

km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
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- UVP Transmis.. CST-1043DR
- LSS UVP
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR

Time-GMT	Comments
	<u>Seapoint fluoro no 30x cable</u>
	<u>even though can file</u>
	<u>set up on 30x option</u>
	<u>post note fluoro data on this</u>
	<u>cast no good</u>

Station:	Cast:
Latitude start: 22 29.890 N	Longitude start: 157 30.029 W
Latitude end: 22 29.879 N	Longitude end: 157 30.021 W
Depth of water: 4781 meters	Date (GMT): (213) 31 / 07 / 2008
Pressure on Deck	Time: 08:13:10
Begin: 548	Start Log: 08:18:25
End:	In Water: 08:20:12
Max cast pressure: 80 dbar	Out of Water: 08:50:49

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2	35:55		44.9	45 m	
3	36:15		44.4	45 m	
4	36:35		45	45 db	
5	36:55		45.6	45 db	post note:
6	37:10		44.8	45 db	fluoro cable
7	08: 37:30		45.1	45 db	hooked up backward
8	08: 37:50		44.9	45	SIC1 - SIC3
9	28:10		44.0	45	
10	38:30		44.7	45	
11	38:50		45.6	45	
12	39:10		44.5	45	
13	39:30		44.1	45	
14	39:50		44.9	45	
15	40:10		45.0	45	
16	40:30		44.3	45	
17	40:50		44.8	45	
18	41:10		45.1	45	
19	41:30		44.2	45	
20	41:50		44.6	45	
21	42:10		44.8	45	
22	42:30		44.8	45	
23	08: 42:50		45.1	45	
24	08: 43:10		44.5	45	

C-MORE CRUISE LOG OPEREX Station Data Sheet

Station Number:

1

Date:

7/31/2008

(GMT)

Cast Number:

1

Time:

820

(GMT)

Operators:

AF, PC, SP

Position:

22 29.879N 157 30.021W

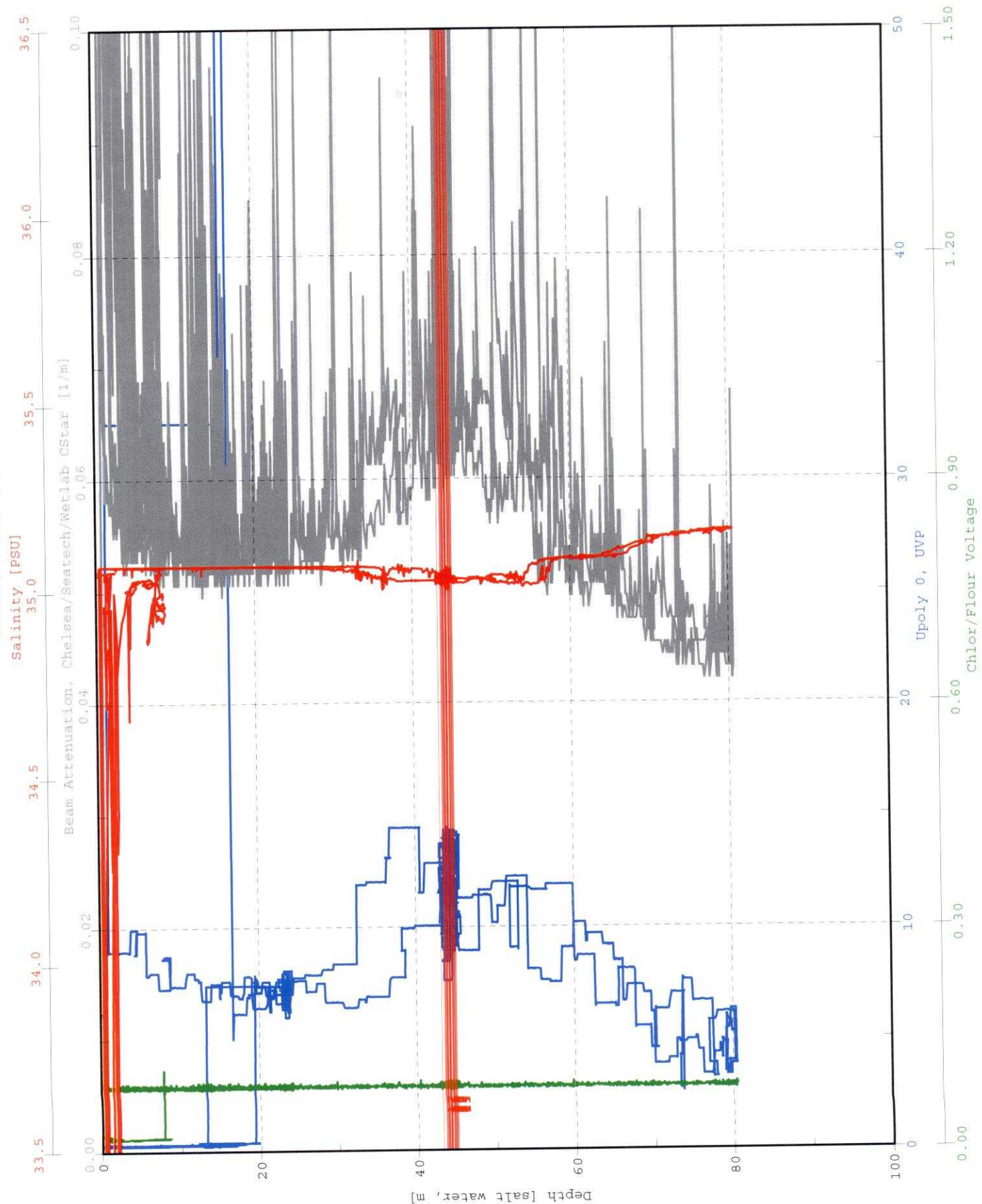
Target Depth 80m

Rosette Position	Desired Depth	Mixing Exp								
1	45	X								
2	45	X								
3	45	X								
4	45	X								
5	45	X								
6	45	X								
7	45	X								
8	45	X								
9	45	X								
10	45	X								
11	45	X								
12	45	X								
13	45	X								
14	45	X								
15	45	X								
16	45	X								
17	45	X								
18	45	X								
19	45	X								
20	45	X								
21	45	X								
22	45	X								
23	45	X								
24	45	X								

NOTES:

Bottle 19 + 20 leak 20 leaks most

KM081 S1 C1



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

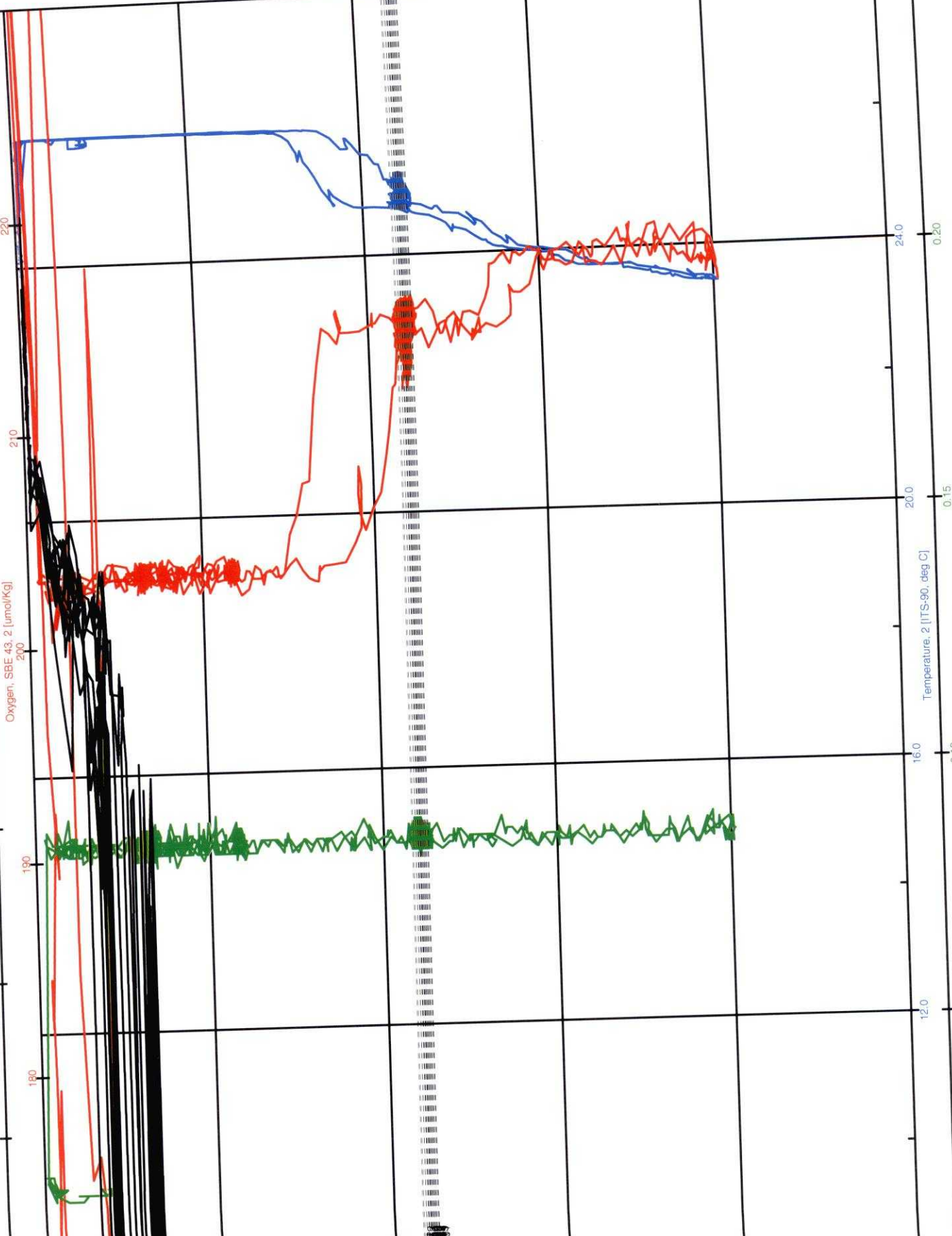
KM0L 51 C1

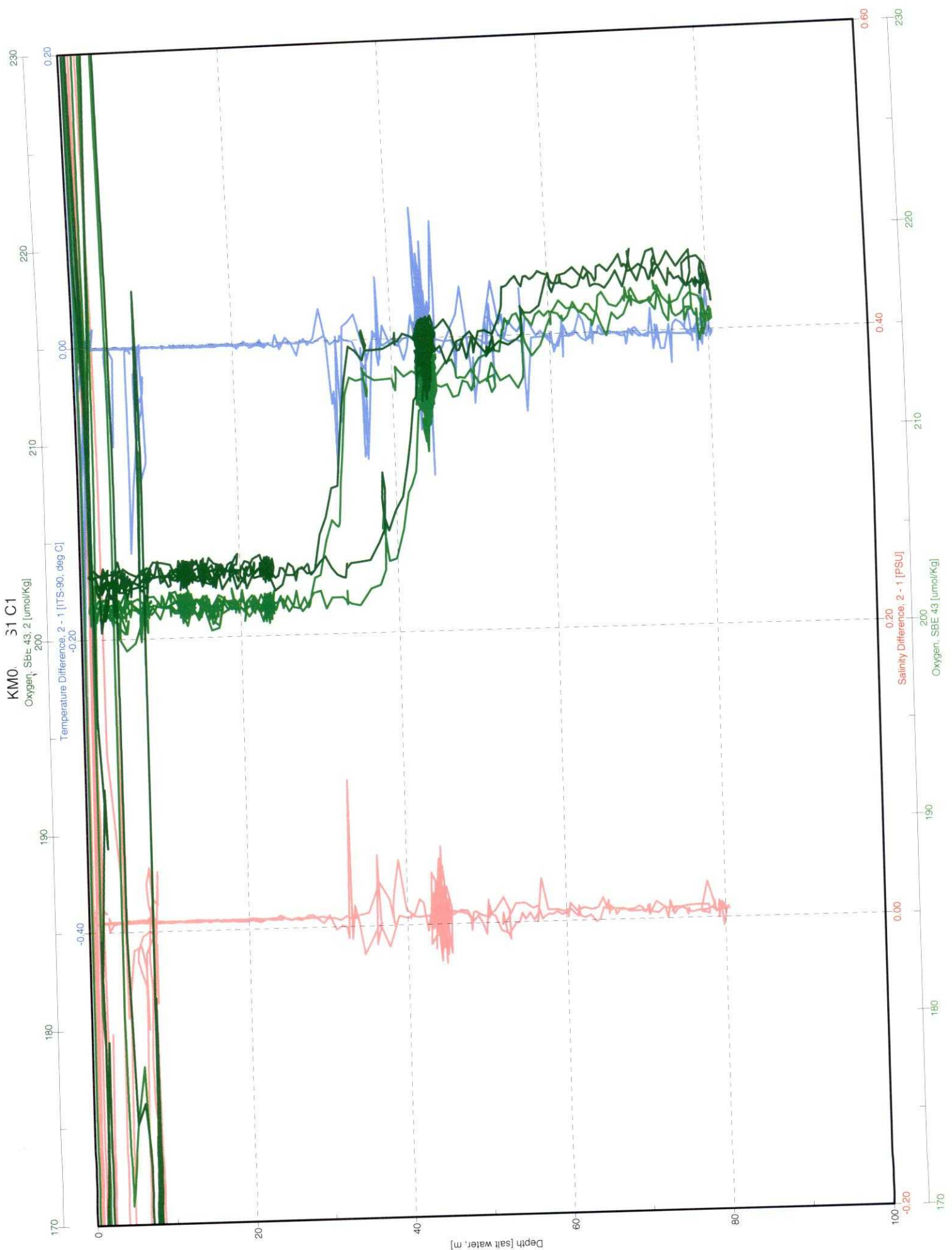
PAR/Irradiance, Biospherical/Lcor

Oxygen, SBE 43.2 [umol/Kg]

Temperature, 2 [ITS-90, deg C]

Fluorescence, Seapoint





km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator SP
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- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR

Time-GMT	Comments
	Seapoint Fluoro - NO 30x Cable although 30x in can file

Station: 1	Cast: 2
Latitude start: 22 29.879' N	Longitude start: 157 30.020' W
end:	end:
Depth of water: 4782 meters	Date (GMT): (213) 07 / 31 / 2008
Pressure on Deck	Time: 10:10:23
Begin: 0.71	Start Log: 10:10:15 z
End:	In Water: (213) 10:11:57 z
Max cast pressure: 150 dbar	Out of Water: (213) 10:41:00 z

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		10:28:50	45.3	45	
3		10:29:10	43.7	45	
4		10:29:30	45.0	45	
5		10:29:50	45.0	45	
6		10:30:10	45.2	45	
7		10:30:30	44.8	45	
8		10:30:50	45.0	45	
9		10:31:10	44.6	45	
10		10:31:30	44.8	45	
11		10:31:50	44.9	45	
12		10:32:10	45.1	45	
13		10:32:30	45.6	45	
14		10:32:50	44.8	45	
15		10:33:10	45.3	45	
16		10:33:30	45.5	45	
17		10:33:50	44.7	45	
18		10:34:10	44.9	45	
19		10:34:30	45.3	45	
20		10:34:50	45.4	45	
21		10:35:10	44.8	45	
22		10:35:30	45.0	45	
23		10:35:50	45.6	45	
24		10:36:10	44.8	45	

10x 8" C1

C-MORE CRUISE LOG

OPEREX

Station Data Sheet

Station Number: **1**
 Cast Number: **2**
 Operators: SP

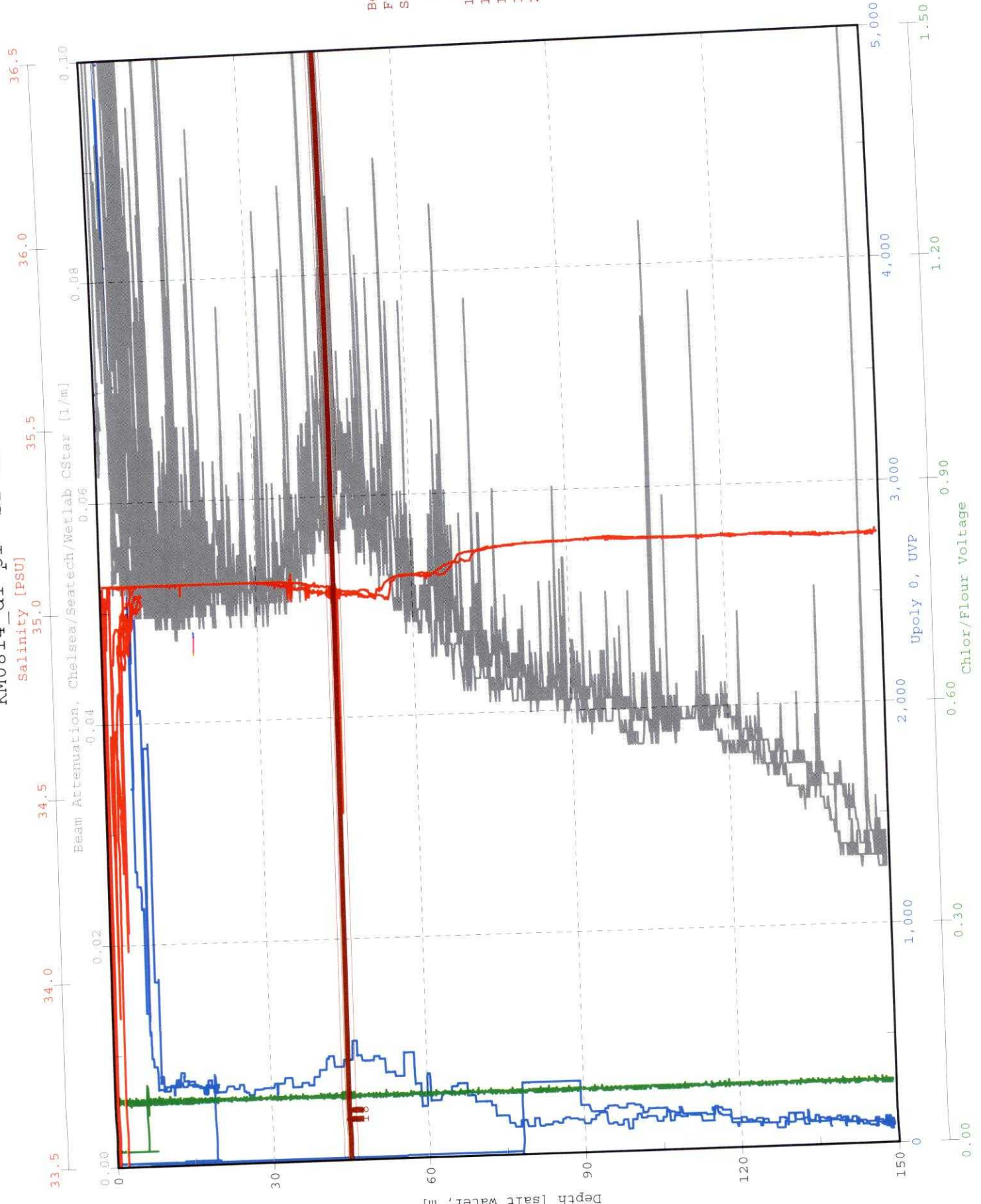
Date: **7/31/2008** (GMT)
 Time: 10:12:15 (GMT)
 Position: 22 29.879'N 157 30.020'W

Target Depth 80m

Rosette Position	Desired Depth	Mixing Exp								
1	45	X								
2	45	X								
3	45	X								
4	45	X								
5	45	X								
6	45	X								
7	45	X								
8	45	X								
9	45	X								
10	45	X								
11	45	X								
12	45	X								
13	45	X								
14	45	X								
15	45	X								
16	45	X								
17	45	X								
18	45	X								
19	45	X								
20	45	X								
21	45	X								
22	45	X								
23	45	X								
24	45	X								

NOTES:

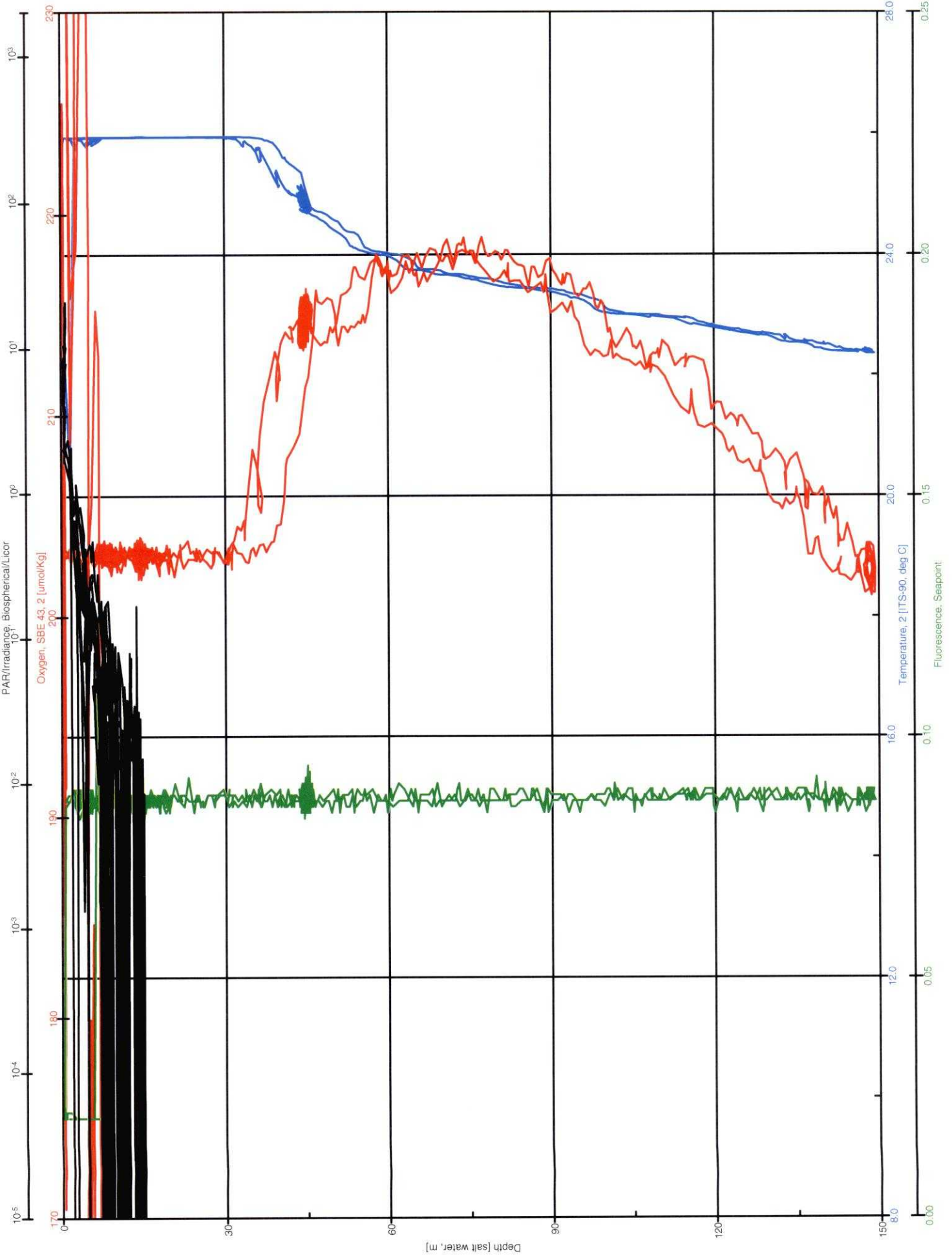
KM0814_d1_p1 S1 C2



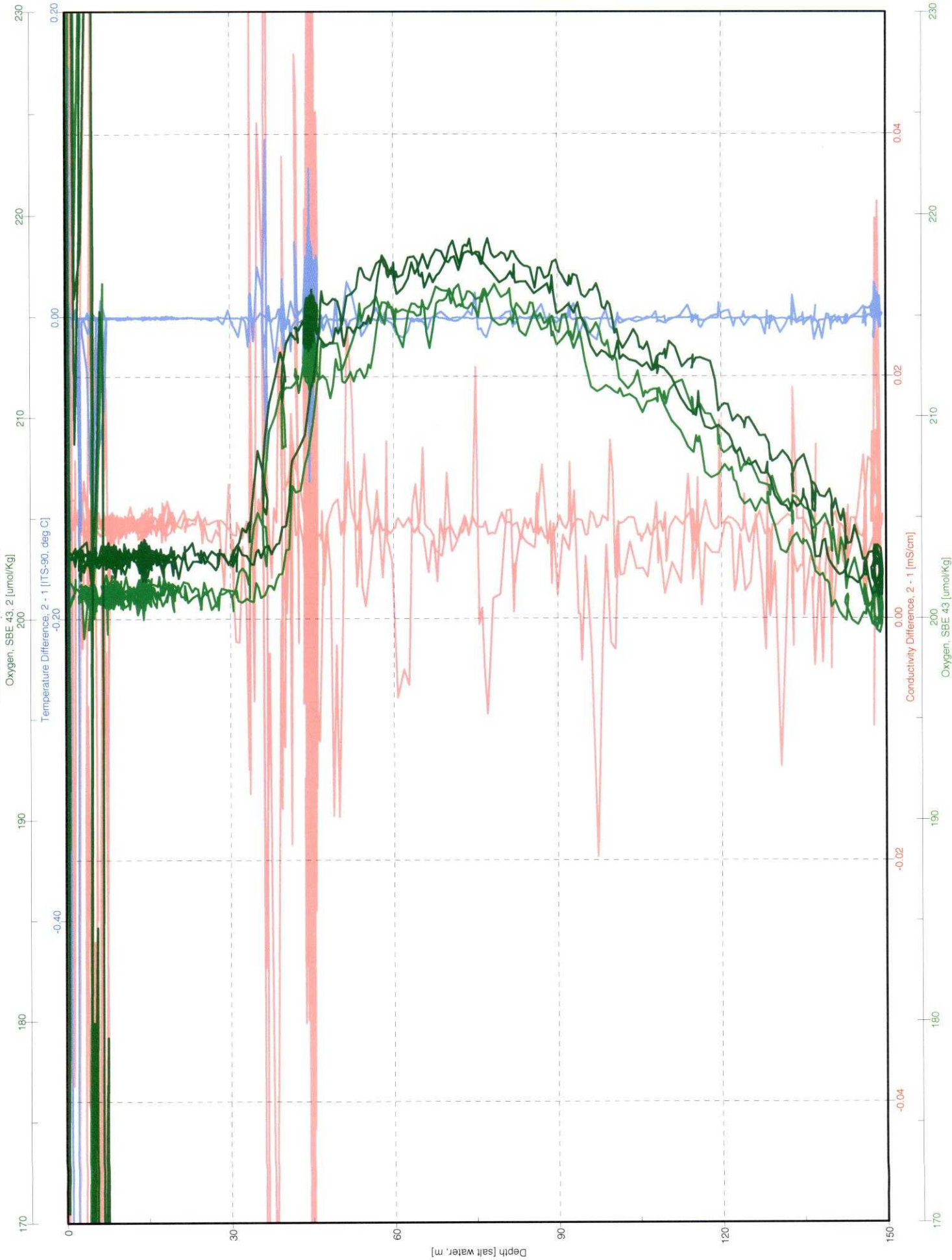
Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_2_S1_C2

PAR/Irradiance, Biospherical/Licor



KM0814 .3 S1 C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
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- UVP Transmis.. CST-1043DR
- LSS UVP
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR

