?*  
 1317 ST1  
 MAX. DEPTH = 131 m

No	DESIRE	notes	SALT	Nur. Bil	O2 Bil. No	CHL. Frac	CHL. DIC/CAIK	DOC	O18	Wetgarrt	Julie	Sambrotto			Moran/ Lomas	Harvey Lessard	Diane	Pat/ Jared	Optics	NIS
												Urea Part.	Prod	DON						
1	131		531	65																1
2	160			66																2
3	75			67																3
4	50			68																4
5	40			69																5
6	30			70																6
7	20			71																7
8	10			72																8
9	0			73																9
10																				10
11																				11
12																				12

Rosette Notes:

VESSEL: RV Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP\_Summer09  
 PROJECT & LEG: BEST/BIERP\_Summer09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 215

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIN D SPD. (kts)	CLOUD (amt)	TYPE	WEATHER	BOTTO M DEPTH (m)	STA. NAME/ID	
2416	55	26.01	N	168	3	59	W	12	JUL	09	1920	7.9		084			134	238	6			206	CN-17
																						200	

REMARKS: SBE 9+  
 SBE43-Oxy (prime)  
 SBE43-Oxy (sec)  
 Transmissometer  
 PAR SN  
 O2 Temp Sensor No.  
 MAX. DEPTH = 196 m

NIS DEPTH	Foset	Hydro Team-PMEL							Wingart	Julie	Sambroto				Moran/	Harvey	Diane	Pat/Jared	Optics	NIS		
		No. DESIRED	notes	SALT	Nut. Bl	O2-Bil. No	CHL. Frac	CHL. DIC/ALK			DOC	O18	S15N	Urea							Part.	Prod
1	196		532	74																		1
2	150			75																		2
3	100			76																		3
4	75			77																		4
5	50			78	1		6															5
6	40			79			5															6
7	30			80			4															7
8	20			81			3															8
9	10			82			2															9
10	0			83			1															10
11																						11
12																						12

Rosette Notes: Mueby!

VESSEL R/V Knorr  
 CRUISE ID 6N195-10 or 6N195J (for PMEL CTD) BEST/BIERP Summer'09  
 PROJECT & LEG BEST/BIERP Summer'09  
 Ship Designation (I.D.) 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO. 216

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD(amt)	WEATHER	BOTTO M DEPTH	STA. NAME/ID	
24755	18	90	N	68	25	12	JUL	09	21	36	8.0		0757	136	267						1710	CV-12

REMARKS: Part is OFF!  
 MAX. DEPTH = 1516 m  
*Route west to 87.1 then S so good to catch up*

No. DESIRED	Roset.	SALT	Nut Bit	O2-Bil. No	CHL. Frac	CHL DIC/Alk	DOC	O18	S15N	Urea Part.	Sambroto			Moran/ Harvey		Diane	Pav Jared	Optics	No.
											Prod	DON	Lomas	Lessard					
1	804	533	84																1
2	1000		85																2
3	500		86																3
4	250		87																4
5	160		88																5
6	75		89																6
7	50		90																7
8	40		91																8
9	30		92																9
10	20		93																10
11	10		94																11
12	0																		12

Rosette Notes:

12 did not Temp



VESSEL: R/V Knorr  
 CRUISE ID: 6N195-10 or 6N195J (for PMEL CTD) / BEST/BSIERP\_Summer'09  
 PROJECT & LEG: BEST/BSIERP\_Summer'09  
 Ship Designation (I.D.): 6N195-10 or 6N19J for PMEL CTD archive  
 STATION NO.: 217

CONSC CAST # 24855  
 DEG 10.13 N  
 LONGITUDE 16848.83 W  
 DAY 13 JUL 09  
 TIME (GMT) 0041  
 DRY BULB (°C) 9.0  
 WET BULB (°C) 9.0  
 PRESSURE (mb) 044515125  
 SEA STATE 8  
 VISIBILITY 2020  
 WIND DIRN (deg) 151  
 WIND SPD (kts) 2  
 CLOUD (amt) 0  
 WEATHER  
 BOTTO M DEPTH (m) 2020  
 STA. NAME/ID CN-19

SBE 9+ \_\_\_\_\_  
 PRESS SN \_\_\_\_\_  
 PRI TEMP SN \_\_\_\_\_  
 SEC TEMP SN \_\_\_\_\_  
 PRI COND SN \_\_\_\_\_  
 SEC COND SN \_\_\_\_\_  
 FLUOR S/N \_\_\_\_\_  
 SBE43-Oxy (prime) \_\_\_\_\_  
 SBE43-Oxy (sec) \_\_\_\_\_  
 Transmissometer \_\_\_\_\_  
 PAR S/N \_\_\_\_\_  
 O2 Temp Sensor No. \_\_\_\_\_  
 REMARKS: Last cast of the cruise. rain  
 MAX. DEPTH = 1526 m

No. DESIRED	Roset	SALT	Nut. Bil	O2-Bil. No	CHL	Frac CHL	DIC/ALK	DOC	O18	S15N	Sambrotto			DON	Moran/	Harvey	Diane	Paul/Jared	Optics	Nis	
											Urea Part.	Prod	Urea								
1	BT	534	95																		1
2			96																		2
3			97																		3
4			98																		4
5			99																		5
6			100																		6
7			101																		7
8			102																		8
9			103																		9
10			104																		10
11			105																		11
12			106																		12

Rosette Notes:

Chlor MAX 30-40