Time-GMT	Comments
	<u>Seapoint s/n 2487</u>
	<u>is using 10X gain cable</u>
	<u>+ confil has been changed to 10x</u>

Station: <u>1</u>	Cast: <u>3</u>
Latitude start: <u>22° 29.880' N</u> end: <u>22° 29.878' N</u>	Longitude start: <u>157° 30.022' W</u> end: <u>157° 30.022' W</u>
Depth of water: <u>4782</u> meters	Date (GMT) <u>(213) 07/31/2008</u>
Pressure on Deck	Time: <u>11:17:38z</u>
Begin:	Start Log: <u>11:18:21z</u>
End:	In Water: <u>11:21:36z</u>
Max cast pressure: <u>500</u> dbar	Out of Water: <u>12:05:46</u>

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1 (213)	11:40:47	11:41:10	499.6	500 db	
2		11:41:30	499.7	500 db	
3	11:46:50	11:47:30	300.7	300 db	
4		11:47:50	300.3	300	
5		11:48:10	299.9	300	
6	11:51:30	11:51:50	200.5	200 db	post note = Fluoro cable
7		11:52:10	200.2	200	hooked up backward
8	11:56:13	11:56:50	45.4	45 db	s1c1 - s1c3
9		11:57:10	45.3	45	therefore fluoro
10	<u>11:57:28</u>	<u>11:57:28</u>	45.8	45	data too good
11		11:57:50	45.1	45	
12		11:58:10	45.6	45 db	
13		11:58:30	45.0	45	
14		11:58:50	44.6	45	
15		11:59:10	45.4	45	
16		11:59:30	45.5	45	
17		11:59:50	45.6	45	
18 (213)		12:00:10	45.5	45	
19		12:00:30	45.4	45	
20		12:00:50	46.3	45	
21		12:01:10	44.7	45	
22		12:01:30	44.3	45	
23		12:01:50	46.1	45	
24		12:02:10	45.1	45	(213) 12:08:41 CTD on deck

C-MORE CRUISE LOG

OPEREX

Station Data Sheet

Station Number: **1**
 Cast Number: **3**
 Operators: AF, PC

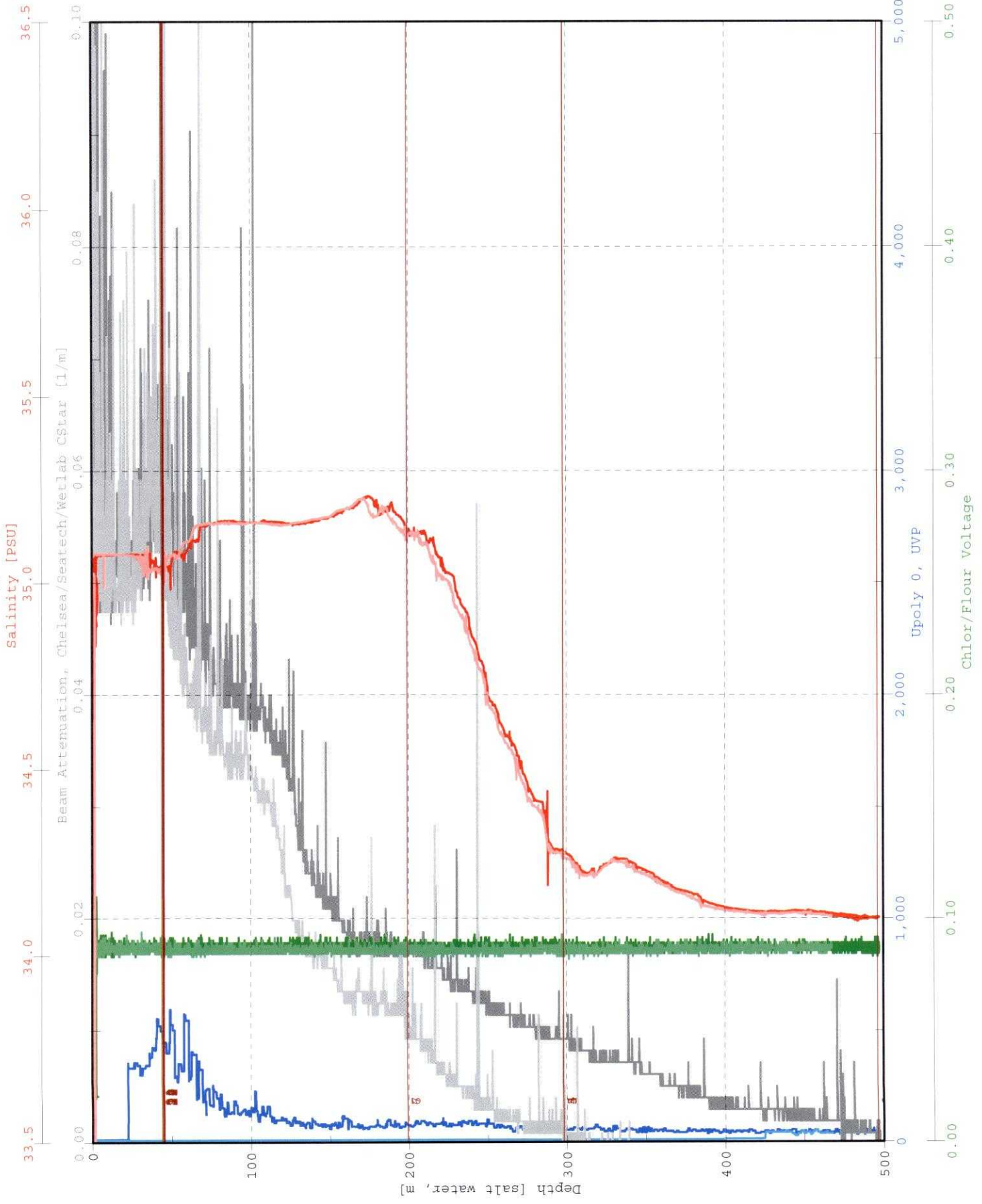
Date: **7/31/2008** (GMT)
 Time: 0915 (GMT)
 Position: 22 29.878'N 157 50.021'W

Target Depth 550

Rosette Position	Desired Depth	Mixing Exp								
1	500	X								
2	500	X								
3	300	X								
4	300	X								
5	300	X								
6	200	X								
7	200	X								
8	45	X								
9	45	X								
10	45	X								
11	45	X								
12	45	X								
13	45	X								
14	45	X								
15	45	X								
16	45	X								
17	45	X								
18	45	X								
19	45	X								
20	45	X								
21	45	X								
22	45	X								
23	45	X								
24	45	X								

NOTES:

KM0814_disp1 S1 C3



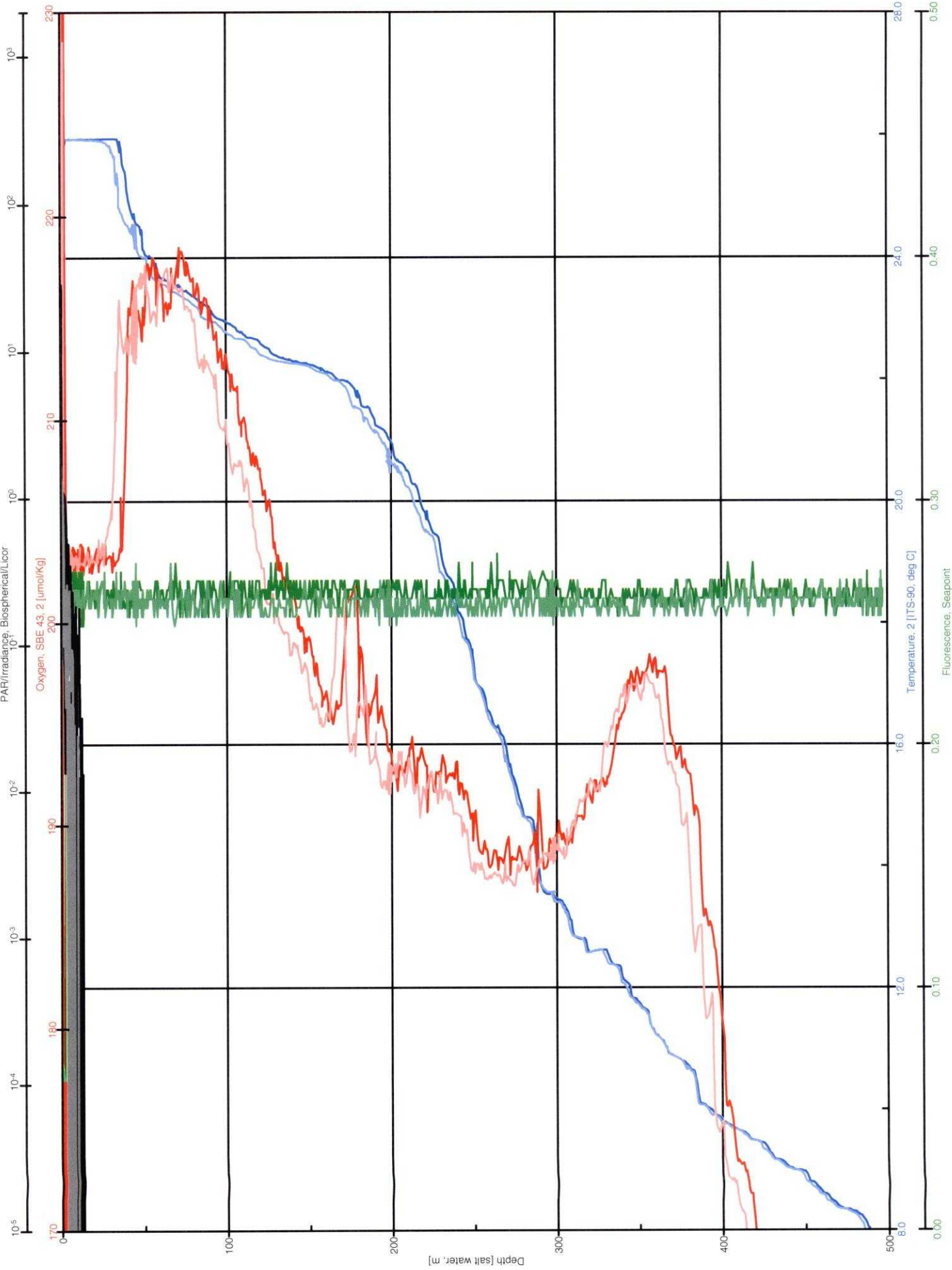
Bottle
Firing
Sequence

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

KM0814_d10p2_S1_C3

PAP/irradiance, Biospherical/Lcor

Oxygen, SBE 43, 2 [umol/Kg]



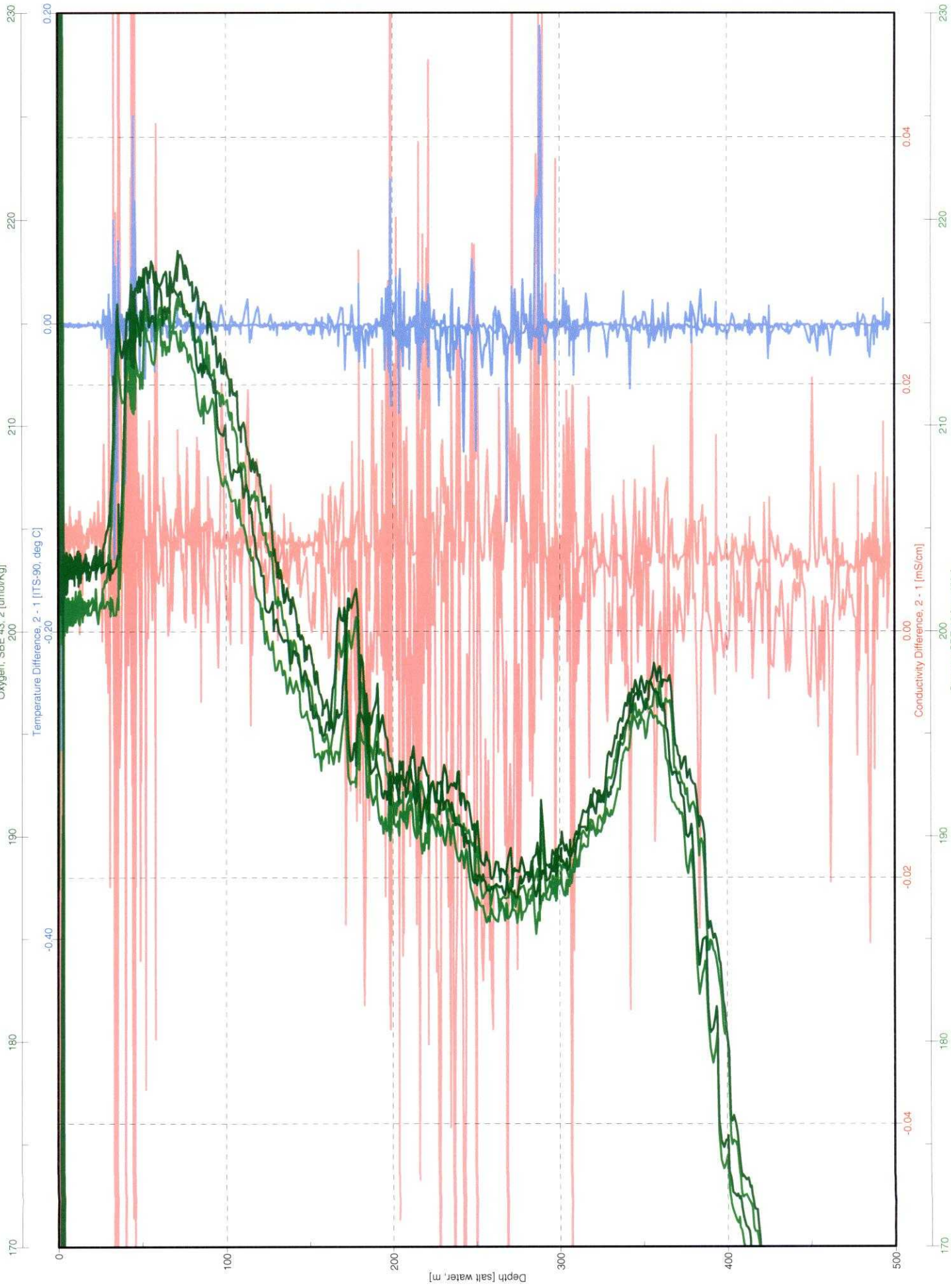
KM0814 01-3 S1 C3

Oxygen, SBE 43, 2 [umol/Kg]

Temperature Difference, 2 - 1 [ITS-90, deg C]

Conductivity Difference, 2 - 1 [mS/cm]

Oxygen, SBE 43 [umol/Kg]



km0814 OPEREX-CMORE CONSOLE LOG

Cast type <i>Core min</i>	Bottle type	SST	Operator <i>SP</i>
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- UVP Transmis.. CST-1043DR
- LSS UVP
- OTG Seapoint Fluorometer s/n *2487*
- Biospherical PAR

Time-GMT	Comments
<i>Seapoint</i>	
<i>wire 10x gain cable</i>	
<i>+ confil - wire 10x</i>	
<i>however just prior hooked cable up</i>	
<i>2517 on km0810</i>	<i>correctly</i>

Station: <i>1</i>	Cast: <i>4</i>
Latitude start: <i>22° 29.877' N</i> end: <i>22 29.876' N</i>	Longitude start: <i>157° 30.019' W</i> end: <i>157° 30.018' W</i>
Depth of water: <i>4781</i> meters	Date (GMT): <i>(213) 07/31/2008</i>
Pressure on Deck	Time: <i>13:47:43z</i>
Begin: <i>.75</i>	Start Log: <i>13:53:20</i>
End: <i>.46</i>	In Water: <i>13:55:48z</i>
Max cast pressure: <i>300</i> dbar	Out of Water: <i>14:38:01z</i>

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
<i>1 (213)</i>	<i>14:15:30</i>	<i>14:16:10</i>	<i>200.6</i>	<i>200 db</i>	<i>13:58:11 - 14:03 start; descent</i>
<i>2</i>		<i>14:16:30</i>	<i>201.4</i>	<i>200</i>	<i>(cond diff is ~ ± 0.017/8)</i>
<i>3</i>		<i>14:16:50z</i>	<i>200.6</i>	<i>200</i>	
<i>4 (213)</i>	<i>14:18:57</i>	<i>14:19:20z</i>	<i>148.6</i>	<i>150</i>	
<i>5</i>		<i>14:19:40z</i>	<i>149.6</i>	<i>150</i>	
<i>6</i>		<i>14:20:00</i>	<i>149.1</i>	<i>150 150</i>	
<i>7</i>	<i>14:21:50z</i>	<i>14:22:10</i>	<i>116.5</i>	<i>DCM</i>	<i>115 db</i>
<i>8</i>		<i>14:22:30</i>	<i>115.0</i>	<i>DCM</i>	<i>115 db</i>
<i>9</i>		<i>14:22:50</i>	<i>114.9</i>	<i>DCM</i>	<i>115 db</i>
<i>10</i>	<i>14:23 59z</i>	<i>14:24:30</i>	<i>99.6</i>	<i>100 db</i>	
<i>11</i>		<i>14:24:50z</i>	<i>99.4</i>	<i>100</i>	
<i>12</i>		<i>14:25:10</i>	<i>99.6</i>	<i>100</i>	
<i>13</i>	<i>14:26:20</i>	<i>14:26:50</i>	<i>75.2</i>	<i>75 db</i>	
<i>14</i>		<i>14:27:10</i>	<i>75.1</i>	<i>75</i>	
<i>15</i>		<i>14:27:30</i>	<i>75.0</i>	<i>75</i>	
<i>16 (213)</i>	<i>14:28:56</i>	<i>14:29:20</i>	<i>45.4</i>	<i>45 db</i>	
<i>17</i>		<i>14:29:40</i>	<i>45.4</i>	<i>45</i>	
<i>18</i>		<i>14:30:00</i>	<i>44.7</i>	<i>45</i>	
<i>19 (213)</i>	<i>14:31:10</i>	<i>14:31:50</i>	<i>24.8</i>	<i>25 db</i>	
<i>20</i>		<i>14:32:10</i>	<i>25.1</i>	<i>25</i>	
<i>21</i>		<i>14:32:30</i>	<i>24.6</i>	<i>25</i>	
<i>22 (213)</i>	<i>14:35:12</i>	<i>14:35:30</i>	<i>6.4 db</i>	<i>5 db (4m wire)</i>	
<i>23</i>		<i>14:35:50</i>	<i>6.1 db</i>	<i>5" (4m wire)</i>	<i>CTD on deck</i>
<i>24</i>		<i>14:36:10</i>	<i>6.4 db</i>	<i>5" (4m wire)</i>	<i>(213) 14:40:06z</i>

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Page 1 of 2

Station Number: **1** Date: 7/31/08 (GMT)
 Cast Number: **4** Time: ~~13:47:437~~ 13:47:437 (GMT)
 Operators: Jennifer, Ryan, Jason, Jamie, Lars, Sam Position: 22° 29.876°N, 157° 30.020W

Target Depth 550

Rosette Position	Desired Depth	Nuts	DOC	LLNut	Chl a	FCM	FRRF	Hilton	Ventouras	Kolber
1	200	X	X	X	X	X ¹²	X			0.5L
2	200								0.5L	
3	200								0.5L	
4	150	X	X	X	X	X ³⁴	X			0.5L
5	150								0.5L	
6	150								0.5L	
7	DCM	X	X	X	X	5,6 X 8	X	5L		
8	DCM									0.5L
9	DCM								0.5L	
10	100	X	X	X	X	7,8 X 8	X	5L		
11	100									0.5L
12	100								0.5L	
13	75	X	X	X	X	9,10 X 8	X	5L		
14	75									0.5L
15	75								0.5L	
16	45	X	X	X	X	11,12 X 8	X	5L		
17	45									0.5L
18	45								0.5L	
19	25	X	X	X	X	13,14 X 8	X	7L		
20	25									0.5L
21	25								0.5L	
22	5	X	X	X	X	15,16 X 8	X	5L		
23	5							5L		0.5L
24	5								0.5L	

NOTES:

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Page 2 of 2

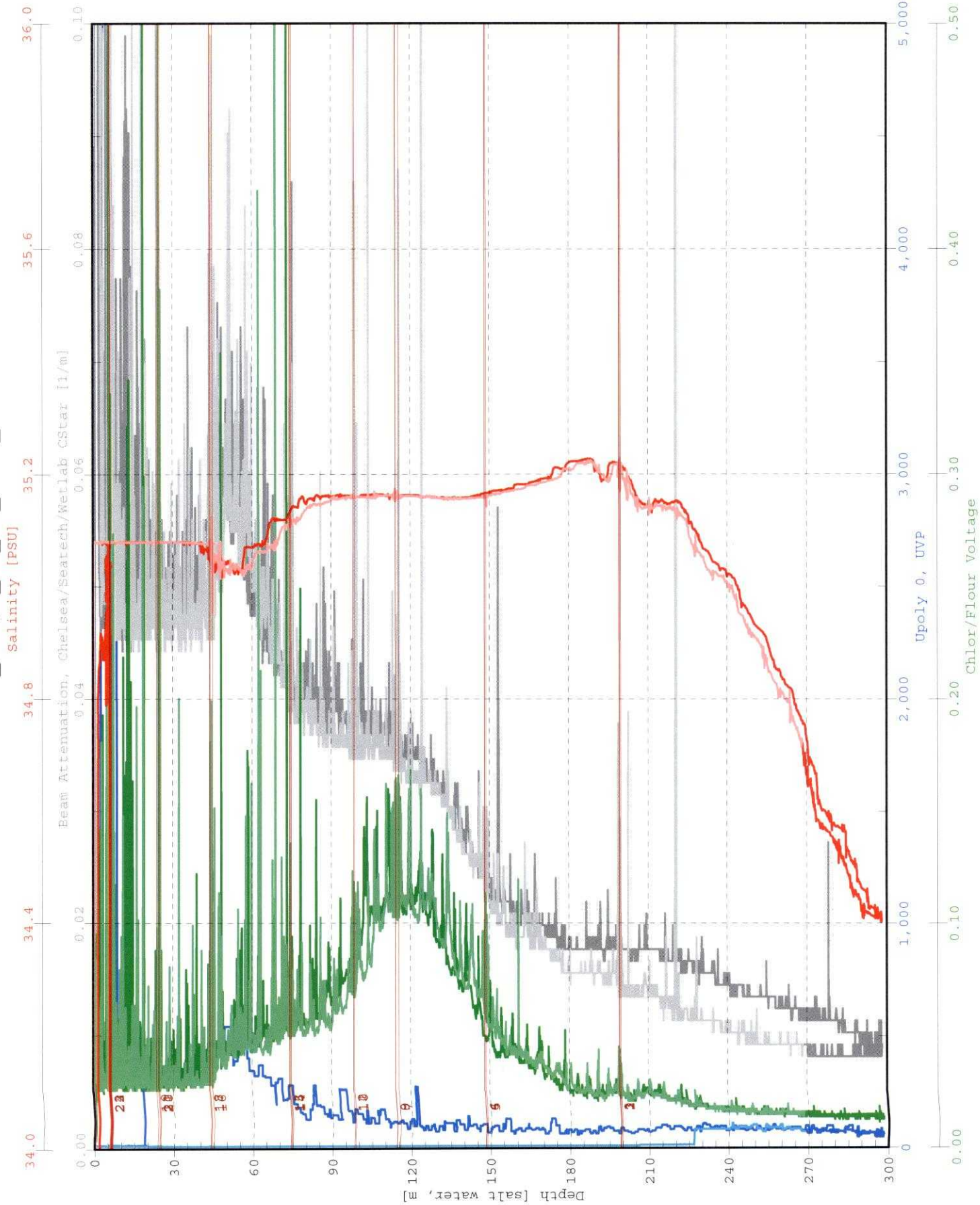
Station Number: 1
 Cast Number: 4
 Operators: Jennifer, Ryan, Jason, Jamie, Lars, Sun

Date: 7/31/08 (GMT)
 Time: ~~13:23~~ 13:47:437 (GMT)
 Position: 22° 29.876'N, 157° 30.020'W

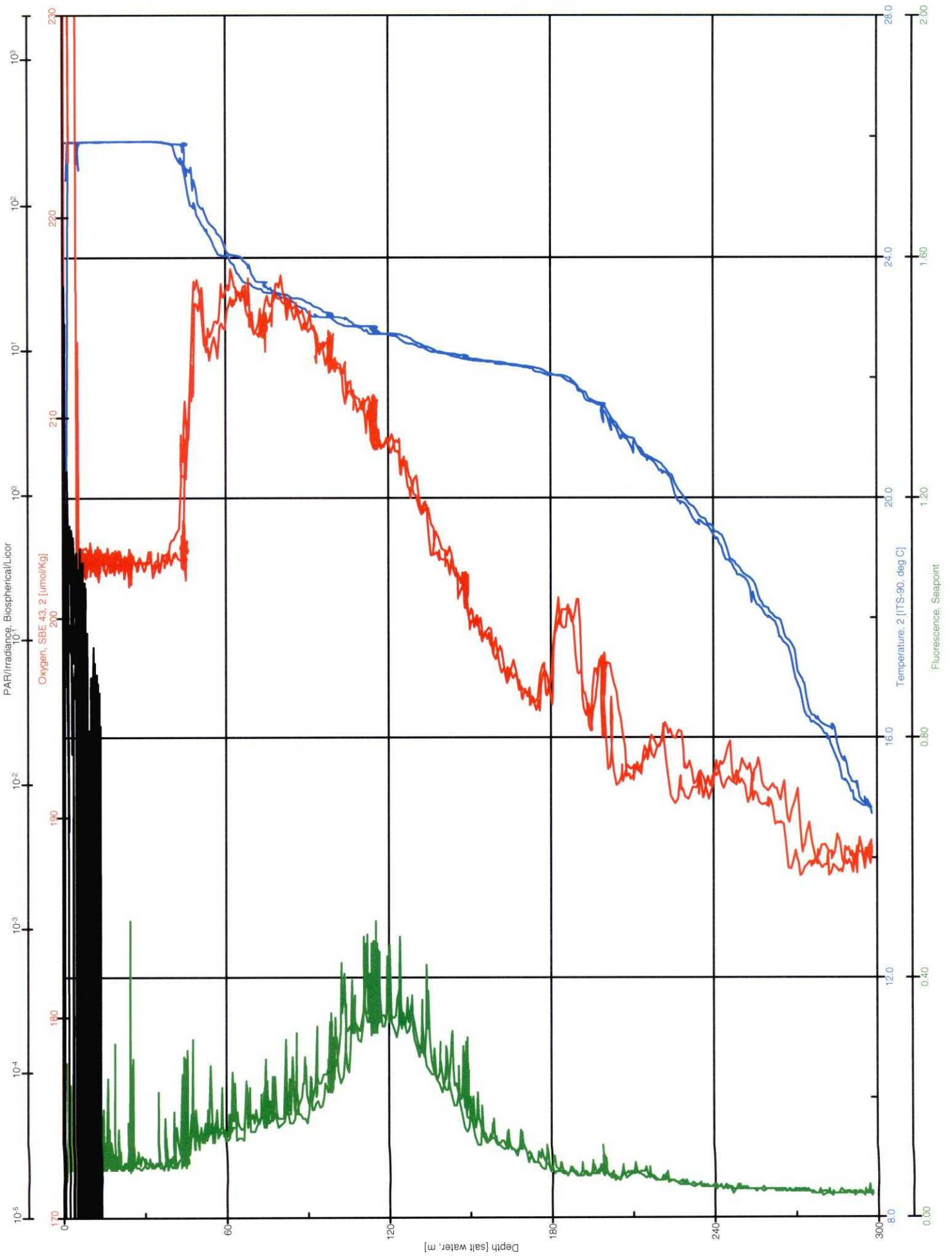
Rosette Position	Desired Depth	Duhamel	Craig	Wilson					
1	200			1.5L					
2	200	5L							
3	200		6L						
4	150			1.5L					
5	150	5L							
6	150		6L						
7	DCM			1.5L					
8	DCM	5L							
9	DCM		6L						
10	100			1.5L					
11	100	5L							
12	100		6L						
13	75			1.5L					
14	75	5L							
15	75		6L						
16	45			1.5L					
17	45	5L							
18	45		6L						
19	25			1.5L					
20	25	10L							
21	25		6L						
22	5			1.5L					
23	5	5L							
24	5		6L						

NOTES:

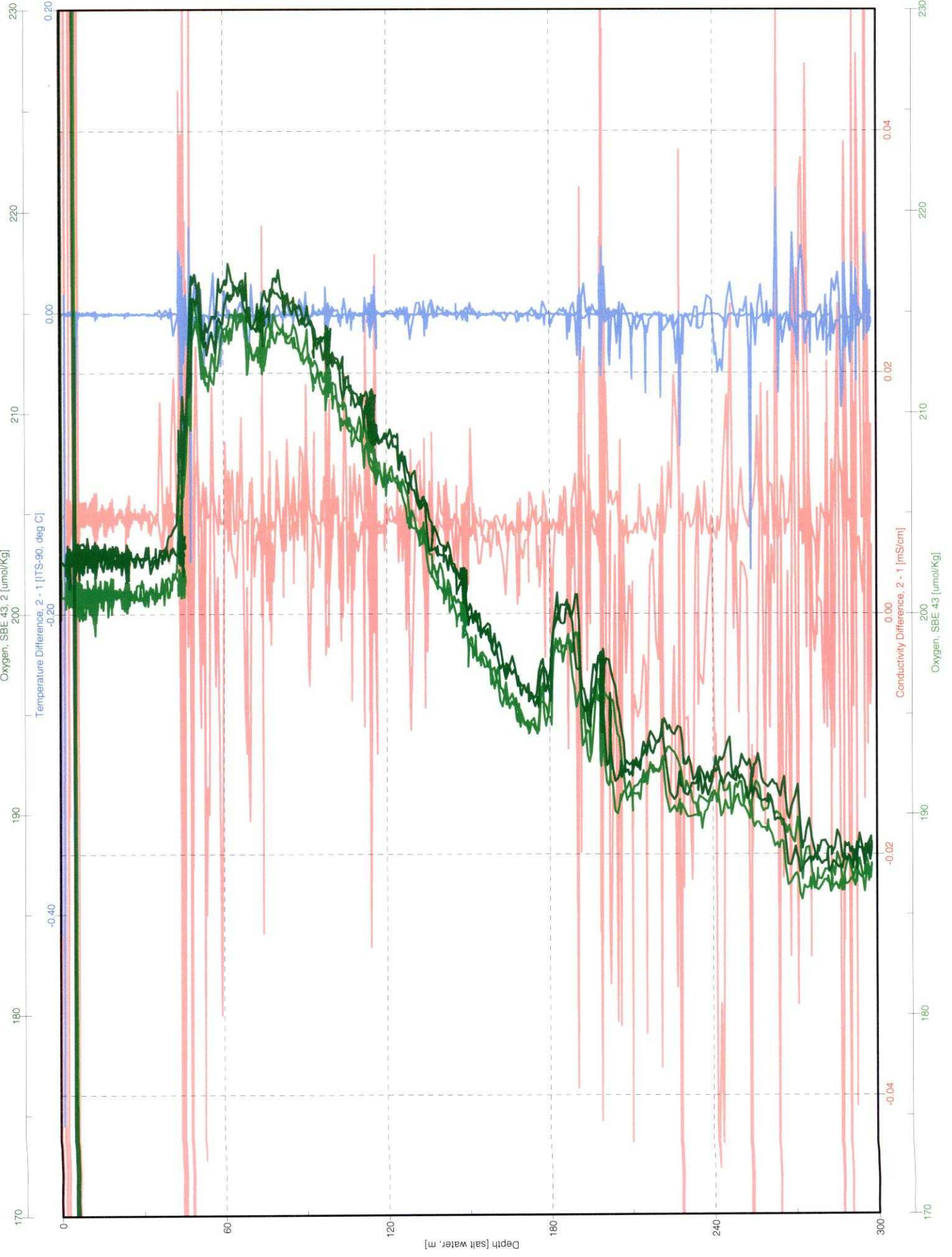
KM0814_disp1_S._J4_Core_Minimum



KM0814_disp2_S_4_Core_Minimum



KM0814 disp3_S †_Core_Minimum



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
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- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR

Time-GMT	Comments

Station: <u>1</u>	Cast: <u>5</u>
Latitude start: <u>22 29.876' N</u>	Longitude start: <u>157° 30.019' W</u>
end:	end:
Depth of water: <u>4781</u> meters	Date (GMT): <u>(213) 7 131 12008</u>
Pressure on Deck	Time: <u>15:20:00Z</u>
Begin: <u>0.675</u>	Start Log: <u>15:25:15Z</u>
End:	In Water: <u>15:28:08Z</u>
Max cast pressure: <u>300</u> dbar	Out of Water: <u>16:08:20Z</u>

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	(213) 15:46:30Z	15:46:50Z	200.4	200 db	15:30:40 @ 10m
2	(213) 15:48:55Z	15:49:20	150.1	150	
3		15:49:40	150.8	150	
4	(213) 15:51:02	15:51:30	119.9	Dcm	118
5		15:51:50	118.6	Dcm	118
6		15:52:10	118.4	Dcm	118
7	(213) 15:53:28	15:54:00	100.3	100	
8	(213) 15:55:30	15:55:50	75.3	75 db	
9		15:56:10	75.1	75	
10		15:56:30	73.5	75 db	
11	(213) 15:58:00	15:58:20	45.2	45	
12		15:58:40	45.4	45	
13		15:59:00	44.9	45	
14	(213) 16:00:20	16:00:40	25.7	25 db	
15		16:01:00	24.8	25	
16		16:01:30	25.9	25	
17		16:01:50	25.4	25	
18		16:02:10	25.1	25	
19		16:02:30	25.5	25	
20		16:02:50	24.8	25	
21		16:03:10	24.9	25	
22	(213) 16:05:12	16:05:40	6.2 db	5 db	(4m wire)
23		16:06:00	5.6 db	5 db	"
24		16:06:20	6.2	5 db	"

need seafloor s/n 146 position

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: CMORE B

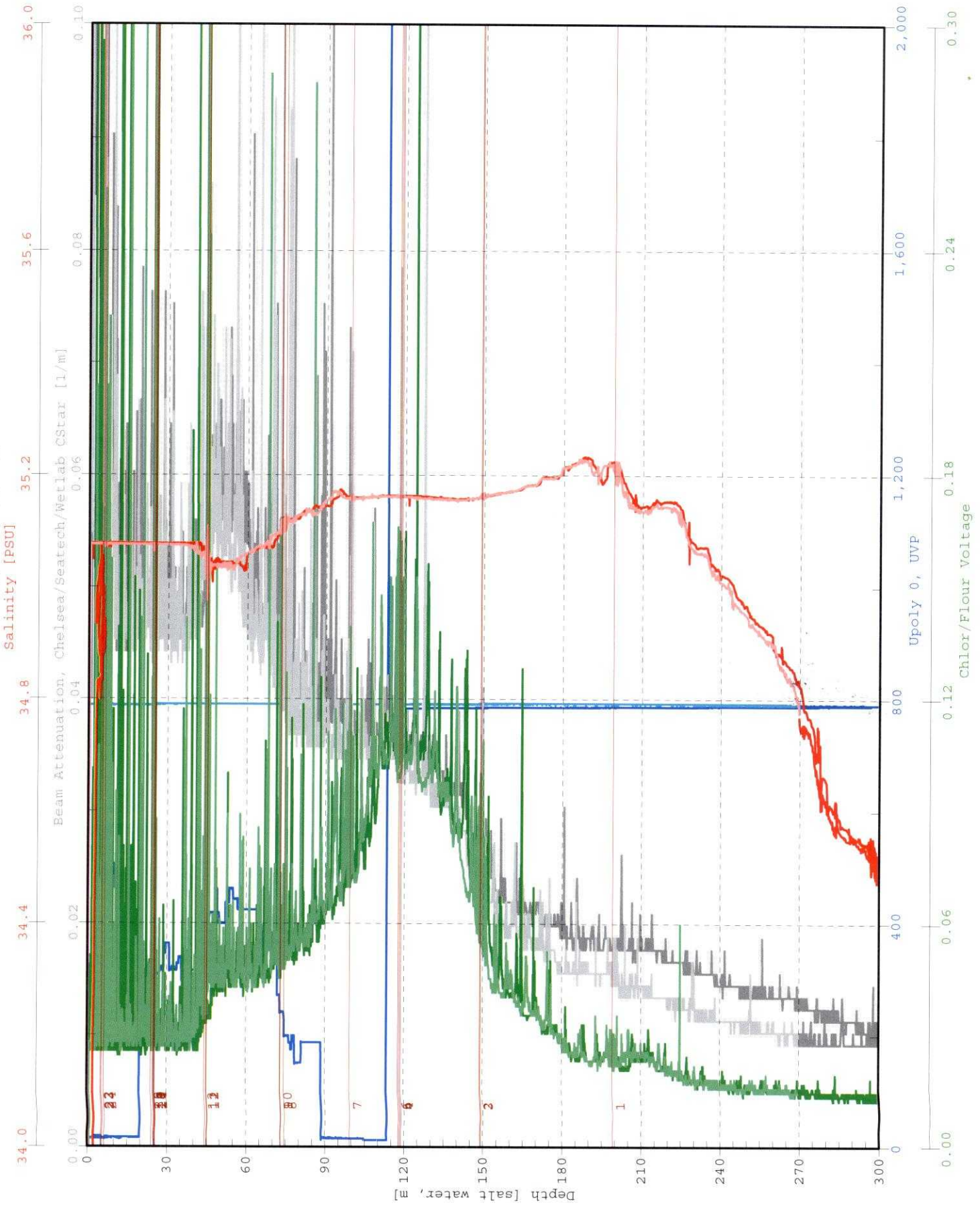
Station Number: 1
 Cast Number: 5
 Operators: Jenn, Ryan, Jason, Jamie

Date: 7/31/08 (GMT)
 Time: 15:28:087 (GMT)
 Position: 22° 29.876' N, 157° 30.019' W

Rosette Position	Desired Depth	Breitlow	Watkins	Fong	Li	Bjorkman				
1	200			4L						
2	150			4L						
3	150				10L					
4	DCM	8L		4L						
5	DCM	8L		8L						
6	DCM				10L					
7	100	8L								
8	75			4L						
9	75	8L								
10	75				10L					
11	45			4L						
12	45	8.5L								
13	45				10L					
14	25			4L		6L				
15	25		12L							
16	25		12L							
17	25		12L							
18	25		12L							
19	25		12L							
20	25	8L								
21	25				10L					
22	5			4L						
23	5	8.5L								
24	5				10L					

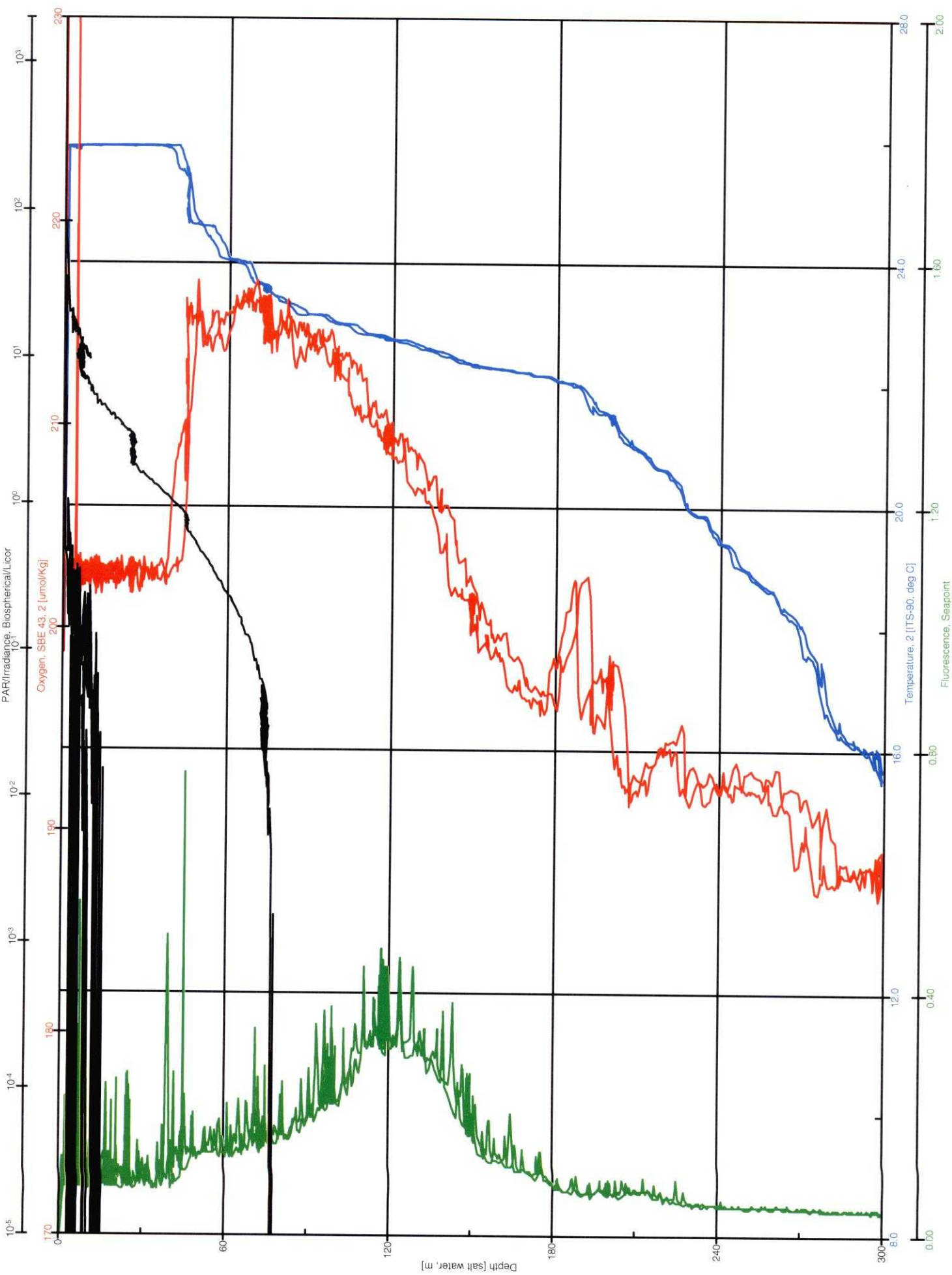
NOTES:

KM0814_a_p1_S1_C5

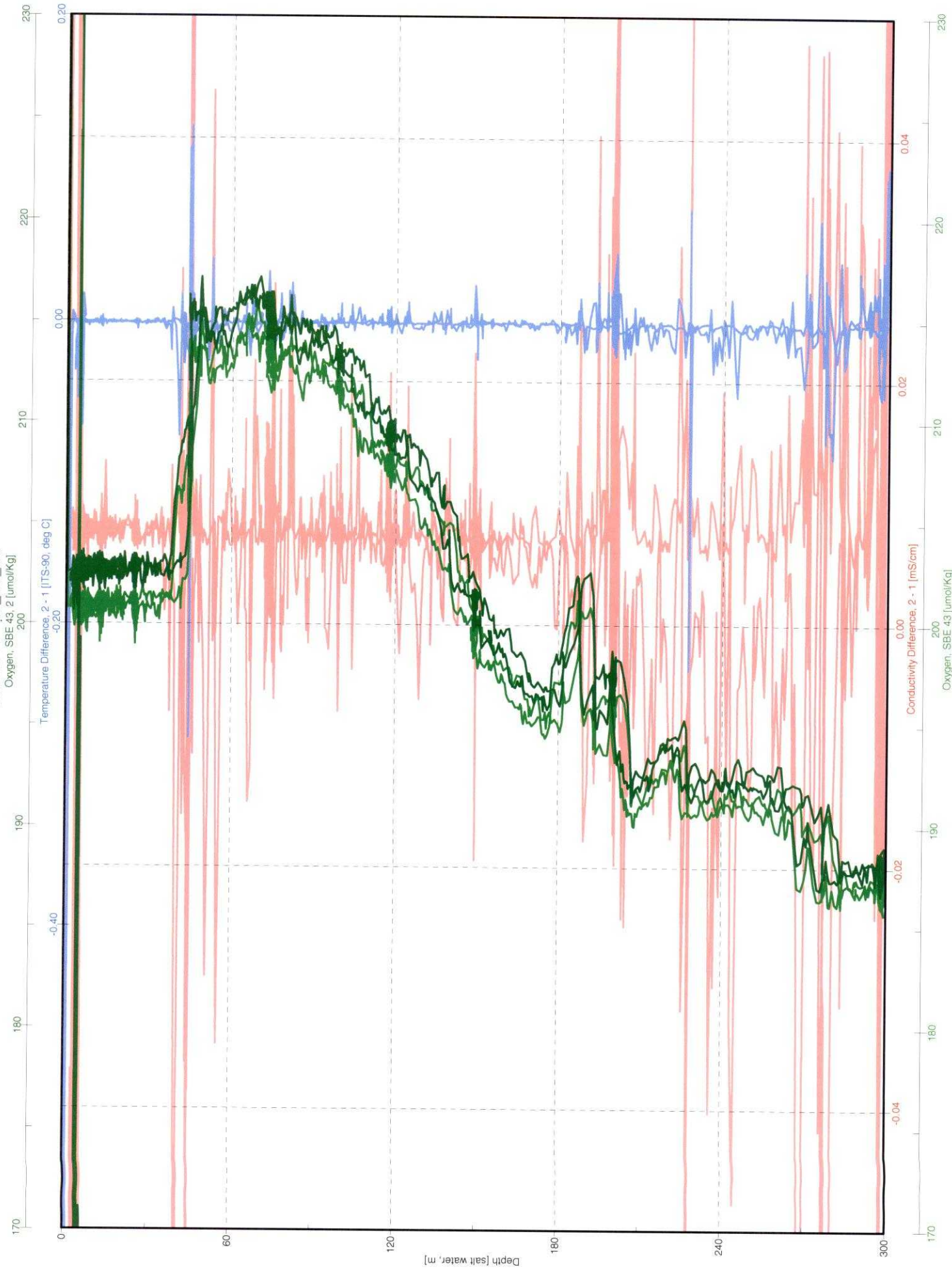


Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_ j2_S1_C5



KM0814_3_S1_C5



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator BreH
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- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR

Time-GMT	Comments

Station: 1	Cast: 6
Latitude 22° 30.018' N start:	Longitude 157° 30.033' W start:
end: 22° 30.019' N	end: 157° 30.034' W
Depth of water: 1775 meters	Date (GMT): (213) 07 / 31 / 2008
Pressure on Deck	Time: 17:15:00
Begin: 0.7500 db	Start Log: 17:17:00
End: 0.4900 db	In Water: 17:18:15
Max cast pressure: 80 dbar	Out of Water: 17:43:00

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	17:27:15	17:27:30	75.5	75	
2		17:27:45	75.6	75	
3		17:28:00	76.0	75	
4		17:28:15	76.4	75	
5		17:28:30	75.9	75	
6		17:28:45	77.8	75	
7		17:29:00	75.6	75	
8		17:29:15	75.6	75	
9		17:29:30	75.7	75	
10	↓	17:29:45	75.9	75	
11	17:36:30	17:36:45	5.3	5	2.5 m wire out
12		17:37:00	5.2	5	
13		17:37:15	4.6	5	
14		17:37:30	5.6	5	
15		17:37:45	5.4	5	
16		17:38:00	4.5	5	
17		17:38:15	5.2	5	
18		17:38:30	4.0	5	
19		17:38:45	4.5	5	
20		17:39:00	5.4	5	
21		17:39:15	5.1	5	
22		17:39:30	4.9	5	
23		17:39:45	5.4	5	
24	↓	17:40:00	5.7	5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet

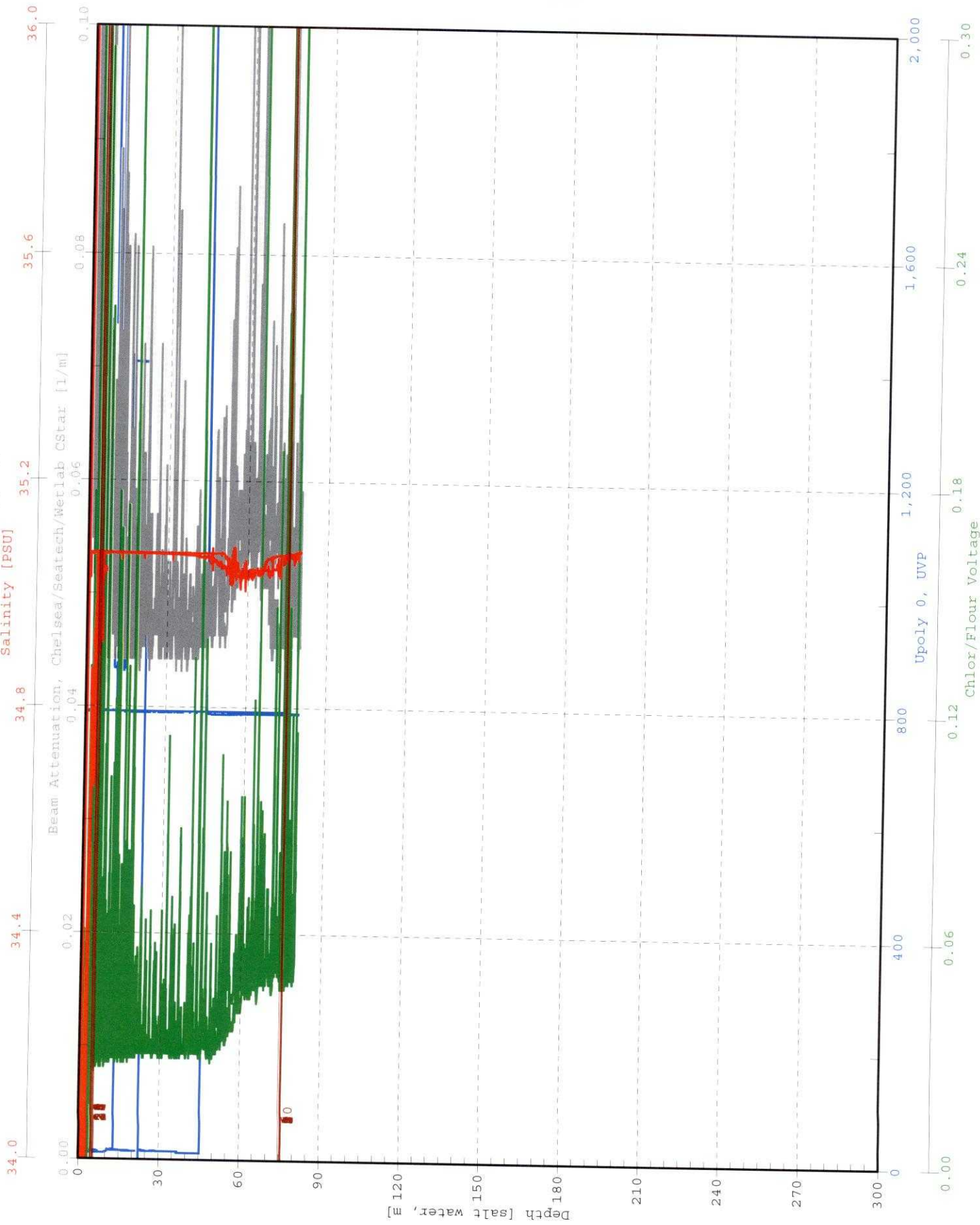
Station Number: 1
 Cast Number: 6
 Operators: Jenn, Jamik, Jason, Lars, Donn, Mar

Date: 7/31/2008 (GMT)
 Time: 17:15 (GMT)
 Position: 22° 30.018'N, 157° 30.033'W

Rosette Position	Desired Depth	Becker	Ventouras	Becker						
1	75		X							
2	75		X							
3	75		X							
4	75		X							
5	75		X							
6	75		X							
7	75		X							
8	75		X							
9	75		X							
10	75		X							
11	5	X								
12	5	X								
13	5	X								
14	5	X								
15	5	X								
16	5	X								
17	5	X								
18	5	X								
19	5	X								
20	5	X								
21	5	X X								
22	5	X X								
23	5	X X								
24	5	X X								

NOTES:

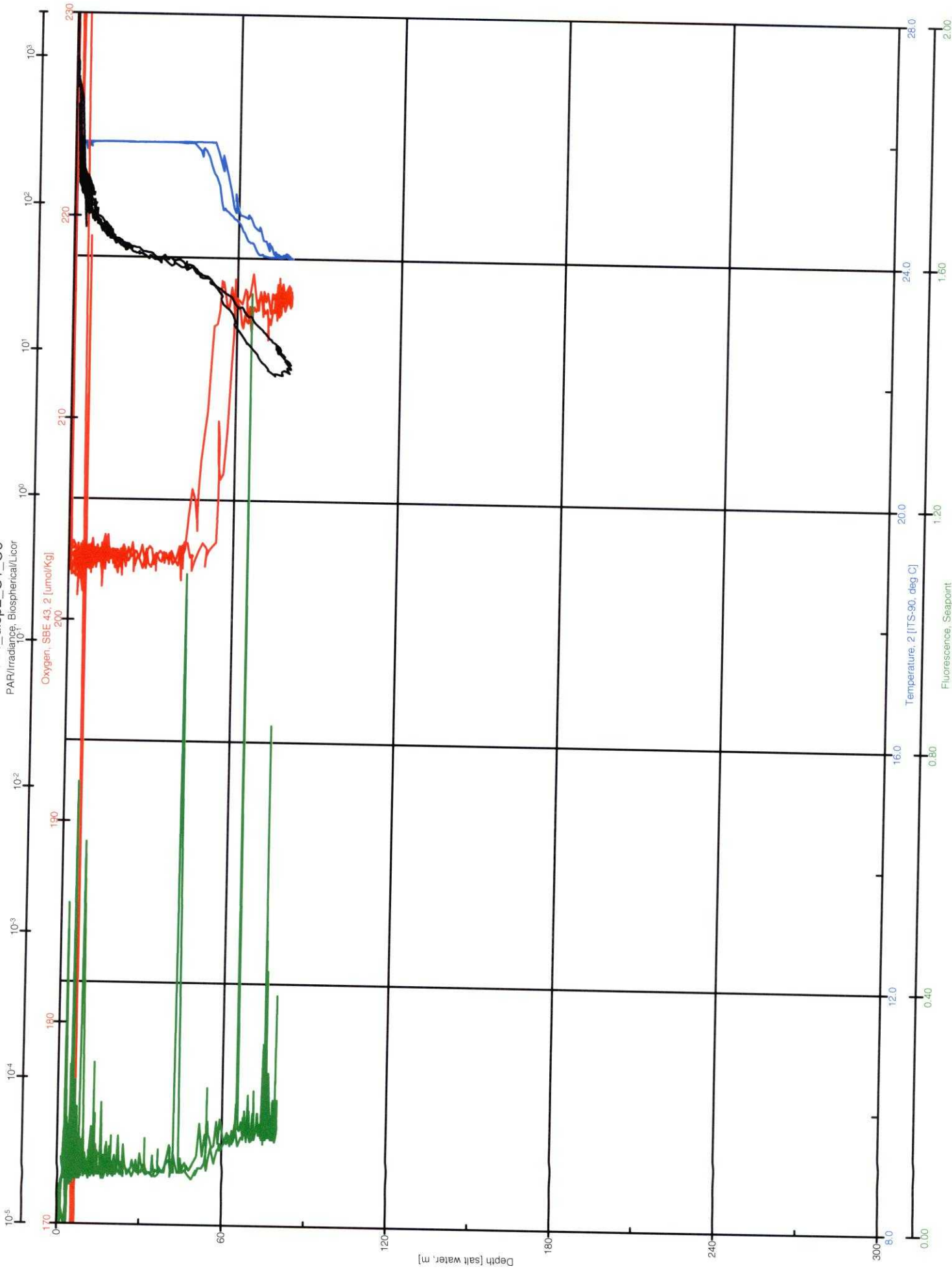
KM0814_disp1_S1_C6



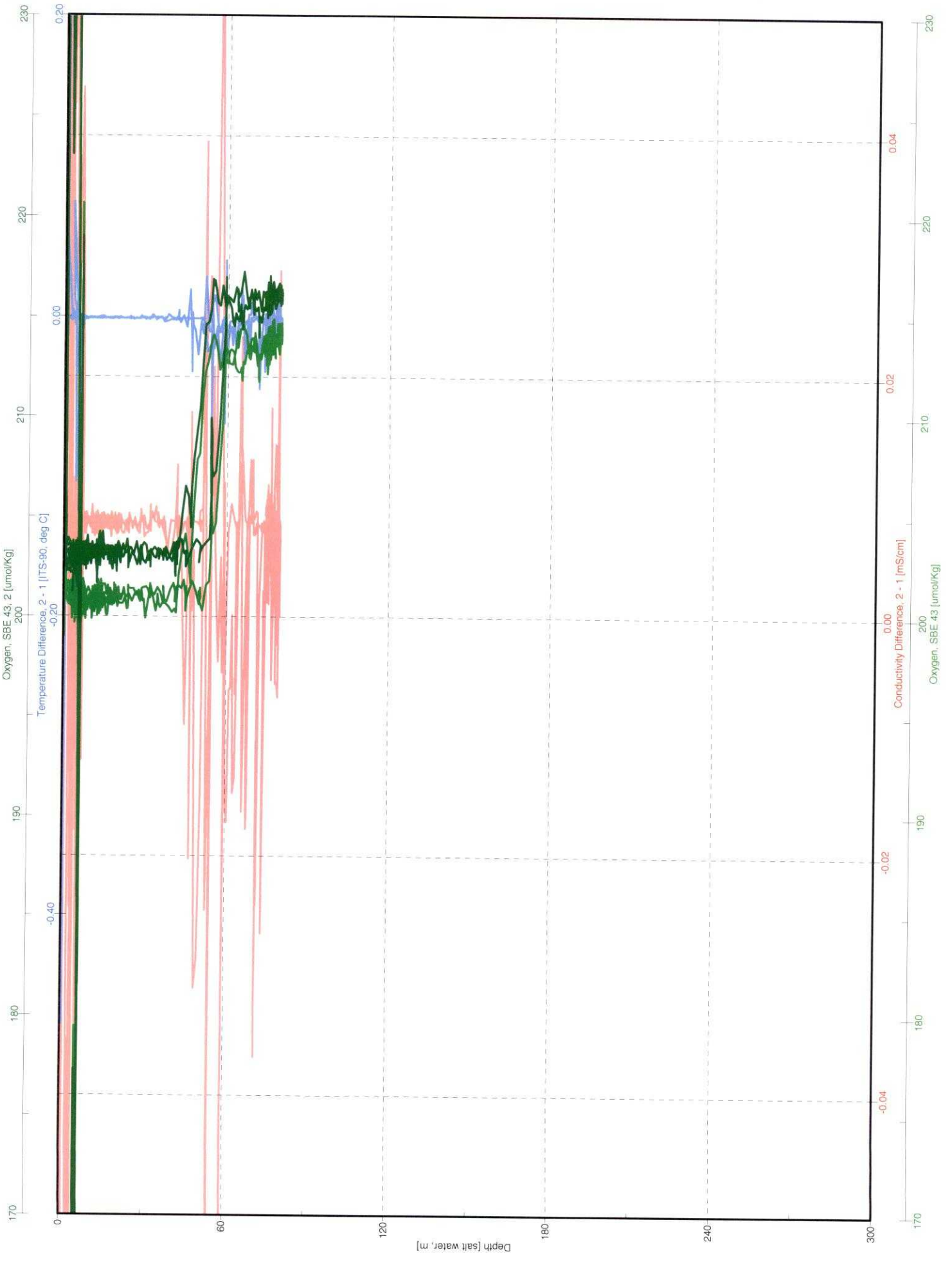
Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_d11p2_S1_C6

PAR/Irradiance, Biospherical/Licor



KM0814 dL_r_j_S1_C6



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator Brett
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- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n _____
- Biospherical PAR

Time-GMT	Comments

Station: 1	Cast: 7
Latitude start: 22° 30.019' N end: 22° 30.019' N	Longitude start: 157° 30.034' W end: 157° 30.033' W
Depth of water: 4775 meters	Date (GMT): (213) 07 / 31 / 2008
Pressure on Deck	Time: 18:20:00
Begin: 0.75 db	Start Log: 18:22:00
End: 0.50 db	In Water: 18:24:30
Max cast pressure: 80 dbar	Out of Water: 18:50:00

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	18:35:45	18:34:00 ³⁶	46.4	45	
2	"	18:34:15 ³⁶	47.0	45	
3	18:38:00	18:38:30	31.2	30	
4		18:38:45	30.8	30	
5		18:39:00	32.0	30	
6		18:39:15	31.2	30	
7		18:39:30	31.0	30	
8		18:39:45	31.7	30	
9		18:40:00	30.9	30	
10		18:40:15	31.3	30	
11		18:40:30	30.8	30	
12		18:40:45	31.4	30	
13		18:41:00	31.8	30	
14		18:41:15	31.5	30	
15		18:41:30	30.5	30	
16		18:41:45	31.5	30	
17		18:42:00	31.0	30	
18		18:42:15	31.2	30	
19		18:42:30	30.7	30	
20		18:42:45	31.6	30	
21	18:45:15	18:45:30	15.2	15	
22	"	18:45:45	15.6	15	
23	18:47:00	18:47:15	5.8	5	
24	"	18:47:30	5.5	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 1
Cast Number: 7

Date: 7/31/2008
Time: 18:20
Position: 22° 30.019'N 157° 30.039'W

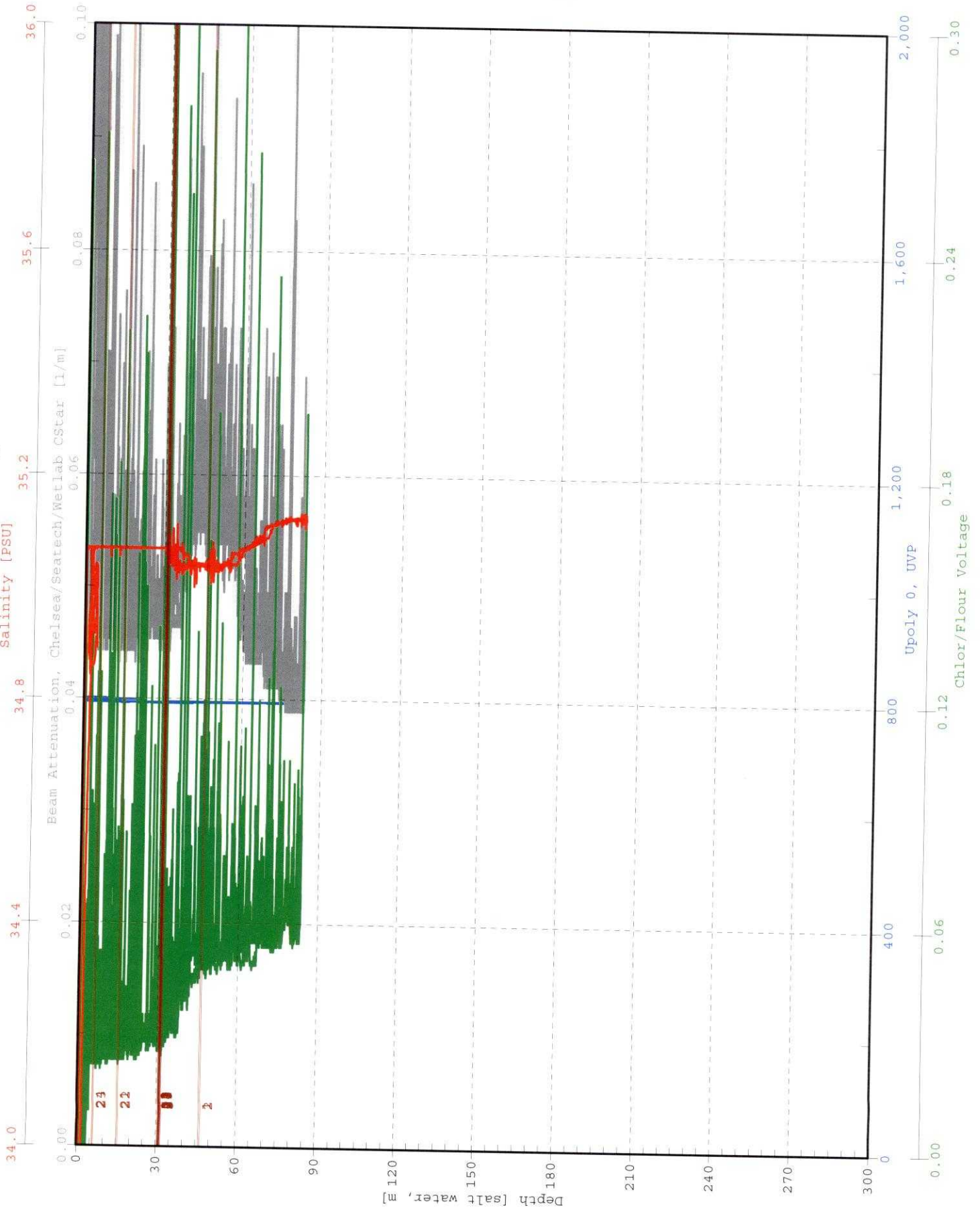
Operators: Jamie, Jason, Jenn, Ryan

Target Depth 80m

Rosette Position	Desired Depth	Ryan Jason						
1	45	x						
2	45	x						
3	30	x						
4	30	x						
5	30	x						
6	30	x						
7	30	x						
8	30	x						
9	30	x						
10	30	x						
11	30	x						
12	30	x						
13	30	x						
14	30	x						
15	30	x						
16	30	x						
17	30	x						
18	30	x						
19	30	x						
20	30	x						
21	15	x						
22	15	x						
23	5	x						
24	5	x						

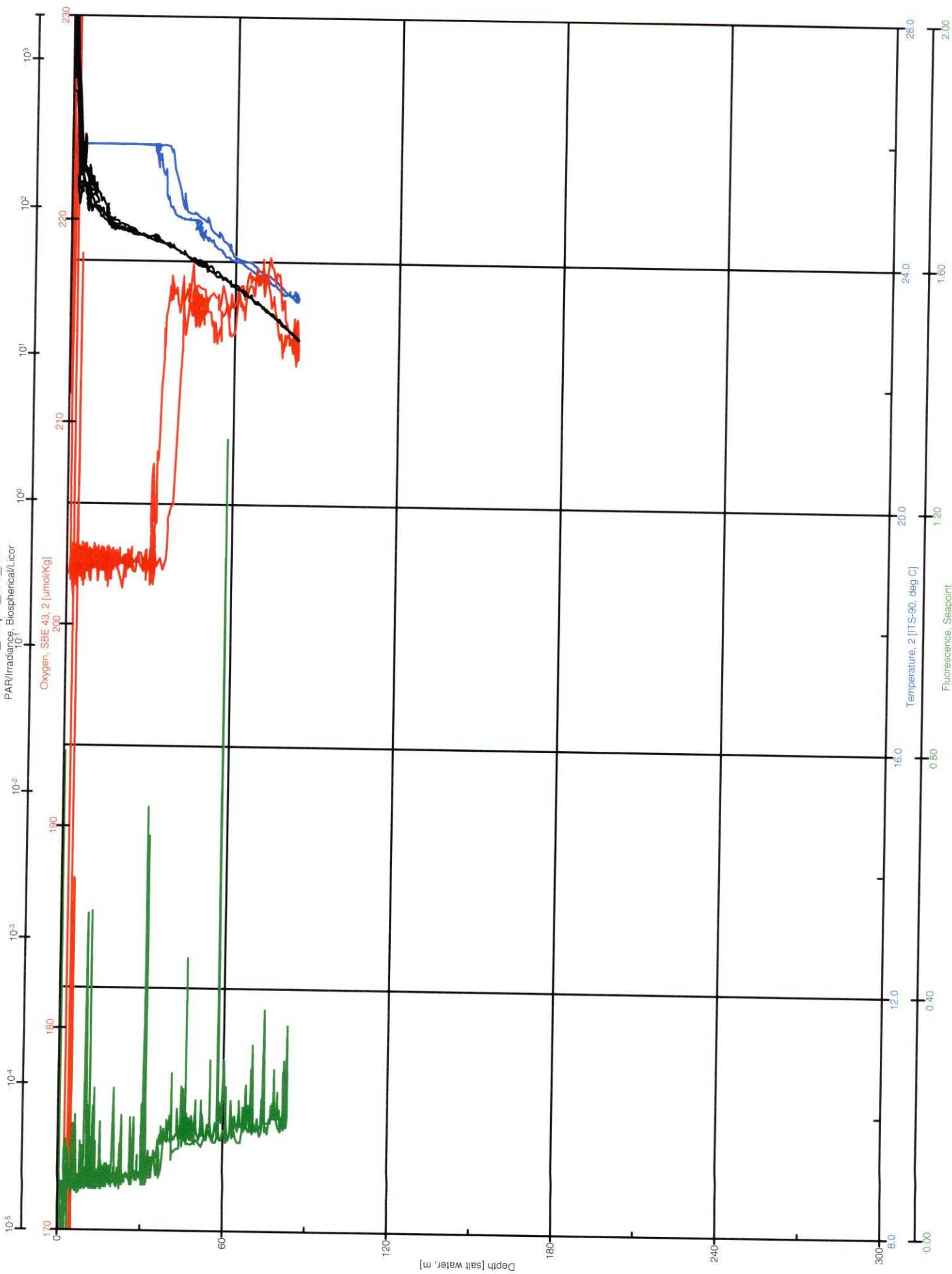
NOTES:

KM0814_disp1_S1_C7

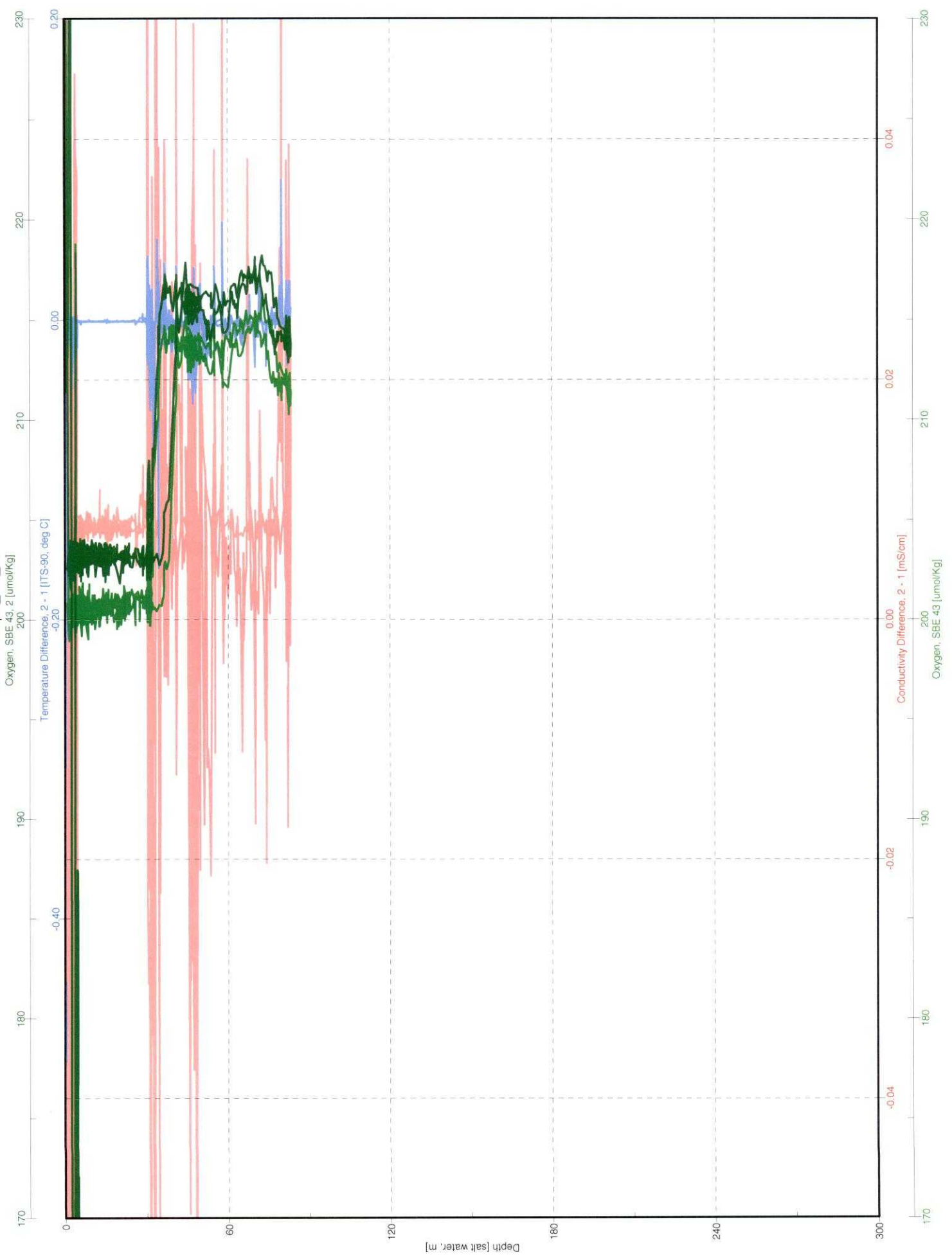


Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_0102_S1_C7



KM0814 d..._S1_C7



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator SP
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- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR

Time-GMT	Comments

Station: <u>2</u>	Cast: <u>1</u>
Latitude start: <u>22° 23.936' N</u> end: <u>22 23.935' N</u>	Longitude start: <u>156 40.100' W</u> end: <u>156 40.100' W</u>
Depth of water: <u>4695</u> meters	Date (GMT): <u>(214) 08/01/2008</u>
Pressure on Deck	Time: <u>08:32Z</u>
Begin:	Start Log: <u>(214) 08:42:30Z</u>
End: <u>.467</u>	In Water: <u>08:44:35Z</u>
Max cast pressure: <u>300.5</u> dbar	Out of Water: <u>09:26:11Z</u>

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	<u>(214) 08:59:15</u>	<u>08:59:50</u>	<u>300.3</u>	<u>300 db</u>	<u>:48: Con 2-1 [5/m]</u>
2		<u>09:00:10</u>	<u>300.4</u>	<u>300</u>	<u>@10 m cond diff 0.0007876</u>
3	<u>(214) 09:02:55</u>	<u>09:03:30</u>	<u>199.6</u>	<u>200</u>	<u>Cond 2 = 2541</u>
4		<u>09:03:50</u>	<u>199.3</u>	<u>200</u>	<u>Con 1 = 2725</u>
5	<u>09:06:00</u>	<u>09:06:30</u>	<u>148.6</u>	<u>150</u>	
6		<u>09:06:50</u>	<u>148.9</u>	<u>150</u>	
7	<u>(214) 09:09:09</u>	<u>09:09:30</u>	<u>127.2</u>	<u>DCM</u>	<u>129?</u>
8		<u>09:09:50</u>	<u>128.3</u>	<u>DCM</u>	<u>129 db</u>
9		<u>09:10:10</u>	<u>128.7</u>	<u>DCM</u>	<u>129 db</u>
10	<u>09:11:54</u>	<u>09:12:30</u>	<u>99.4</u>	<u>100</u>	
11		<u>09:12:50</u>	<u>99.6</u>	<u>100</u>	
12		<u>09:13:10</u>	<u>99.1</u>	<u>100</u>	
13	<u>(214) 09:14:30</u>	<u>09:14:50</u>	<u>73.6</u>	<u>75</u>	
14		<u>09:15:10</u>	<u>73.8</u>	<u>75</u>	
15		<u>09:15:30</u>	<u>74.0</u>	<u>75</u>	
16	<u>(214) 09:16:53</u>	<u>09:17:10</u>	<u>43.7</u>	<u>45</u>	
17		<u>09:17:30</u>	<u>44.4</u>	<u>45</u>	
18		<u>09:17:50</u>	<u>44.2</u>	<u>45</u>	
19	<u>(214) 09:19:20</u>	<u>09:19:50</u>	<u>26.5</u>	<u>25 db</u>	
20		<u>09:20:10</u>	<u>26.3</u>	<u>25 db</u>	
21		<u>09:20:30</u>	<u>25.6</u>	<u>25 db</u>	
22	<u>(214) 09:23:10</u>	<u>09:23:30</u>	<u>6.6</u>	<u>5 db</u>	
23		<u>09:23:50</u>	<u>5.3</u>	<u>5 db</u>	
24		<u>09:24:10</u>	<u>6.0</u>	<u>5 db</u>	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 2

Date: (214) 1 Aug 2008 (GMT)

Cast Number: 1

Time: 08:32z (GMT)

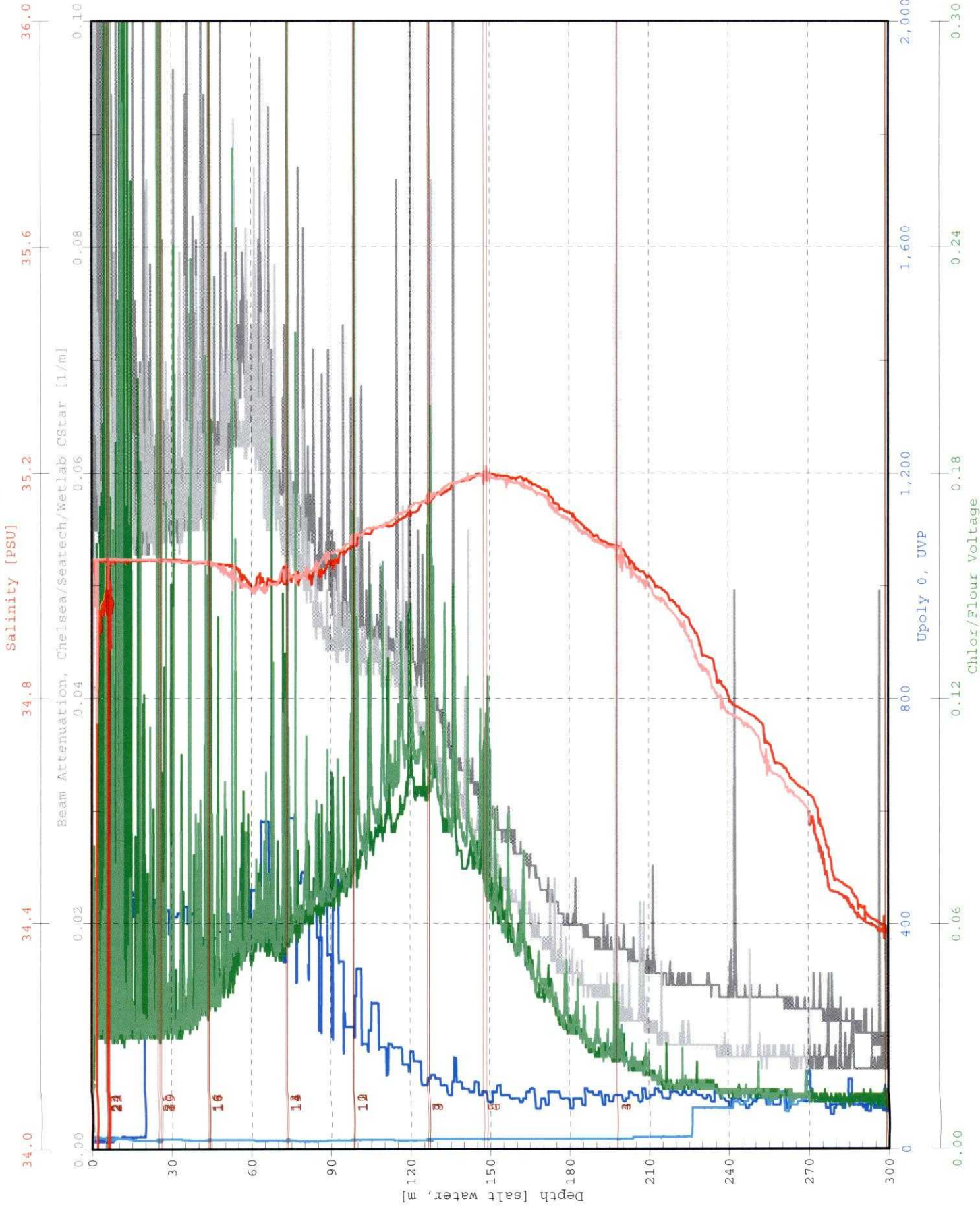
Operators: SP, AFSW, L, PC

Position: 22° 23.936' N 156° 40.100' W

Rosette Position	Desired Depth	Hilton	Centoura s	Kolber	Dynamal	Craft	Wilson	mixing		
1	300							10L		
2	300							10L		
3	200			0.5	FL		1.5L			
4	200		10 ✓			GL				
5	150			0.5L	FL	GL	1.5L			
6	150		GL			GL	1.5L			
7	DCM	FL					1.5L			
8	DCM			0.5L	FL					
9	DCM		10 ✓			GL				
10	100	FL					1.5L			
11	100			0.5L	FL					
12	100		GL			GL	1.5L			
13	75			8L			1.5L			
14	75	FL			FL					
15	75		GL			GL	1.5L			
16	45	FL					1.5L			
17	45			0.5L	FL					
18	45		10 ✓			GL				
19	25	FL					1.5L			
20	25			0.5L	FL					
21	25		GL			GL	1.5L			
22	5	FL					1.5L			
23	5	FL		0.5L	FL					
24	5		10 ✓			GL				

NOTES:

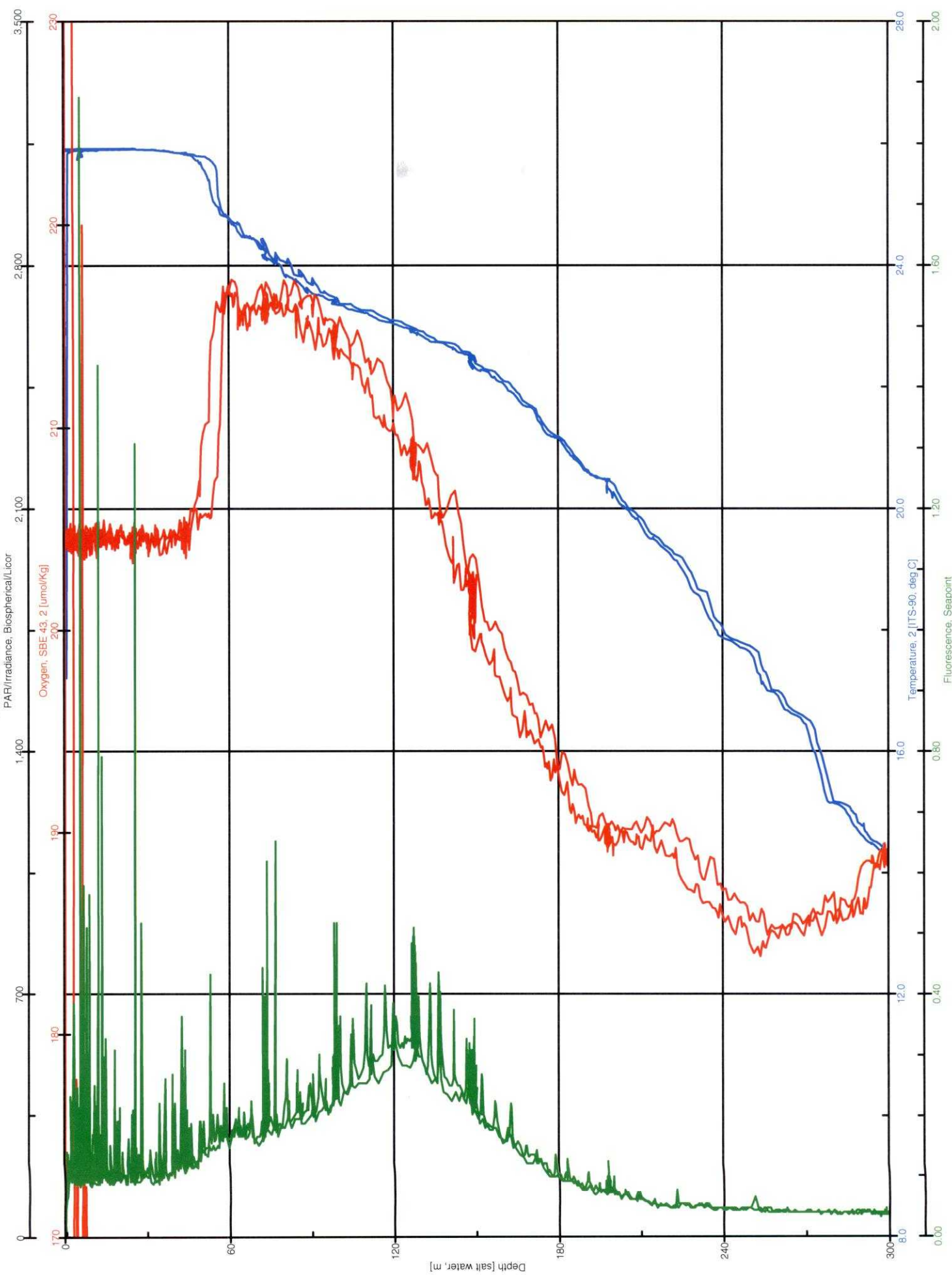
KM0814_0_p1_S2_C1



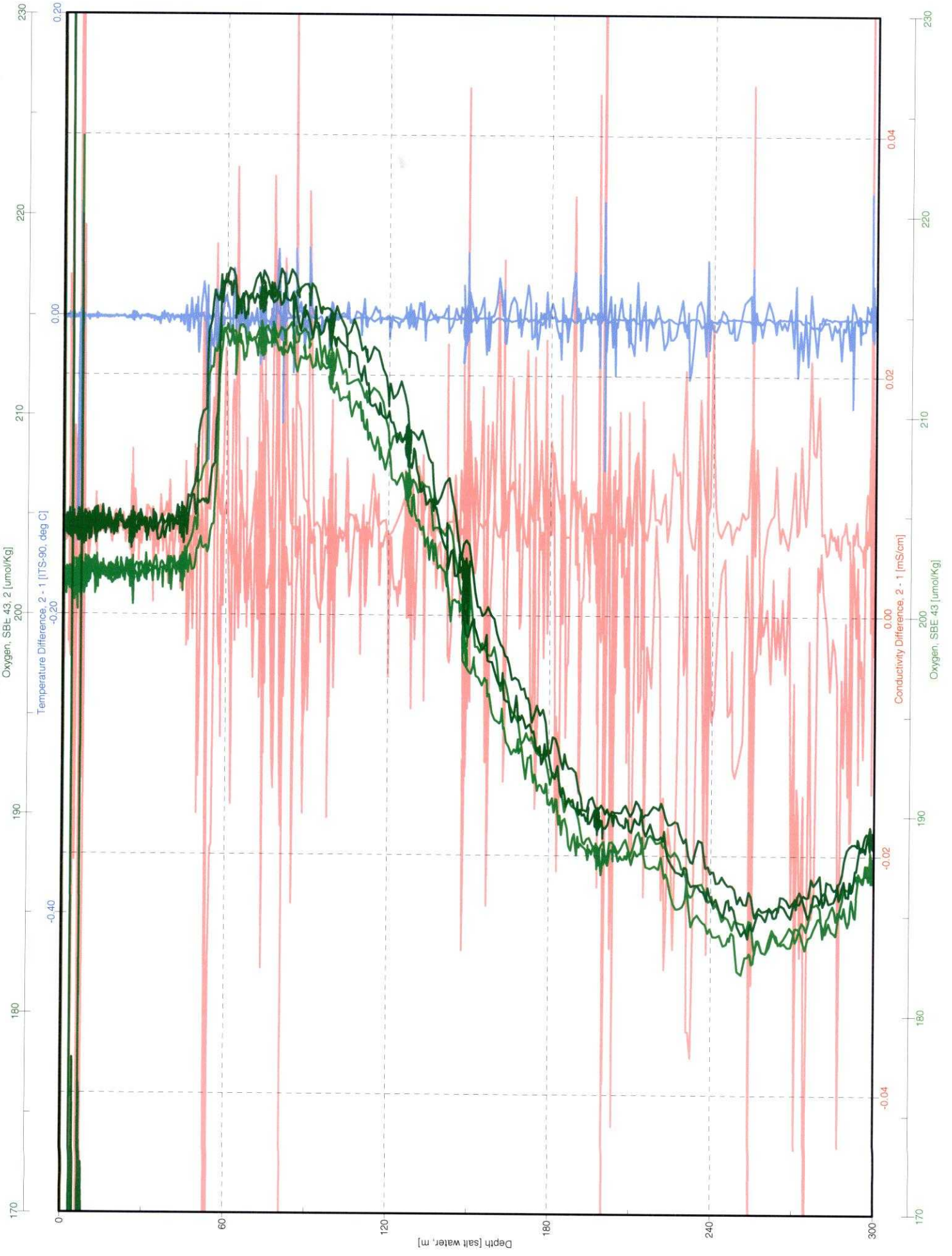
Bottle Firing Sequence
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

KM0814_2_S2_C1

PAR/Irradiance, Biospherical/Licor



KM0814_3_S2_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
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- UVP Transmis.. CST-1043DR
- LSS UVP
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR

Time-GMT	Comments

Station: <u>2</u>	Cast: <u>2</u>
Latitude start: <u>22° 23.937' N</u> end: <u>23.938' N</u>	Longitude start: <u>156° 40.101' W</u> end: <u>156° 40.103' W</u>
Depth of water: <u>4697</u> meters	Date (GMT): <u>(214) 08 / 01 / 2008</u>
Pressure on Deck	Time: <u>10:34z</u>
Begin: <u>φ.509-φ.651</u>	Start Log: <u>10:38:46</u>
End: <u>φ.489-.53</u>	In Water: <u>10:40z</u>
Max cast pressure: <u>80</u> dbar	Out of Water: <u>11:07:15z</u>

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
					<u>C2-C1 - looks Good!</u>
<u>1 (214)</u>	<u>10:54:10</u>	<u>10:54:50</u>	<u>26.1</u>	<u>25 db</u>	<u>φ.0003 [σ_t/m] ,00029</u>
<u>2</u>		<u>10:55:10</u>	<u>26.7</u>	<u>25 "</u>	<u>10:43:15z @ 10m</u>
<u>3</u>		<u>10:55:30</u>	<u>25.2</u>	<u>25 "</u>	<u>LSS stuck @ 33.000</u>
<u>4</u>		<u>10:55:50</u>	<u>25.4</u>	<u>25 "</u>	<u>80 dbar for UVP to Turn off</u>
<u>5</u>		<u>10:56:10</u>	<u>25.8</u>	<u>25 "</u>	
<u>6</u>		<u>10:56:30</u>	<u>26.4</u>	<u>25 "</u>	
<u>7</u>		<u>10:56:50</u>	<u>25.3</u>	<u>25 "</u>	
<u>8</u>		<u>10:57:10</u>	<u>25.5</u>	<u>25 "</u>	
<u>9</u>		<u>10:57:30</u>	<u>25.5</u>	<u>25 "</u>	
<u>10</u>		<u>10:57:50</u>	<u>26.φ</u>	<u>25</u>	
<u>11</u>		<u>10:58:10</u>	<u>26.5</u>	<u>25</u>	
<u>12</u>		<u>10:58:30</u>	<u>25.6</u>	<u>25</u>	
<u>13</u>		<u>10:58:50</u>	<u>25.3</u>	<u>25</u>	
<u>14</u>		<u>10:59:10</u>	<u>25.9</u>	<u>25</u>	
<u>15</u>		<u>10:59:30</u>	<u>25.9</u>	<u>25</u>	
<u>16</u>		<u>10:59:50</u>	<u>25.9</u>	<u>25</u>	
<u>17</u>		<u>11:00:10</u>	<u>26.1</u>	<u>25</u>	
<u>18</u>		<u>11:00:30</u>	<u>25.3</u>	<u>25</u>	
<u>19</u>		<u>11:00:50</u>	<u>25.9</u>	<u>25</u>	
<u>20</u>		<u>11:01:10</u>	<u>26.1</u>	<u>25</u>	
<u>21</u>		<u>11:01:30</u>	<u>26.φ</u>	<u>25</u>	
<u>22</u>		<u>11:01:50</u>	<u>25.5</u>	<u>25</u>	
<u>23</u>		<u>11:02:10</u>	<u>26.1</u>	<u>25</u>	
<u>24</u>		<u>11:02:30</u>	<u>25.8</u>	<u>25</u>	<u>11:08.26z CTN on Deck</u>

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

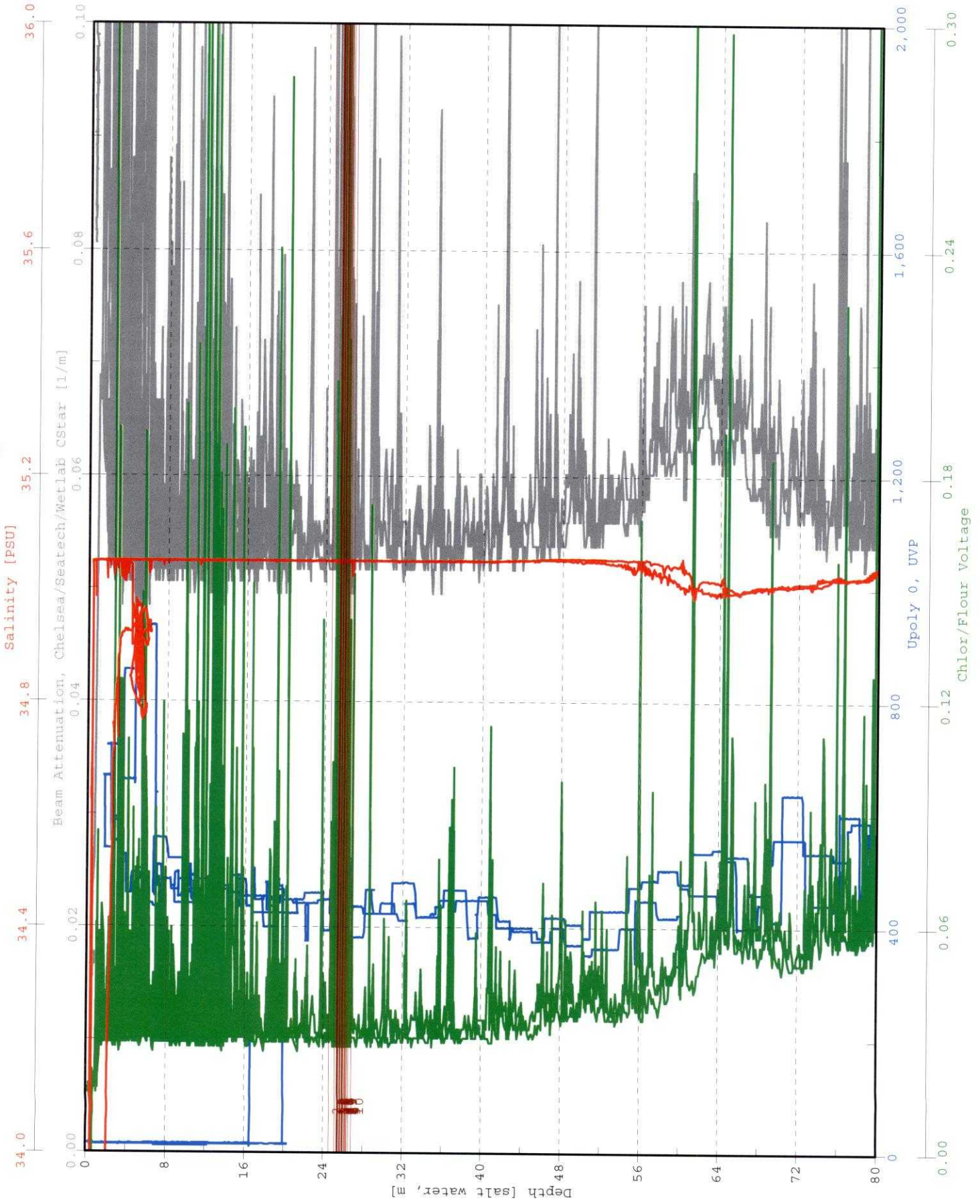
Station Number: 2 Date: 8/1/2008 (214) (GMT)
 Cast Number: 2 Time: 10:40 (0:40 HST) (GMT)
 Operators: SP, AF, SD, KW, KB Position: 22° 23.937' N 156° 40.101' W

Rosette Position	Desired Depth	AF, SD, KW								
1	25	12L								
2	25	12L								
3	25	12L								
4	25	12L								
5	25	12L								
6	25	12L								
7	25	12L								
8	25	12L								
9	25	12L								
10	25	12L								
11	25	12L								
12	25	12L								
13	25	12L								
14	25	12L								
15	25	12L								
16	25	12L								
17	25	12L								
18	25	12L								
19	25	12L								
20	25	12L								
21	25	12L								
22	25	12L								
23	25	12L								
24	25	12L								

NOTES: Mixing experiment cast, mixed with 300m water (10% dilution)

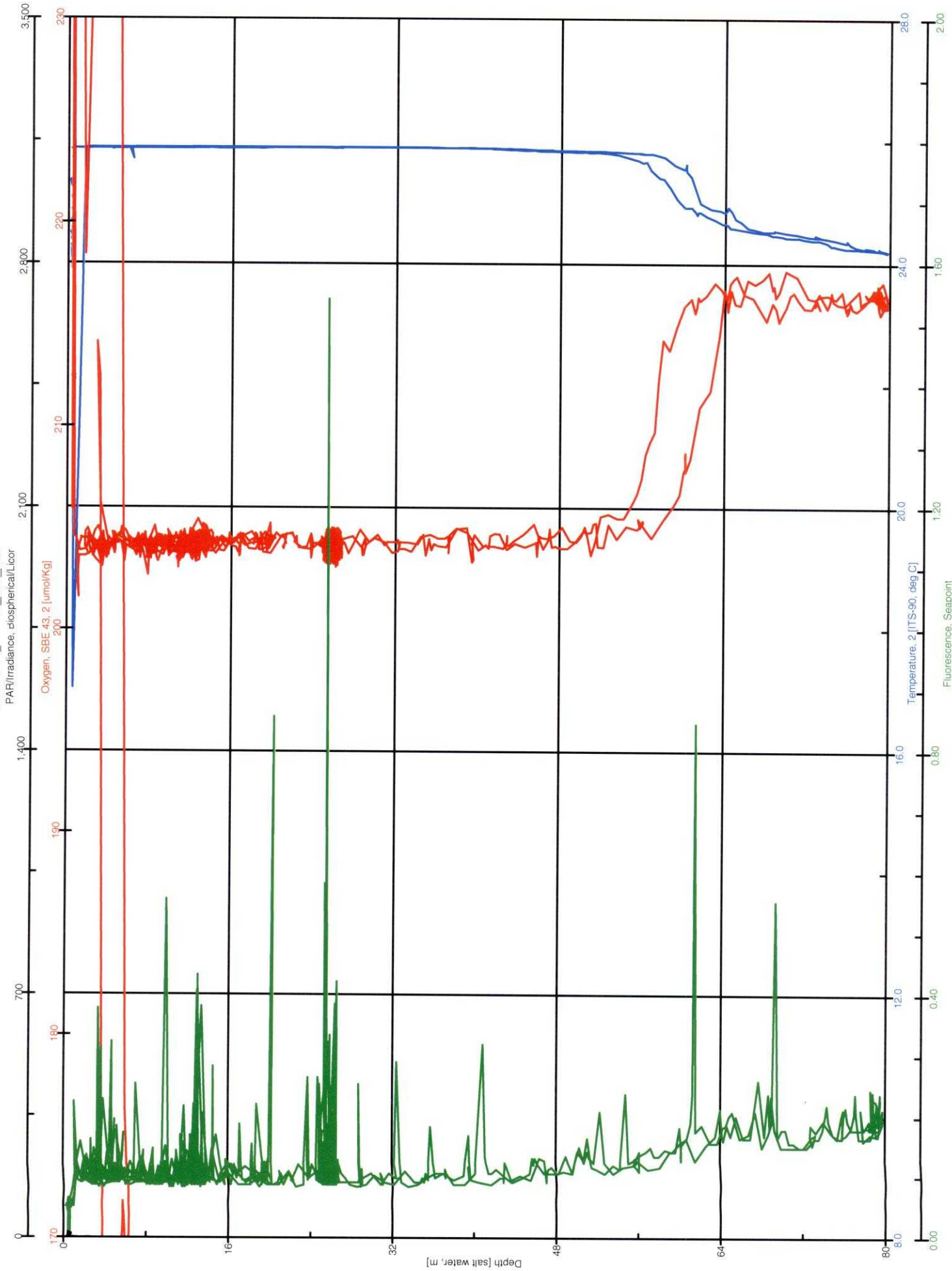
Actual Target 80db

KM0814_c_p1_S2_C2

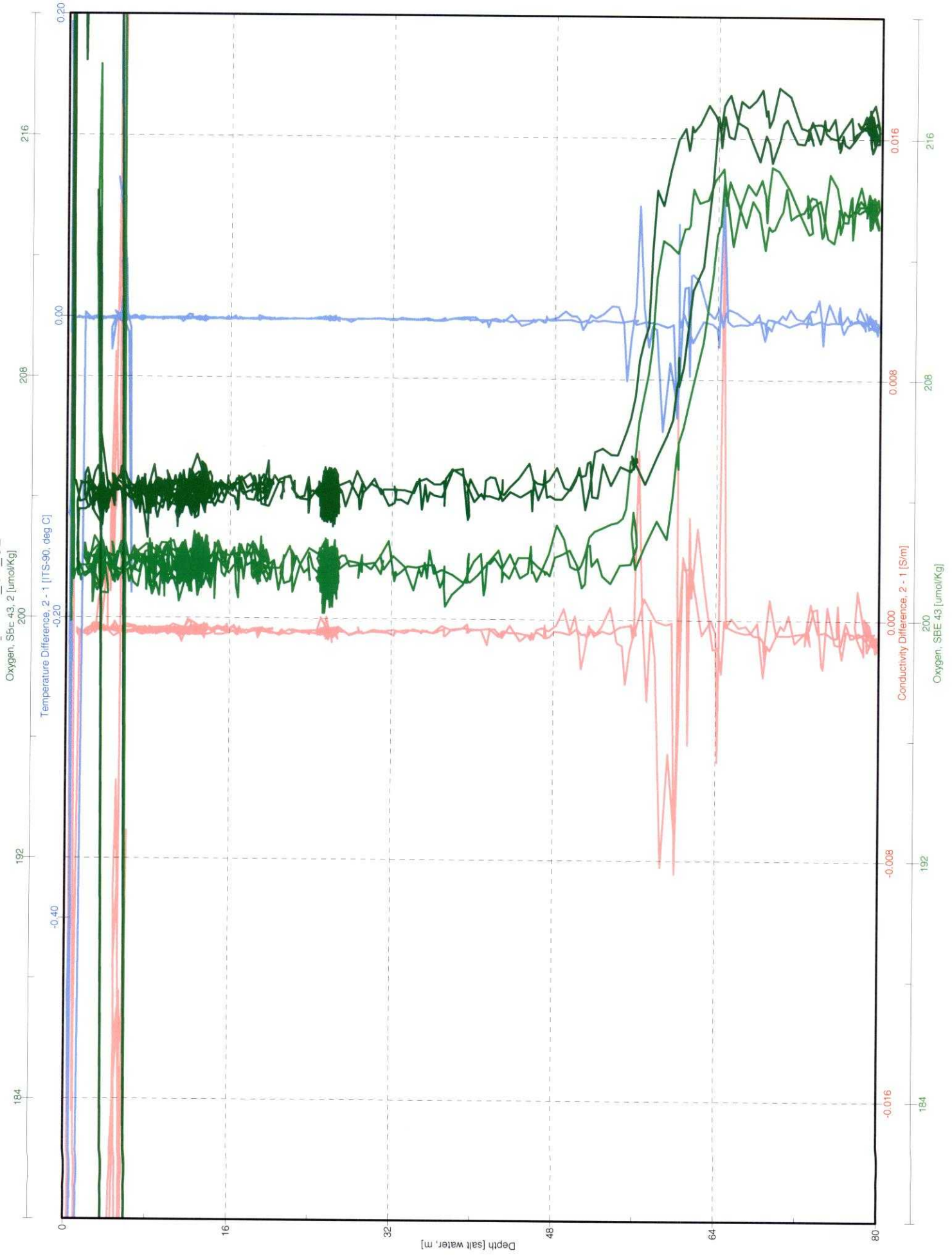


Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_2_S2_C2



KM0814_3_S2_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator SP
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- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n _____
- Biospherical PAR

Time-GMT	Comments
	LSS 6000 re-oriented - first
	good cast for use of
	this sensor

Station: 2	Cast: 3
Latitude start: 22° 23.938' N end: 22 23.937' N	Longitude start: 156° 40.103' W end: 156° 40.104' W
Depth of water: 4695 meters	Date (GMT): (214) 08 / 01 / 2008
Pressure on Deck	Time: 12:10:00Z
Begin: φ.781 - φ.687	Start Log: (214) 12:29:16
End: φ.469 - 501	In Water: 12:31:34Z
Max cast pressure: 125 dbar	Out of Water: 13:02:00Z

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	(214) 12:46:00	12:46:30	74.9	75 db	12:33:46 @ 10m
2		12:46:50	75.1	75	LSS looks reasonable
3		12:47:10	76.1	75	disp 2 red
4		12:47:30	75.4	75	
5		12:47:50	75.φ	75	
6		12:48:10	75.5	75 db	
7		12:48:30	75.2	75	
8		12:48:50	75.3	75	
9		12:49:10	75.5	75	
10		12:49:30	76.φ	75	
11		12:49:50	75.8	75	
12	(214) 12:52:09	12:52:30	24.1	25 db	
13		12:52:50	24.4	25	
14	(214) 12:56:16	12:56:50	6.3	5 db	
15		12:57:10	5.7	5	
16		12:57:30	5.8	5 db	(4m wire)
17		12:57:50	5.9	5 db	
18		12:58:10	6.1	5 db	
19		12:58:30	6.2	5 db	
20		12:58:50	6.φ	5	
21		12:59:10	6.5	5	
22		12:59:30	5.5	5	
23		12:59:50	5.8	5	
24		13:00:10	6.9	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number:

2

Date:

8/1/2008

(GMT)

Cast Number:

~~2~~ 3

Time:

12:12 (02:12 HST)

(GMT)

Operators:

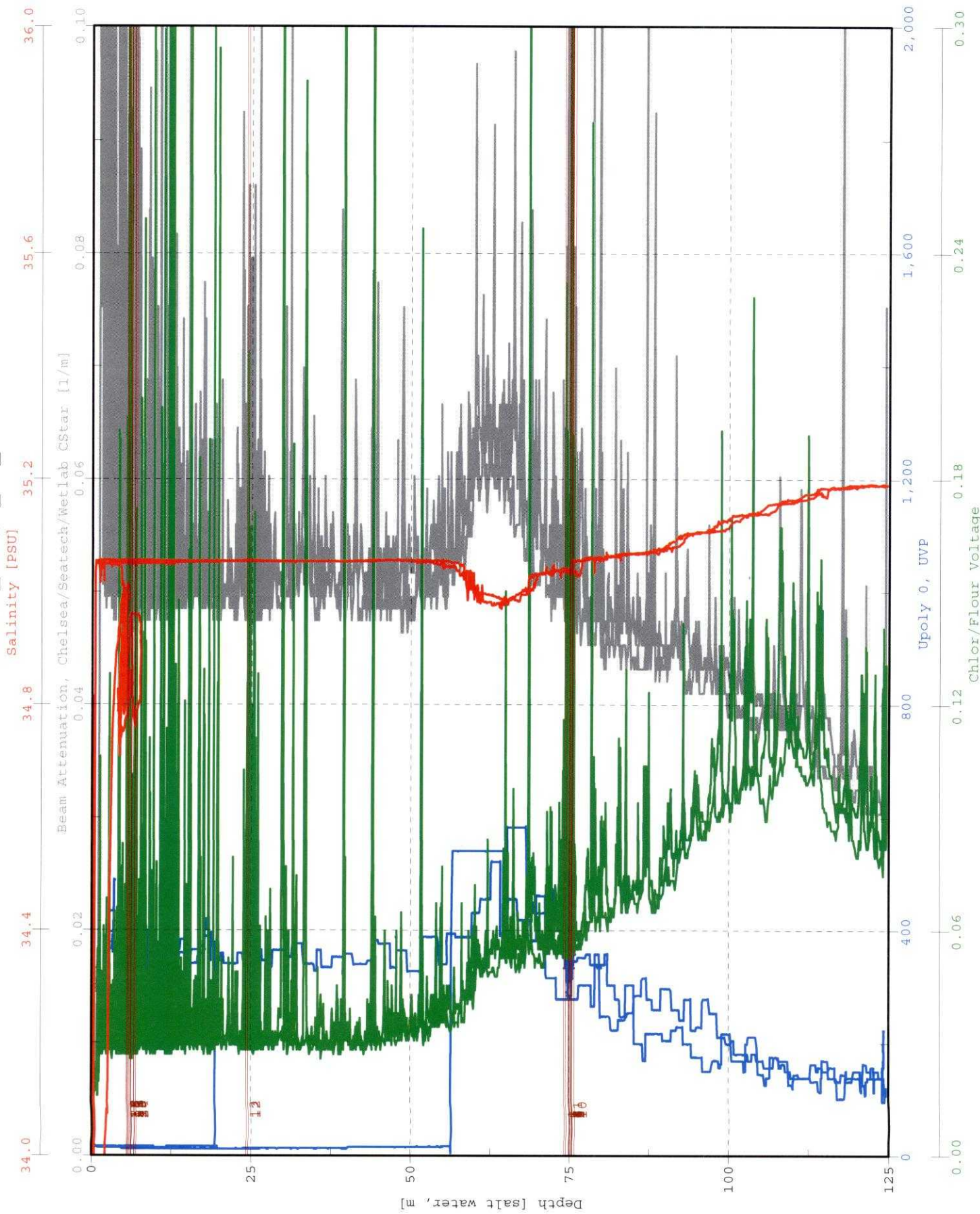
AF

Position: 22 23.938'N 156° 40.103'W

Rosette Position	Desired Depth	Brum	Watkins							
1	75	12L								
2	75	12L								
3	75	12L								
4	75	12L								
5	75	12L								
6	75	12L								
7	75	12L								
8	75	12L								
9	75	12L								
10	75	12L								
11	75	12L								
12	25		12L							
13	25		12L							
14	5	12L								
15	5	12L								
16	5	12L								
17	5	12L								
18	5	12L								
19	5	12L								
20	5	12L								
21	5	12L								
22	5	12L								
23	5	12L								
24	5	12L								

NOTES:

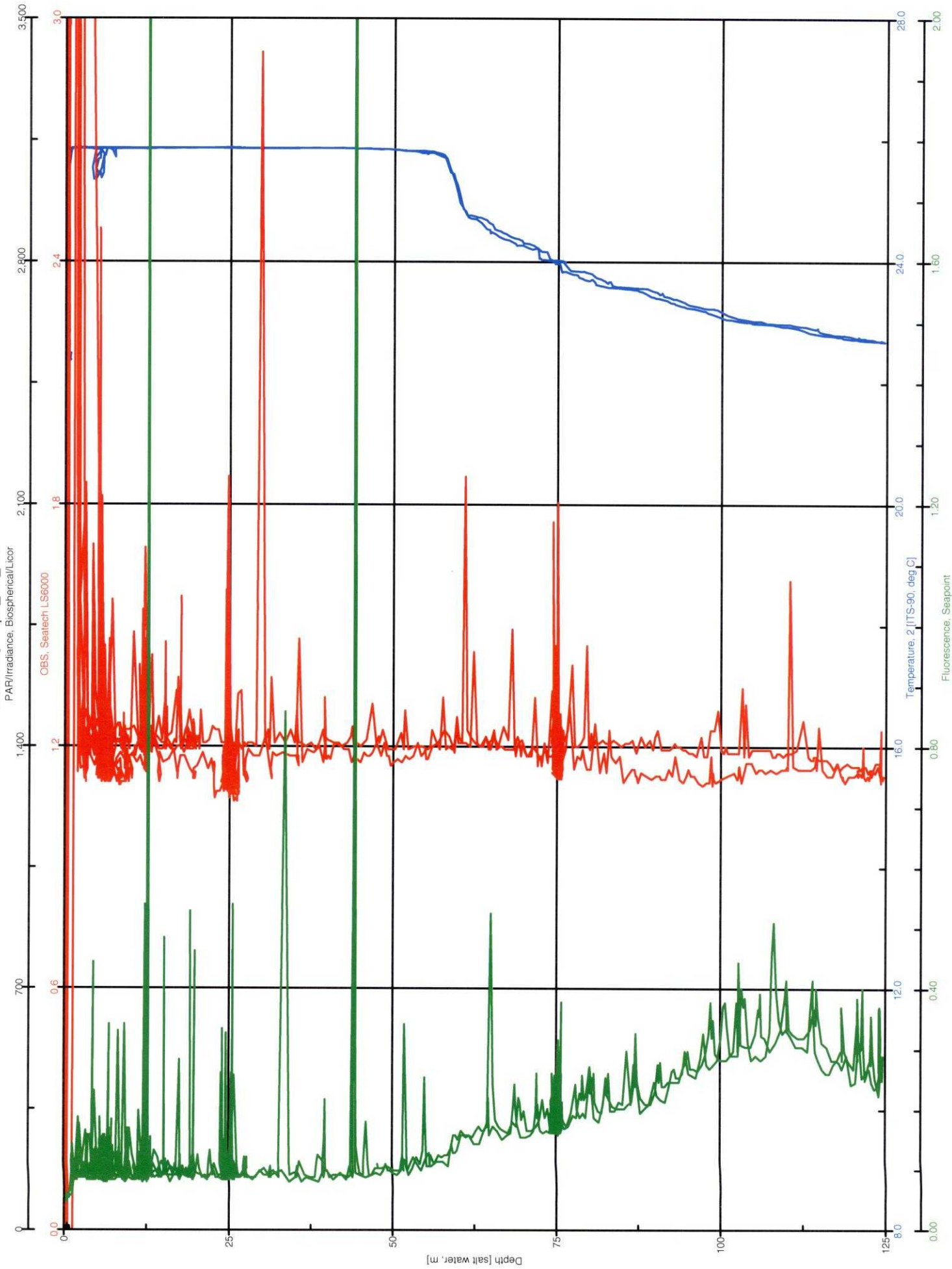
KM0814_c_p1_S2_C3



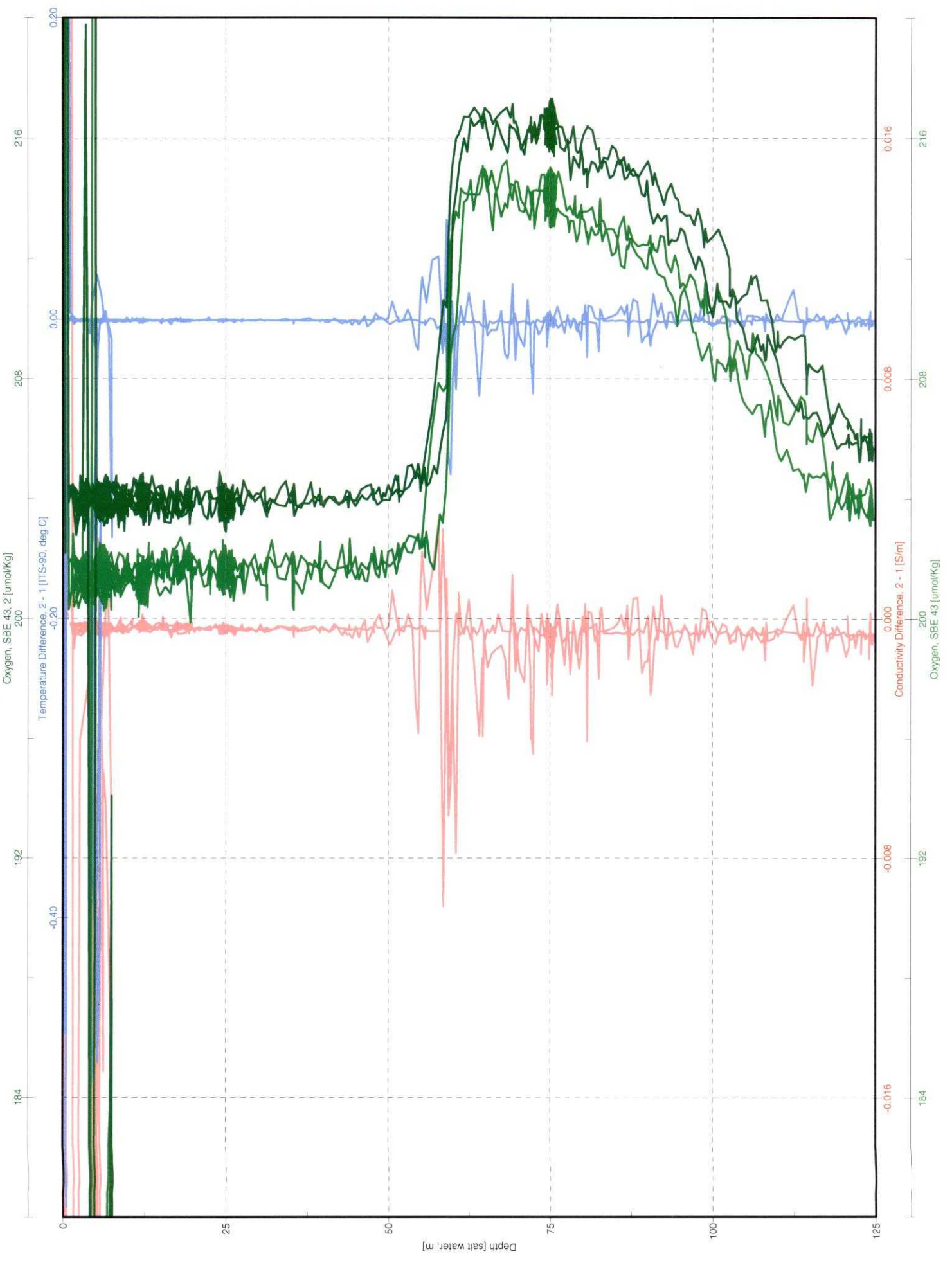
Bottle
Firing
Sequence

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

KM0814_p2_S2_C3



KM0814_p3_S2_C3



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
-----------	-------------	-----	----------

- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n _____
- Biospherical PAR

Time-GMT	Comments

Station: 2	Cast: 4
Latitude start: 22° 23.937' N	Longitude start: 156° 40.102' W
end:	end:
Depth of water: 4695 meters	Date (GMT): (214) 08 / 01 / 2008
Pressure on Deck	Time: 14:42:06Z
Begin: ϕ .569-.615	Start Log: 14:43:00Z
End: ϕ .528-.452	In Water: 14:47:00Z
Max cast pressure: 125 dbar	Out of Water: (214) 15:17:48

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		15:01:10	101	100 db	
3		15:01:30	100.5	100	
4		15:01:50	100.6	100	
5 (214) 15:03:20	15:03:50	75.4	75		
6		15:04:10	75.1	75	
7		15:04:30	75.1	75	
8		15:04:50	75.0	75	
9		15:05:10	74.9	75	
10 (214) 15:06:45	15:07:10	44.8	45 db		
11		15:07:30	45.6	45	
12		15:07:50	45.4	45	
13		15:08:10	44.5	45	
14		15:08:30	44.8	45	
15 (214) 15:09:45	15:10:10	24.7	25 db		
16		15:10:30	25.4	25	
17		15:10:50	25.3	25	
18		15:11:10	25.1	25	
19		15:11:30	25.4	25	
20 (214) 15:13:39	15:14:10	6.4	5 db	(~4m wire out)	
21		15:14:30	6.5	5	(~4m "
22		15:14:50Z	6.4	5	" "
23		15:15:10	6.12	5	" "
24		15:15:30	6.2	5	" "

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 2

Date: 8/1/08 (214)

Cast Number: 4

Time: 14:42:067

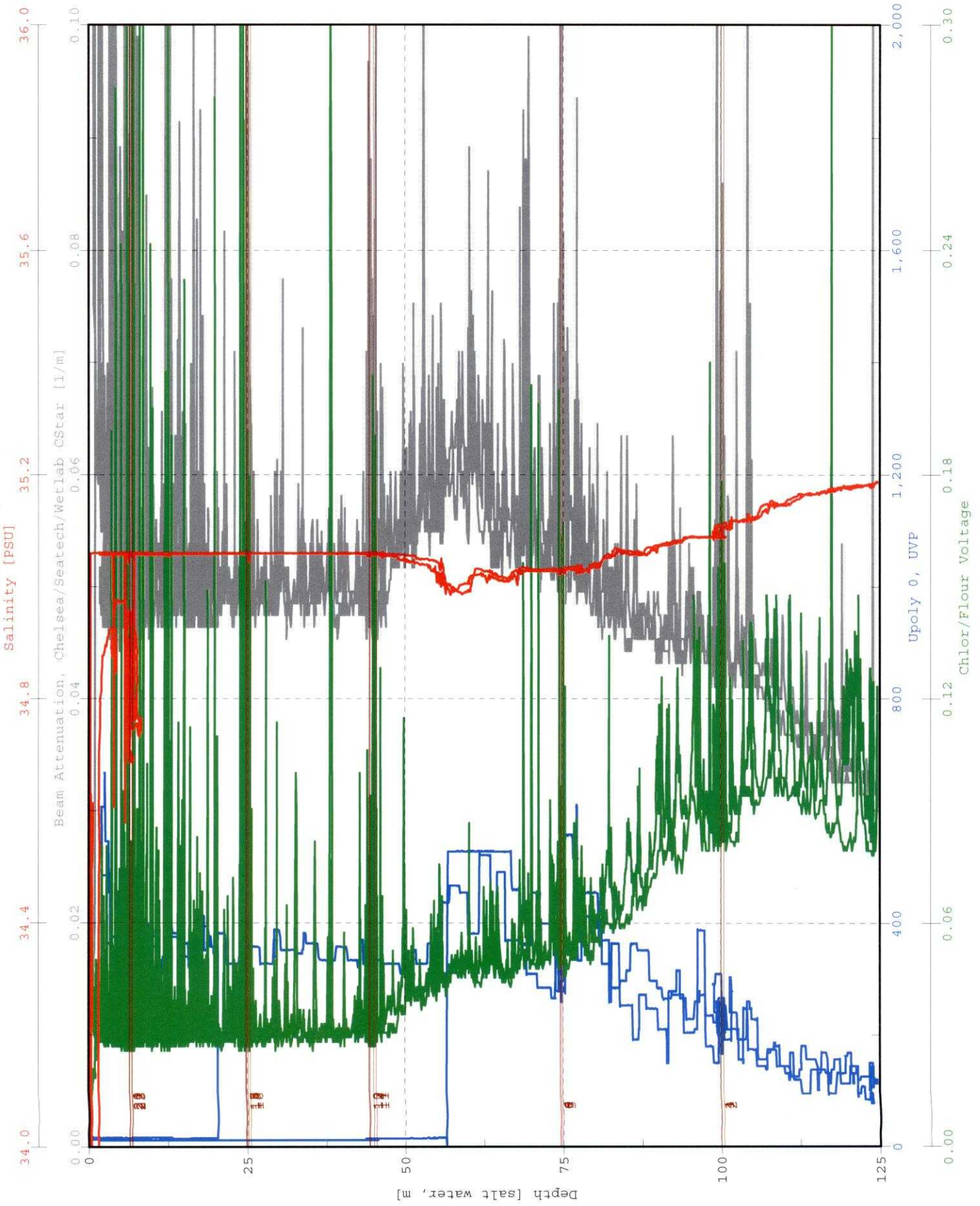
Operators: RP, AF, BU, SP

Position: 22°23.937'N, 156°40.102'W

Rosette Position	Desired Depth	Ryan Jason	32p	RNA				
1	100	X		/				
2	100	X						
3	100	X						
4	100	X						
5	75	X						
6	75	X						
7	75	X						
8	75	X						
9	75	X						
10	45	X						
11	45	X						
12	45	X						
13	45	X						
14	45	X		BU				
15	25	X						
16	25	X						
17	25	X						
18	25	X	KB					
19	25	X						
20	5	X						
21	5	X		BL				
22	5	X						
23	5	X	*					
24	5	X						

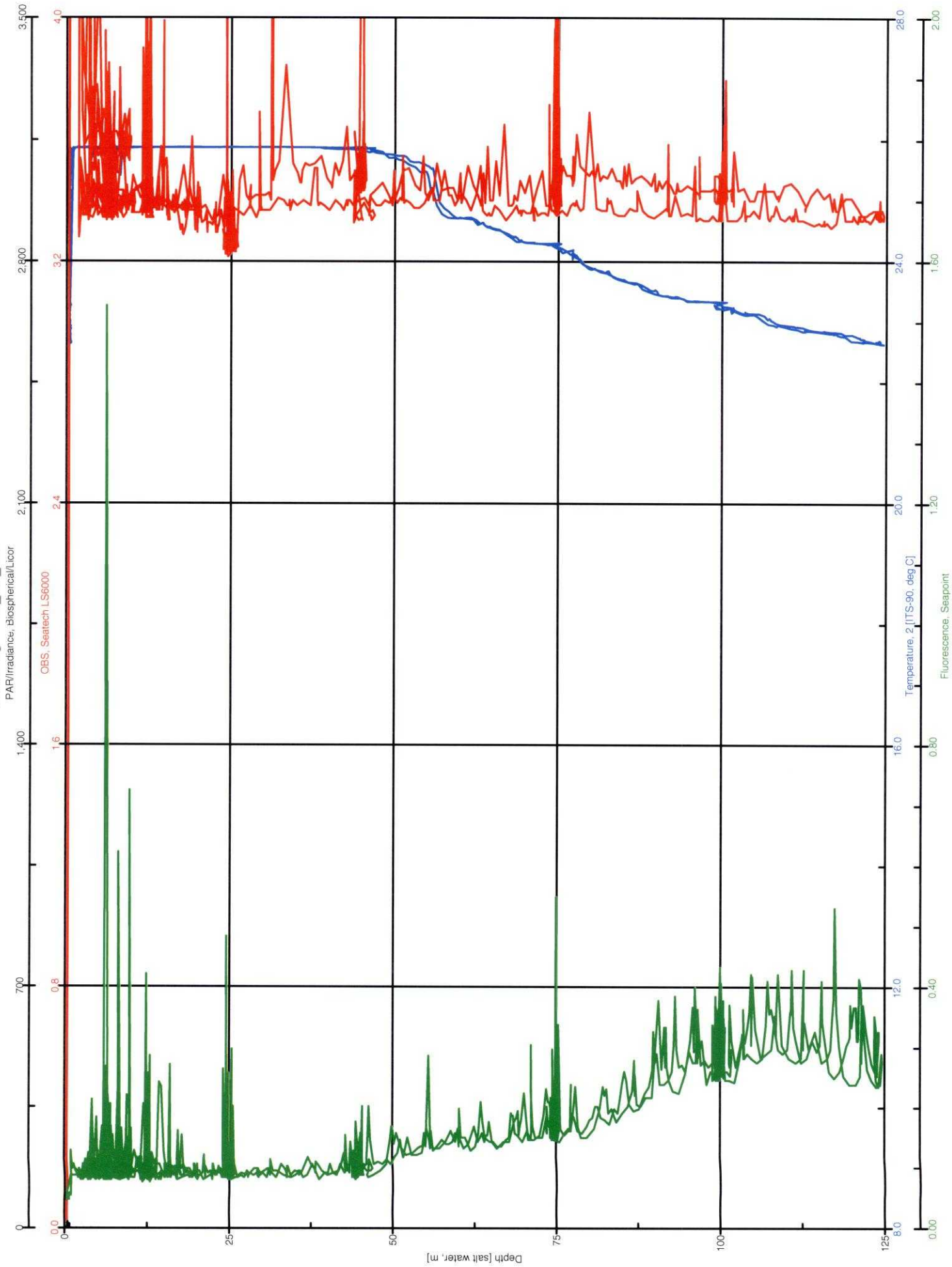
NOTES: * Nishin 23 used for O₂ QC samples
14821 for photosynthesis & RNA.

KM0814_c p1_S2_C4

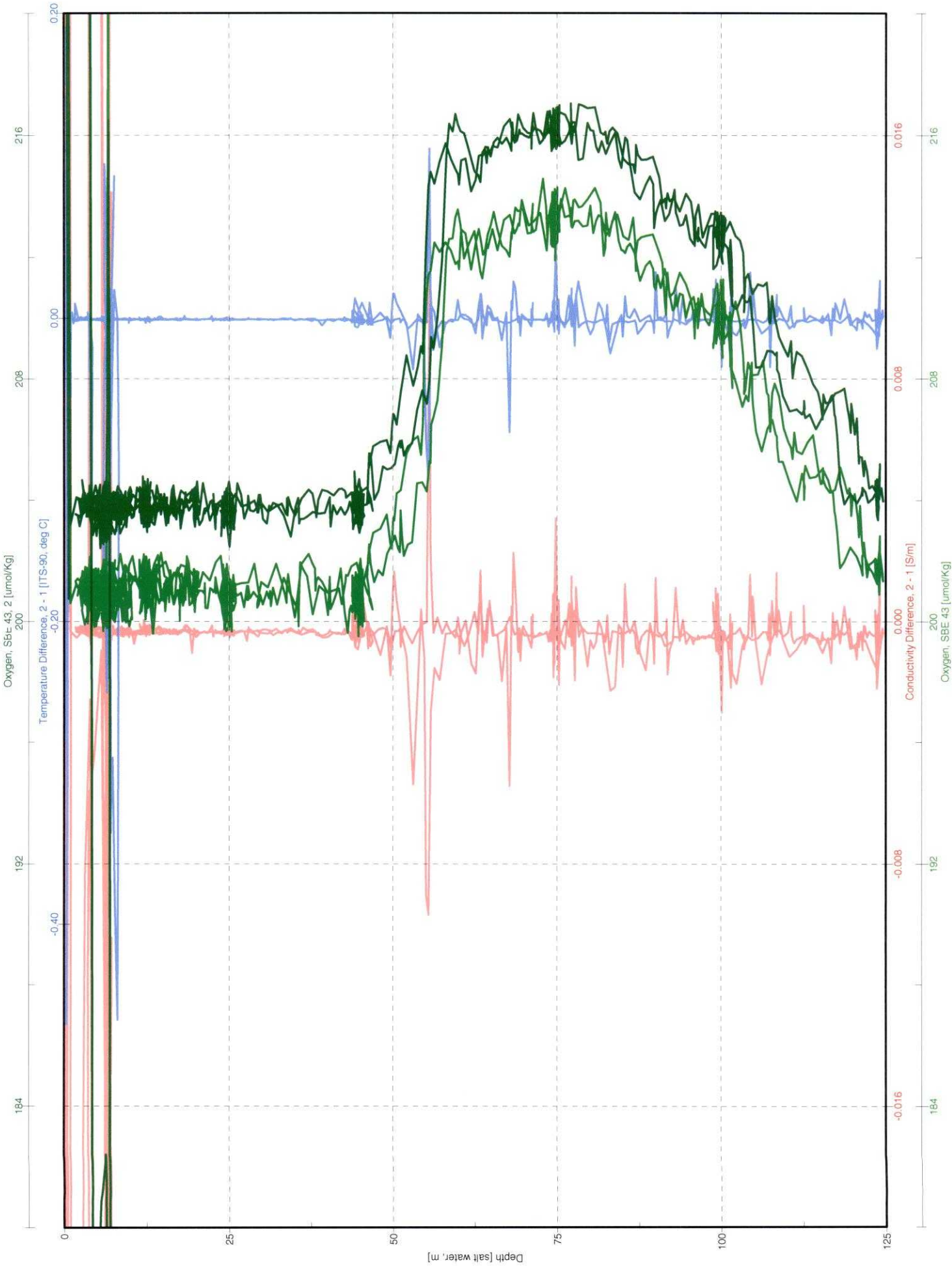


Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_i2_S2_C4



KM0814_3_S2_C4



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
	12Litr	26.1°c	SP

- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n _____
- Biospherical PAR

Time-GMT	Comments

Station: 2	Cast: 5
Latitude start: 22 24.000' N end: 24.001' N	Longitude start: 156 39.976' W end: 156 39.976' W
Depth of water: 4691 meters	Date (GMT): (214) 08 / 01 / 2008
Pressure on Deck	Time: 16:18:40
Begin:	Start Log: 16:23:10Z
End:	In Water: (214) 16:25:55Z
Max cast pressure: 200 dbar	Out of Water: (214) 17:03:08

Trip/Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	(214) 16:40:25	16:40:50	199.6	200 db	16:28:54 @ 10m
2	(214) 16:43:30	16:43:50	151.1	150	
3	(214) 16:46:22	16:46:50	110.6	DCM	110 db
4		16:47:10	110.6	DCM	110 db
5		16:48:30	100.5	100 db	
6	(214) 16:49:55	16:50:10	74.9	75	
7		16:50:30	75.5	75	
8		16:50:50	76.1	75	
9		16:51:10	75.9	75	
10		16:51:30	75.2	75	
11		16:51:50	76.0	75	
12		16:52:10	76.1	75	
13	16:53:38	16:54:00	45.1	45	
14		16:54:20	45.2	45	
15	16:55:30	16:55:50	24.7	25	
16		16:56:10	24.9	25	
17	(214) 16:58:30	16:58:50	5.7	5 db	(~4m Wire)
18		16:59:10	5.8db	5 db	
19		16:59:30	5.9 db	5 db	
20		16:59:50	6.4 db	5 db	
21		17:00:10	6.1	5 db	
22		17:00:30	5.7	5 db	
23		17:00:50	5.8	5	
24		17:01:10	6.2	5	17:04:50 CTD on deck

(214) 17:11:13 staging for
GAS array deployment

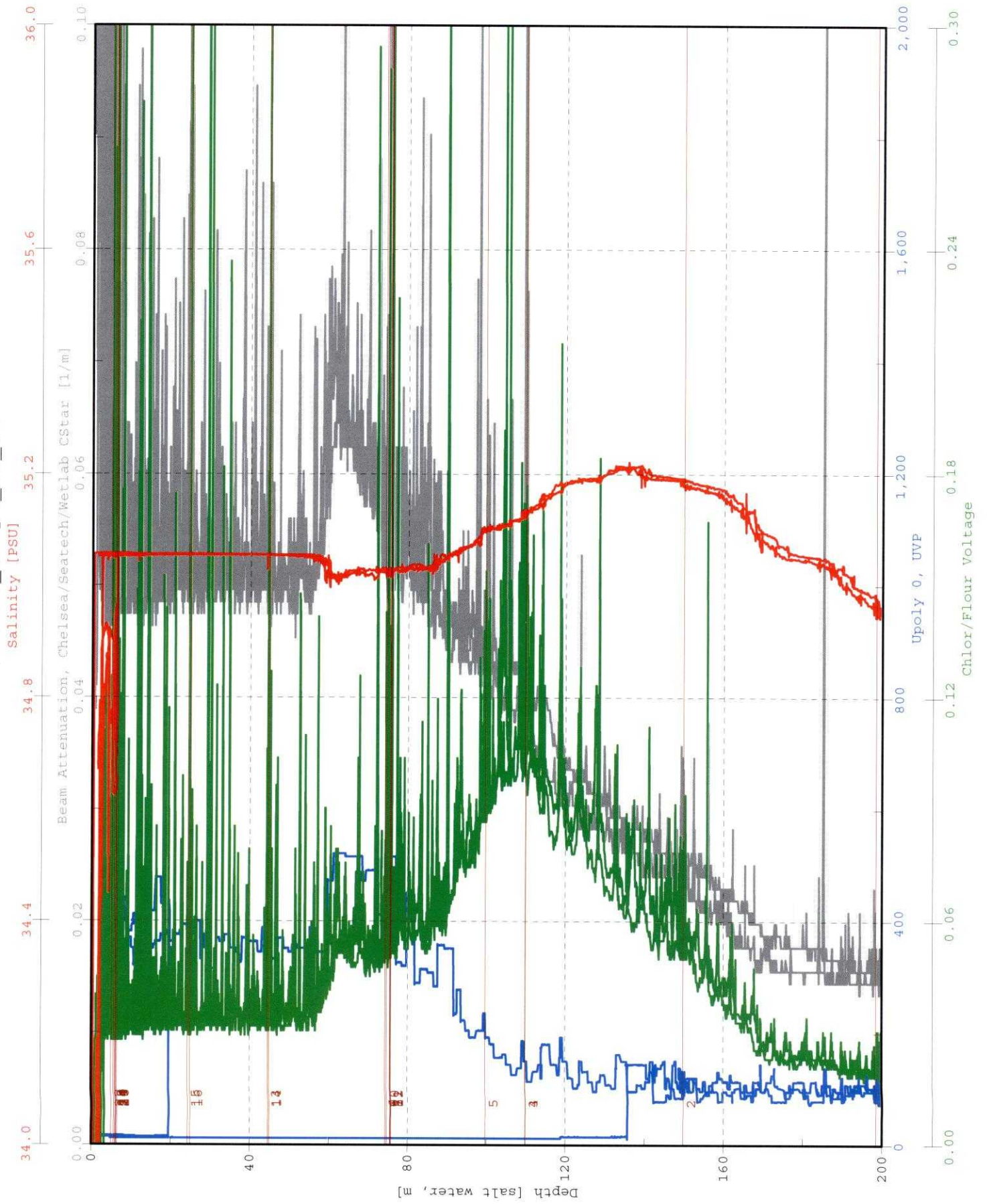
C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 2 Date: 8/1/2008 (214) (GMT)
 Cast Number: 5 Time: 16:18:40 (GMT)
 Operators: AF, JB, BL, KB Position: 22° 24.000'N, 156° 39.976'W

Rosette Position	Desired Depth	Brum	Breitlow	Li	KB LCD					
1	200	1L			✓					
2	150	1L		10L	✓					
3	DCM		10L							
4	DCM			10L						
5	100	1L	10L		✓					
6	75	12L			✓					
7	75	12L								
8	75	12L								
9	75	12L								
10	75	12L								
11	75	12L								
12	75			10L						
13	45	1L	10L		✓					
14	45			10L						
15	25	1L	10L		✓					
16	25			10L						
17	5	12L			✓					
18	5	12L								
19	5	12L								
20	5	12L								
21	5	12L								
22	5	12L								
23	5		10L							
24	5			10L						

NOTES: Consolidated some of CMORE B cast onto this cast.

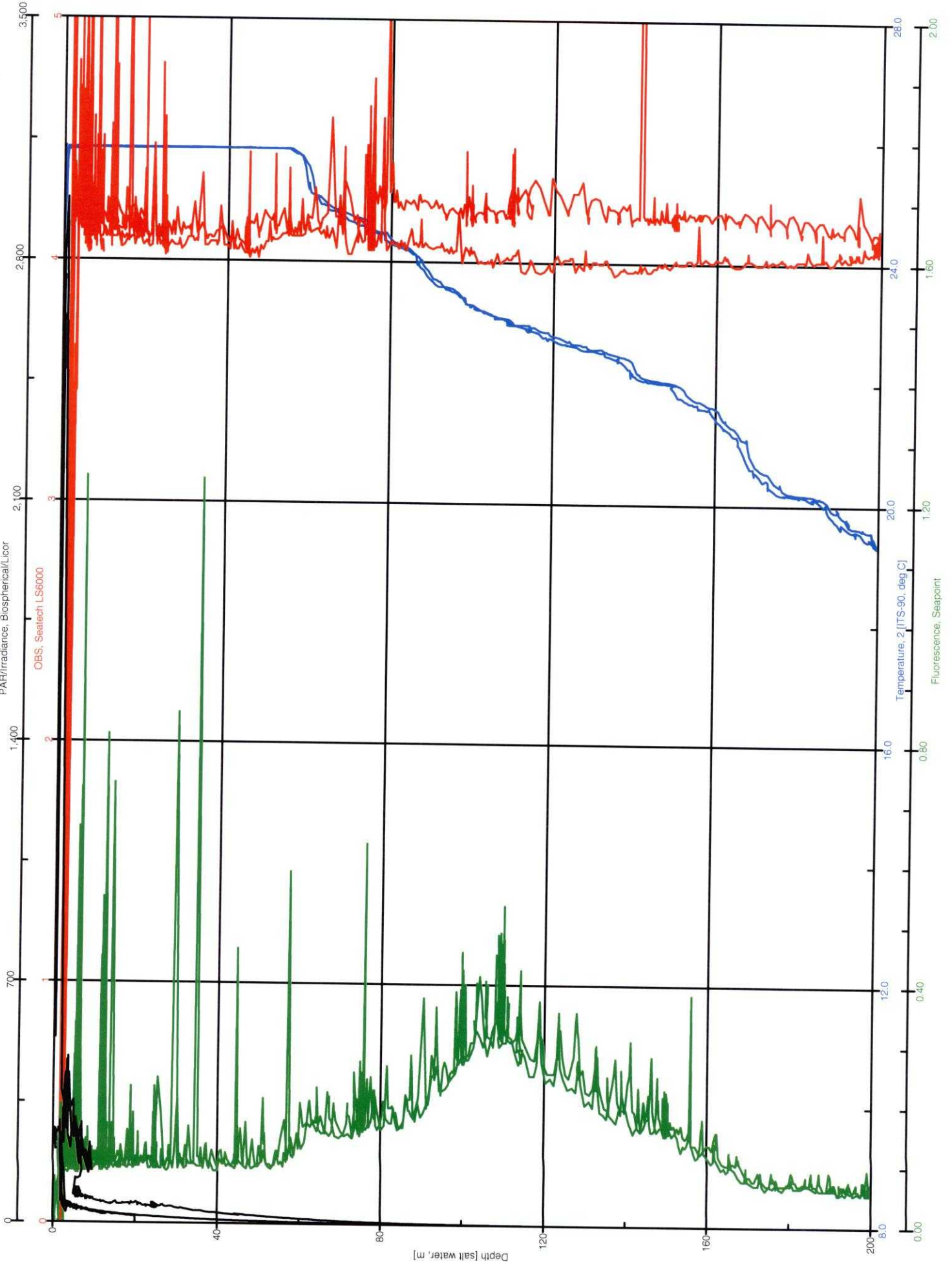
KM0814_d_p1_s2_C5



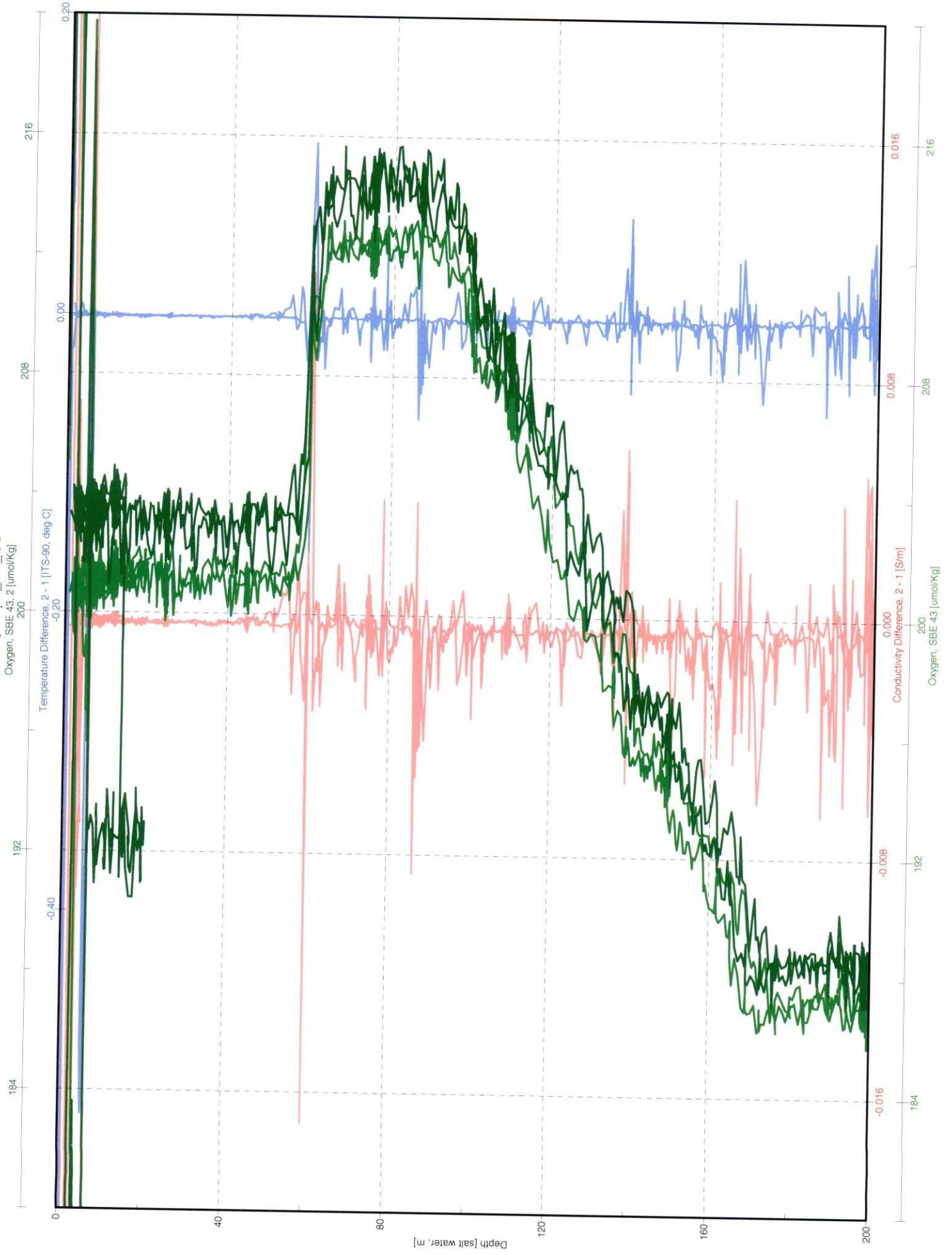
Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_2_S2_C5

PAR/Irradiance, Biospherical/Licor



KM0814_ p3_S2_C5



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator b updyke
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- UVP [] Transmis.. CST-1043DR
- LSS [] UVP
- OTG Seapoint Fluorometer s/n _____
- Biospherical PAR

Time-GMT	Comments

Station: 2	Cast: 6
Latitude start: 22° 25.139' N	Longitude start: 156° 37.227' W
Latitude end: 22° 25.140' N	Longitude end: 156° 37.223' W
Depth of water: 466.4 meters	Date (GMT): (214) 08 / 01 / 2008
Pressure on Deck	Time: 40 21:00
Begin: 0.81 db	Start Log: 21:08:00
End: 0.51 db	In Water: 21:10:30
Max cast pressure: 300 dbar	Out of Water: 21:51:00

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	21:26:30	21:26:45	200.0	200	
2	↓	21:27:00	200.2	200	
3	↓	21:27:15	199.3	200	
4	↓	21:27:30	200.1	200	
5	21:30:00	21:30:15	150.3	150	
6	↓	21:30:30	150.2	150	
7	↓	21:30:45	150.3	150	
8	21:33:00	21:33:15	115.7	DCM	115 db
9	↓	21:33:30	116.0	DCM	
10	↓	21:33:45	116.0	DCM	
11	21:35:15	21:35:30	99.6	100	
12	↓	21:35:45	99.9	100	
13	↓	21:36:00	100.3	100	
14	21:37:45	21:38:00	75.0	75	
15	↓	21:38:15	74.4	75	
16	↓	21:38:30	75.2	75	
17	21:41:45	21:42:00	47.5	45	
18	"	21:42:15	47.5	45	
19	21:44:00	21:44:15	25.5	25	
20	↓	21:44:30	24.5	25	
21	↓	21:44:45	24.8	25	
22	21:47:15	21:47:30	6.3	5	
23	↓	21:47:45	6.7	5	
24	↓	21:47:00	6.9	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Maximum

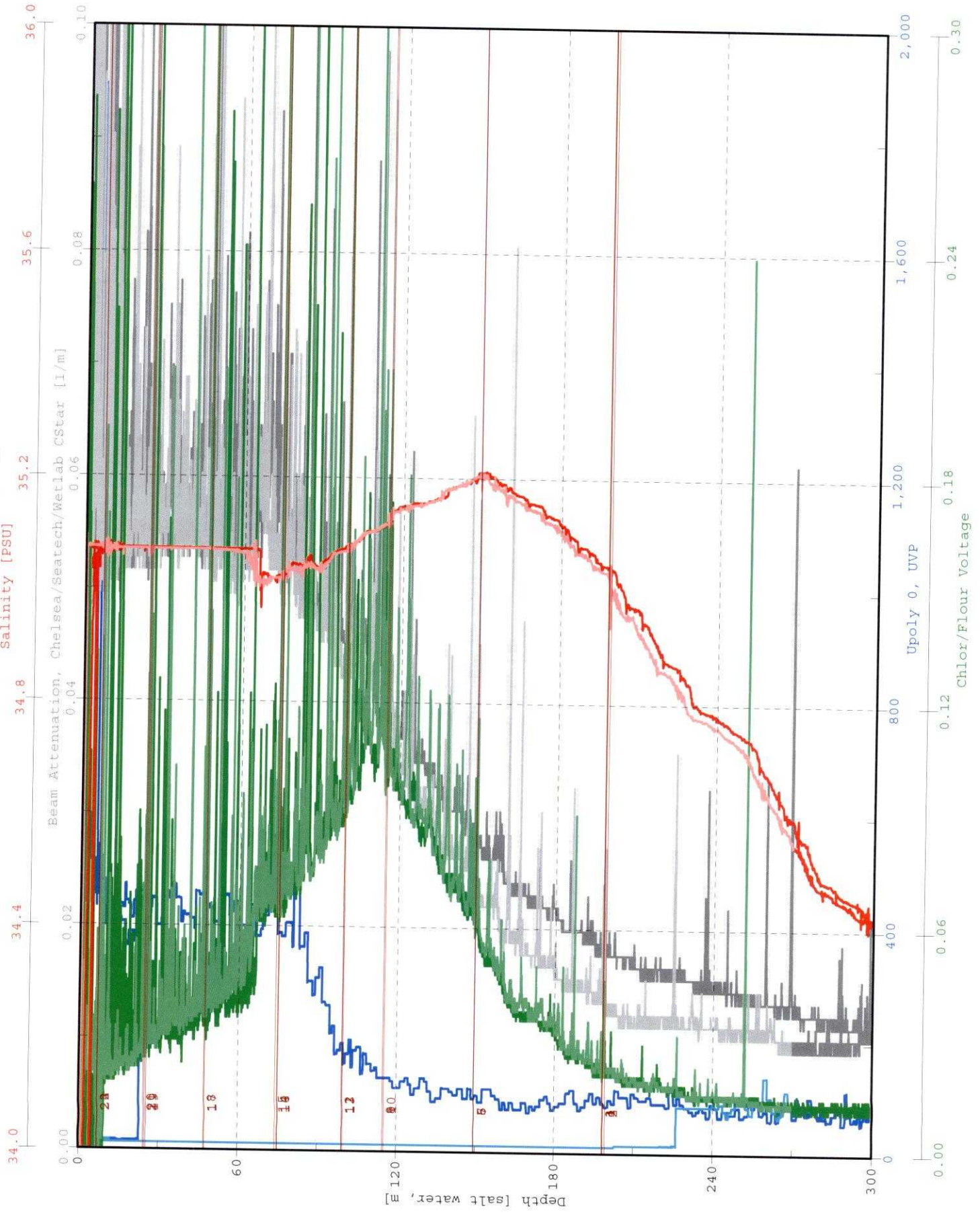
Station Number: 2 Date: _____ (GMT)
 Cast Number: 6 Time: _____ (GMT)
 Operators: _____ Position: _____

Rosette Position	Desired Depth	Oxygen	Temp	pH	DIC	Nuts	DOC	LLNuts	Chl a	FCM
1	200	11 X	20.3 X	1 X	X	X	X	X	X	17 X 18
2	200									
3	200									
4	200									
5	150	12 X	22.4 X	2 X	X	X	X	X	X	19 X 20
6	150									
7	150									
8	DCM	13 X 14	23.5 X	3 X	X	X	X	X	X	21 X 22
9	DCM									
10	DCM									
11	100	15 X	24.3 X	4 X	X	X	X	X	X	23 X 24
12	100									
13	100									
14	75	16 X	25.5 X	5 X	X	X	X	X	X	25 X 26
15	75									
16	75									
17	45	17 X 18	26.8 X	6 X	X	X	X	X	X	27 X 28
18	45									
19	25	20 X	26.6 X	7 X	X	*	*	*	*	29 X 30
20	25									
21	25									
22	5	20 X	25.1 X	8 X	X	X	X	X	X	31 X 32
23	5									
24	5									

NOTES:

NUTS → FCM from #21
 (19 did not trip, 20 empty)

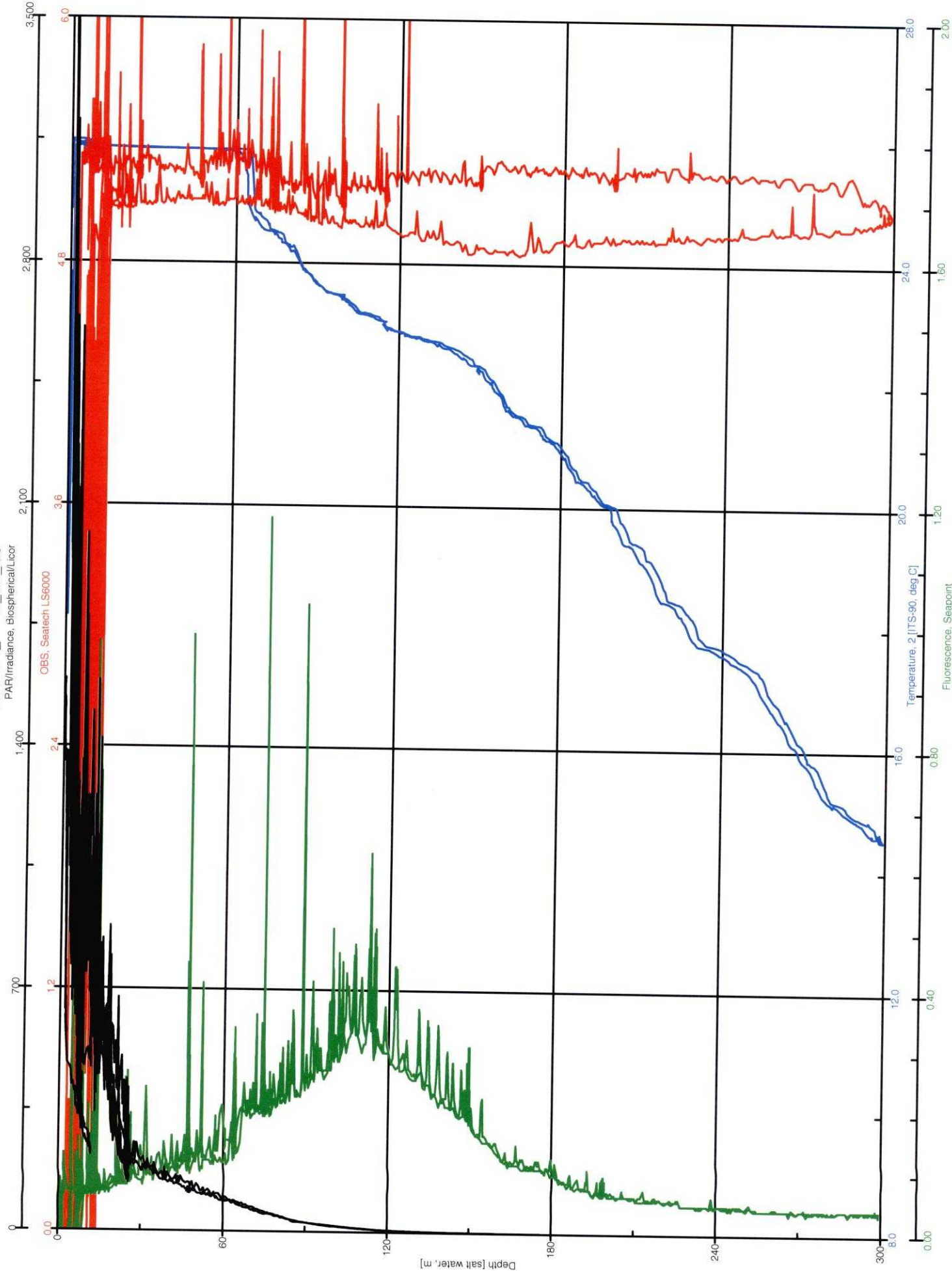
KM0814_ä_p1_S2_C6



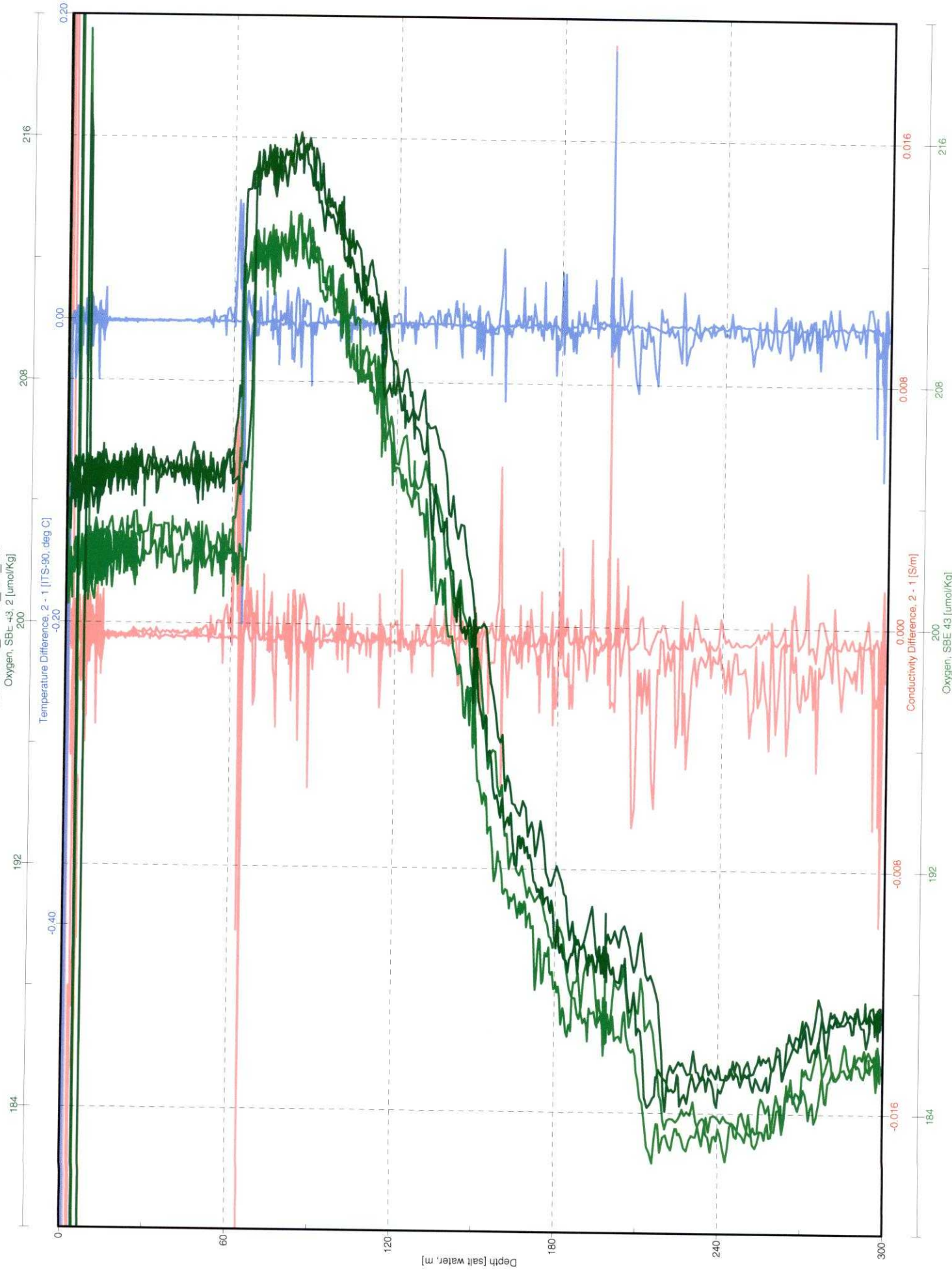
Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_2_S2_C6

PAR/Irradiance, Biospherical/Libor



KM0814_3_S2_C6



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.4°	Operator SP
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Station: 3	Cast: 1
Latitude start: 22° 20.027' N end: 22 20.032' N	Longitude start: 156° 24.975' W end: 156° 24.963' W
Depth of water: 4684 meters	Date (GMT): (215) 08 02/2008
Pressure on Deck	Time: 01:05:36
Begin: 7175- .6676	Start Log: 01:09:00 (215) In Water: 01:12:07Z
End: 358-335	
Max cast pressure: 1000 dbar	Out of Water: (215) 02:15:25Z

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	H. Resolution Cast based on profile

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		01:54:00	240.1	240	# of small particles limit is 30/pers
3	01:55:00	01:55:20	219.9	220	incl: large particle but 90% are
4	01:55:00	01:55:40	219.9 220.4	220	small
5	01:57:10	01:55:40	199.2	200	5 Dcm ~119/120 db
6		01:57:30	199.4	200	
7	(215) 01:58:20	01:58:40Z	174.3	185 db	
8		01:59:00Z	174.2	175	
9	(215) 01:59:52	02:00:10	149.8	150	
10		02:00:30	149.5	150	
11	(215) 02:01:30	02:01:50	120.2	Dcm	120 db
12		02:02:10	119.8	Dcm	120 db
13		02:03:10	99.4	100	
14		02:03:30	98.9	100	
15	(215) 02:04:25	02:04:50	75.2	75	
16		02:05:10	75.2	75	
17	(215) 02:05:50	02:06:10	60.2	60	
18		02:06:30	59.6	60	
19	02:07:15	02:07:30	46.4	45	
20		02:07:50	45.9	45	
21	(215) 02:08:40Z	02:09:10	24.8	25	
22		02:09:30	24.2	25	
23		02:12:20	6.3	5	(4m wire)
24		02:12:40	6.6 db	5	(4m wire) (02:17:50Z on Deck)

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Maximum

Station Number: 2 Date: _____ (GMT)
 Cast Number: 6 Time: _____ (GMT)
 Operators: _____ Position: _____

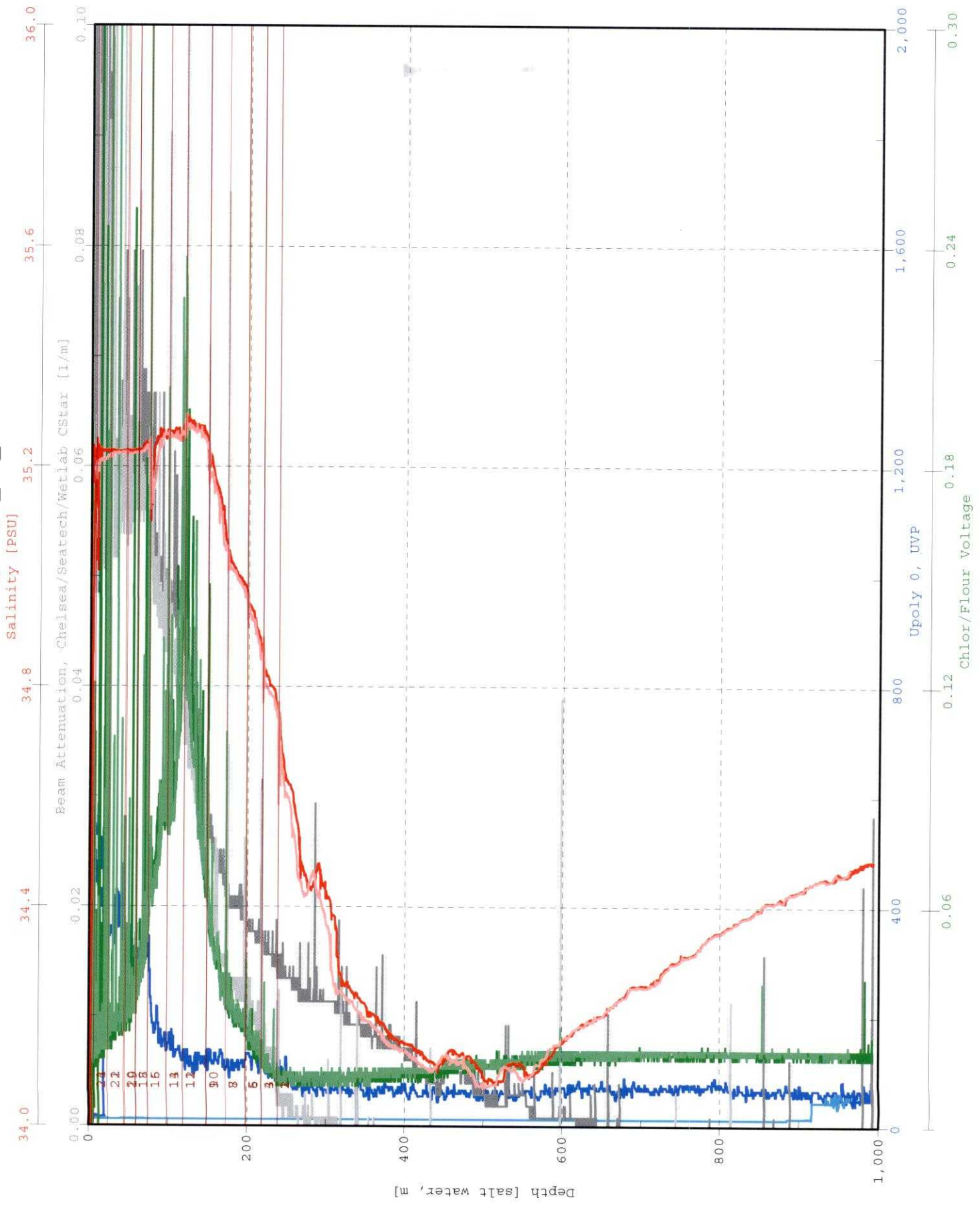
Rosette Position	Desired Depth	FRRF	HPLC	Psi	PC/PN	PPO4	Temp			
1	200	X								
2	200		2L	4L 8L (4)						
3	200				10L 2					
4	200					10L 3				
5	150	X								
6	150		2L	4L 8L (5)						
7	150				4L 7 7 4L 2					
8	DCM	X								
9	DCM		2L	4L 8L (6)						
10	DCM				8 4L 8 8 4L 2					
11	100	X								
12	100		2L	4L 8L (7)						
13	100				4L 9 9 4L 2					
14	75	X								
15	75		2L	4L 8L (8)						
16	75				4L 10 10 4L 2					
17	45	X		4L 4L (9)						
18	45		2L		4L 11 11 4L 2					
19	25	X								
20	25		2L	4L 8L (10)						DID NOT TRIP
21	25				4L 12 12 4L 2					
22	5	X								
23	5		2L	4L 8L (11)						
24	5				4L 13 13 4L 2					

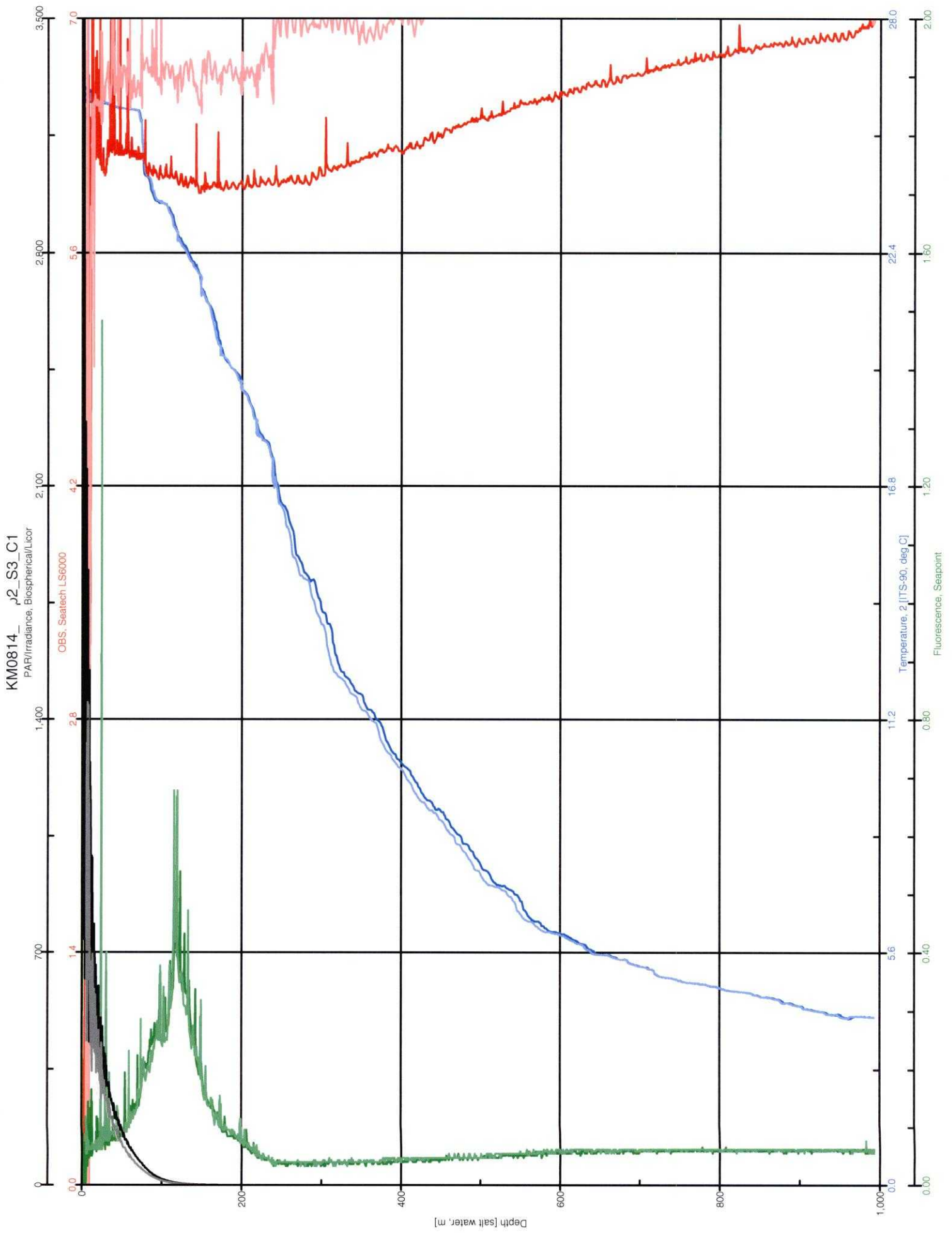
NOTES:

Dropped PC/PN 2-16-16

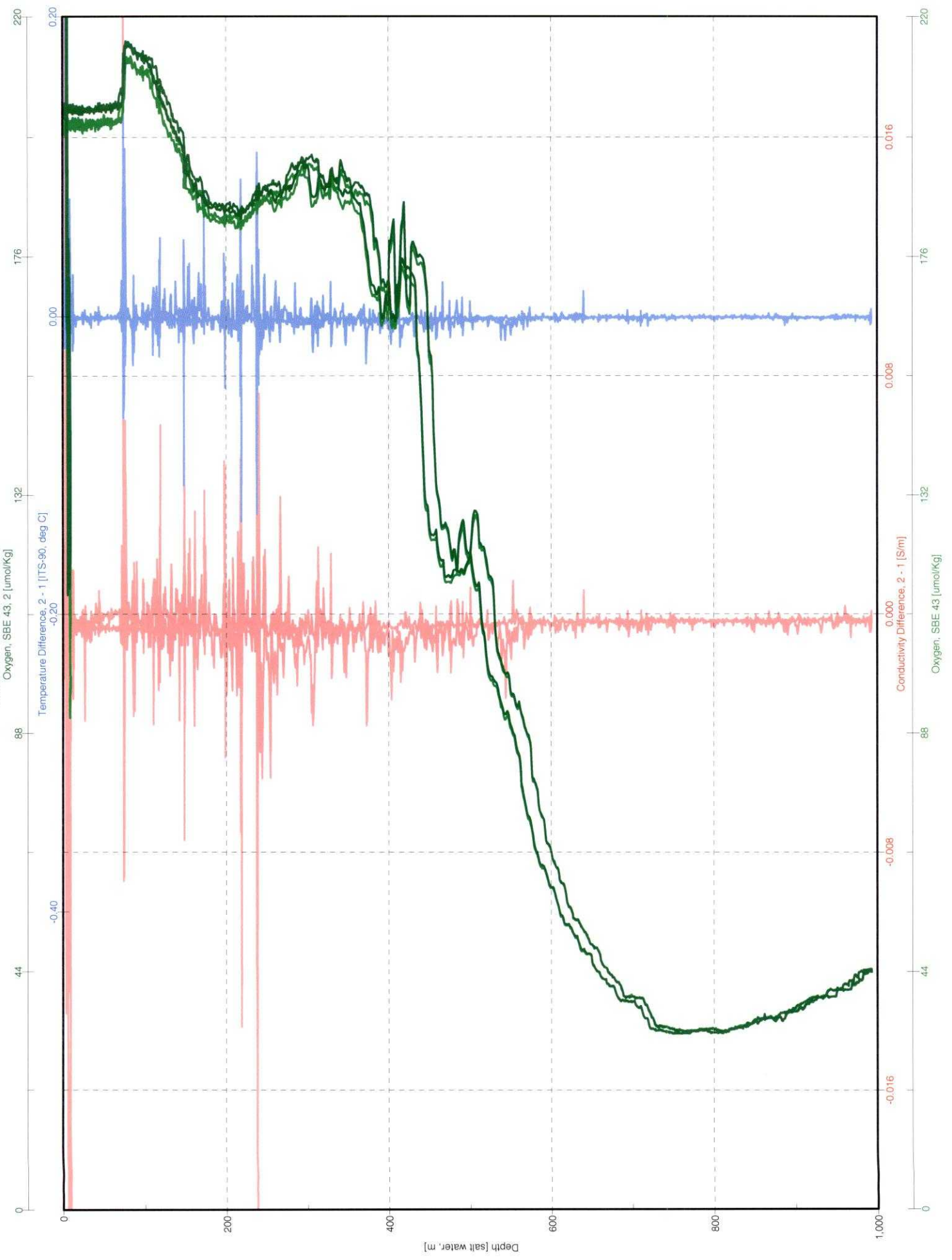
NUTS

KM0814_d...p1_s3_c1





KM0814_μ3_S3_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
	12L	26.4	SP

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 3	Cast: 2
Latitude start: 22° 20.032'N end: 22 20.033'N	Longitude start: 156° 24.963'W end: 156° 24.964'W
Depth of water: 4684 meters	Date (GMT): (215) 08/02/2008
Pressure on Deck	Time: 03:35:02
Begin: 0.576 - 489	Start Log: (215) 03:37:40Z
End: 0.348 - 478	In Water: (215) 03:40:35Z
Max cast pressure: 200 dbar	Out of Water: 04:13:50Z

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	(215) 03:53:50	03:54:10	199.4	200	03:44:02 @ 10m
2	(215) 03:57:21	03:57:40	123.7	DCM	124 db
3	03:59:18	03:59:40	75.1	75 db	
4		04:00:00	75.1	75	
5		04:00:20	75.5	75	
6		04:00:40	74.9	75 db	
7	(215) 04:01:55	04:02:10	44.5	45 db	
8		04:02:30	44.7	45	
9		04:02:50	43.6	45	
10		04:03:10	44.0	45	
11		04:03:30	44.3	45	
12		04:03:50	44.0	45 db	
13	04:04:50	04:05:10	24.9	25	
14		04:05:30	24.8	25	
15		04:05:50	24.2	25	
16		04:06:10	24.3	25	
17		04:06:30	24.7	25	
18		04:08:30	5.7 db	5	(3m wire)
19	04:09:30	04:09:50	2.6	5	
20		04:10:10	2.9	5	
21		04:10:30	3.0	5	
22		04:10:50	3.3	5	
23		04:11:10	2.8	5 db	
24		04:11:30	2.8	5 db	04:15:46 on Deck

C-MORE CRUISE LOG

OPEREX

Station Data Sheet

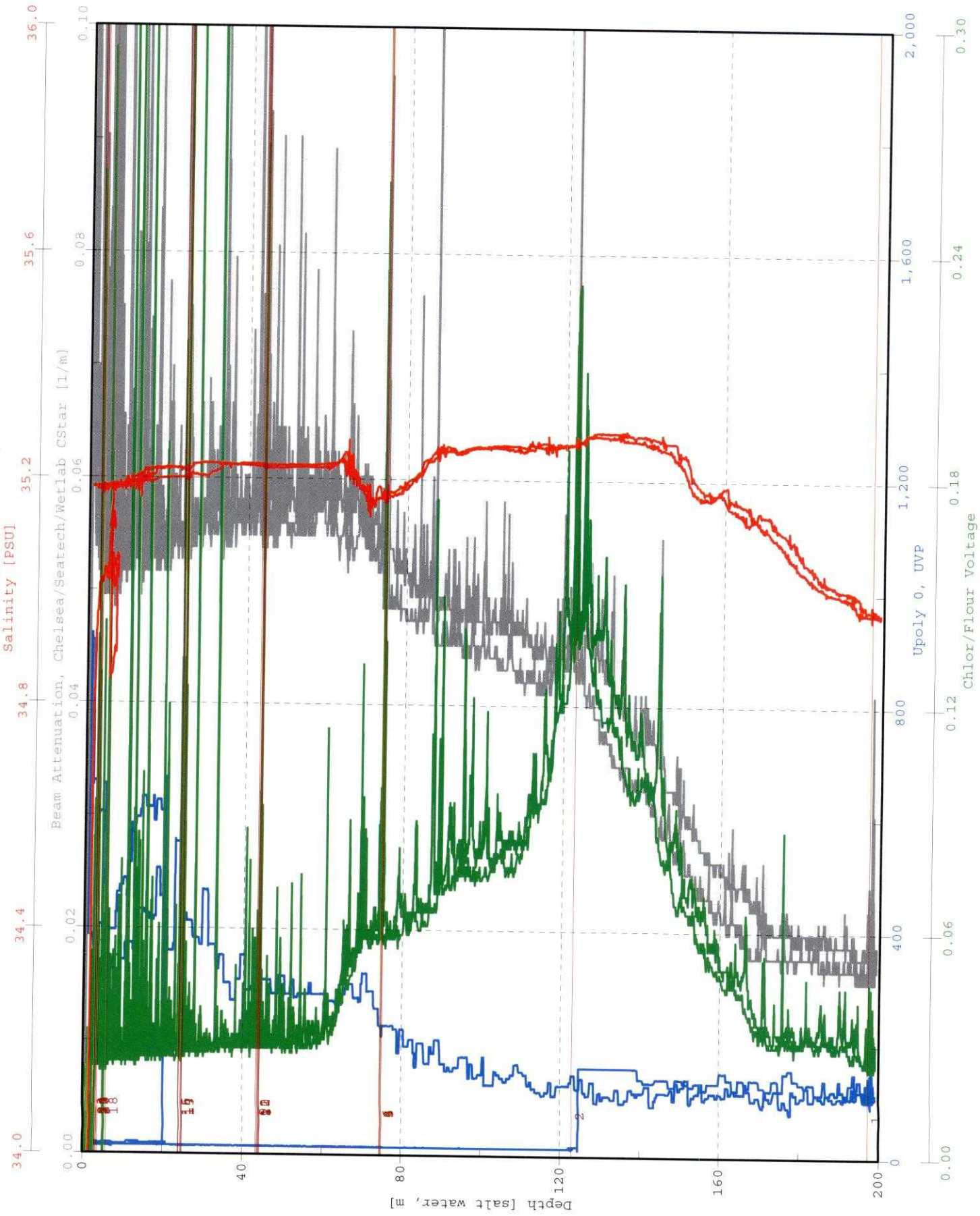
Station Number: 3
 Cast Number: 2
 Operators: AF, SP

Date: 8/2/2008 (215) (GMT)
 Time: 03:35:02 Z (GMT)
 Position: 22° 20.932' N 156° 24.963' W

	Desired Depth	Watkins/Fong	Ventour as/Krey						
1	200		12L						
2	DCM		12L						
3	75	12L							
4	75	12L							
5	75	12L							
6	75	12L							
7	45		12L						
8	45	12L							
9	45	12L							
10	45	12L							
11	45	12L							
12	45	12L							
13	25	12L							
14	25	12L							
15	25	12L							
16	25	12L							
17	25	12L							
18	5		12L						
19	5	12L							
20	5	12L							
21	5	12L							
22	5	12L							
23	5	12L							
24	5	12L							

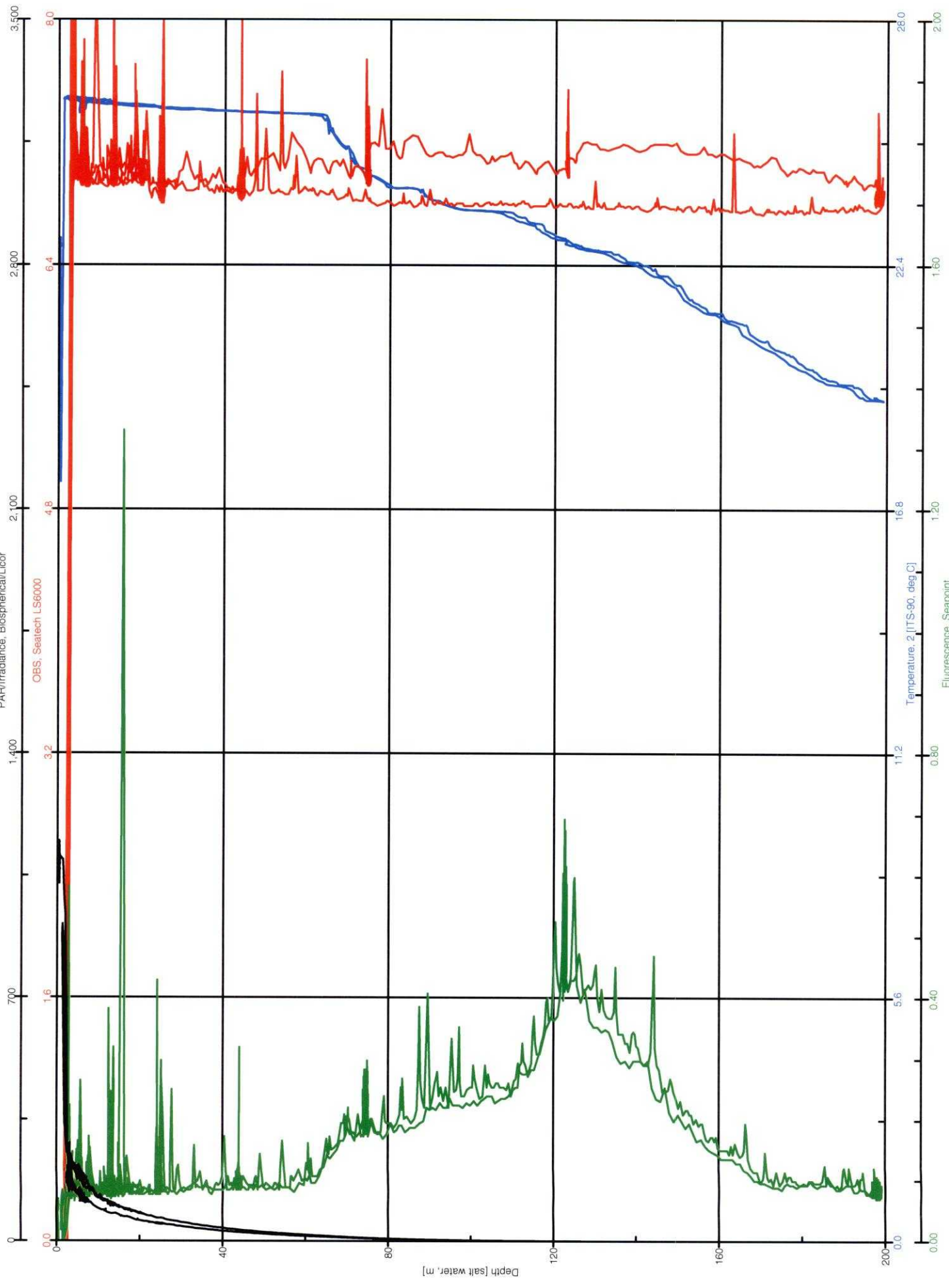
NOTES: Niskins 19-24 are actually as close to surface as possible, not SM.

KM0814_d_p1_s3_c2

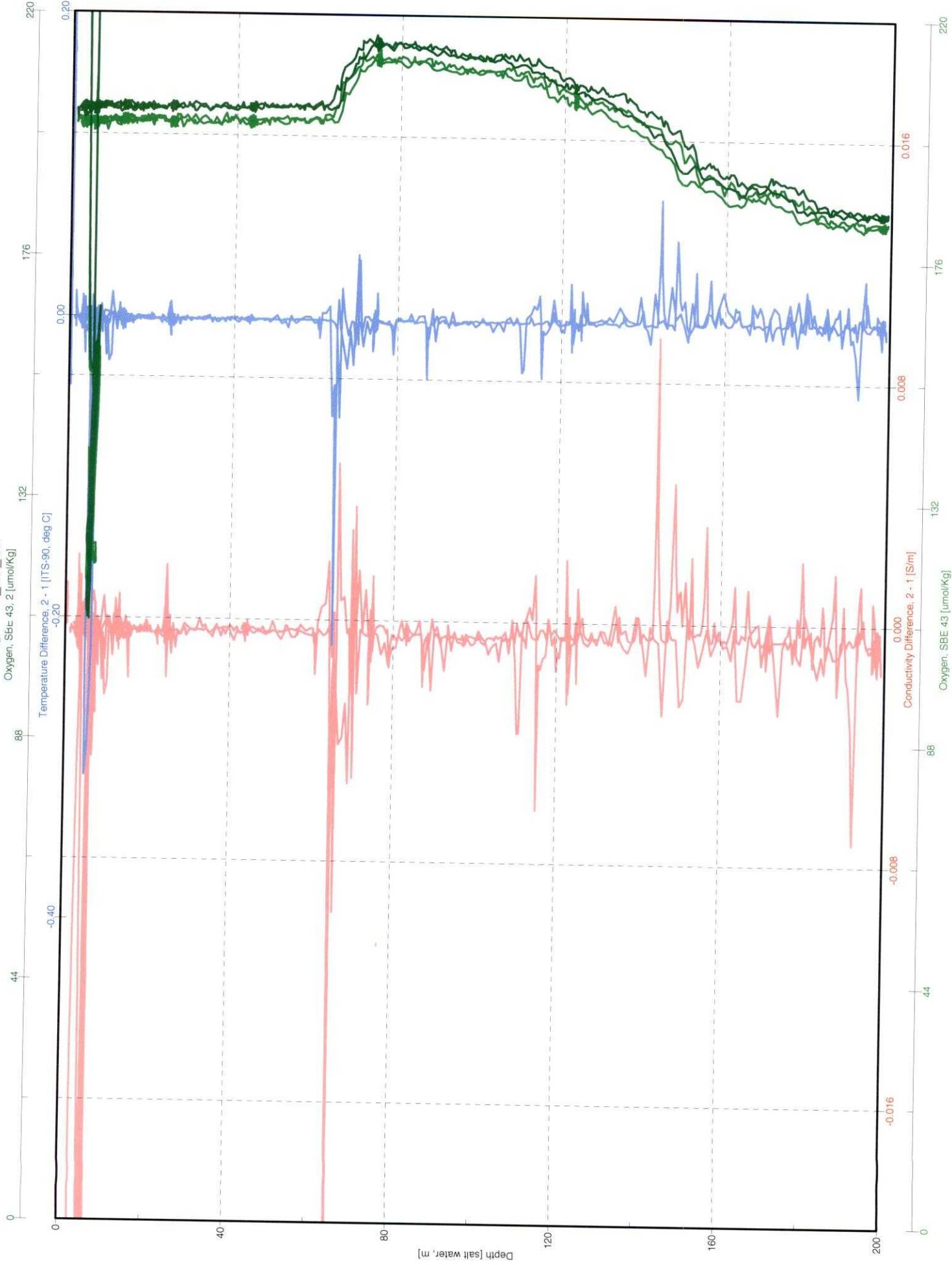


KM0814_2_S3_C2

PAR/Irradiance, Biospherical/Licor



KM0814_3_S3_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator JP
-----------	-------------	-------------	----------------

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	outstation
	CORE MIN CMORE A

Station: 4	Cast: 1
Latitude start: 22° 19.979' N end: 22 19.957' N	Longitude start: 156° 14.972' W end: 156° 14.977' W
Depth of water: 1646 meters	Date (GMT): (215) 08/02/2008
Pressure on Deck	Time: 05:38:00
Begin: ϕ .502 - .624	Start Log: 05: 38 :00 53:10
End: ϕ .35 - ϕ .29	In Water: (215) 05:57:04
Max cast pressure: 1000 dbar	Out of Water: (215) 06:59:07

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	(215) 06:37:40	06:38:10	199.7	200	05:59:10 @ 10m
2		06:38:30	199.2	200	
3		06:38:50	199.3	200	
4	(215) 06:40:48	06:41:10	150.4	150	
5		06:41:30	150.3	150	
6		06:41:50	150.4	150	
7	(215) 06:43:07	06:43:30	118.1	DCM	118 db
8		06:43:50	116.8	DCM	118
9		06:44:10	117.3	DCM	
10	(215) 06:45:15	06:45:30	99.6	100	
11		06:45:50	99.9	100	
12		06:46:10	99.8	75 100	
13	(215) 06:47:35	06:47:50	75.6	75	
14		06:48:10	76.0	75	
15		06:48:30	75.6	75	
16	(215) 06:49:58	06:50:30	44.2	45 db	
17		06:50:50	45.1	45 db	
18		06:51:10	44.5	45	
19	(215) 06:52:25	06:52:50	25.4	25	
20		06:53:10	25.4	25	
21		06:53:30	25.6	25	
22		06:55:50	6.4	5 db	4m wire
23		06:56:10	5.3	5 db	4m wire
24		06:56:30	6.7	5 db	4m wire

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Minimum

Station Number: 4

Date: 2 Aug 2008 (215) ~~2/8/2008~~ (GMT)

Cast Number: 1

Time: 05:38:00 ~~435~~ (GMT)

Operators:

Position: 22° 19.974' N 156° 14.972' W

Target Depth ~~550~~ 1000

Rosette Position	Desired Depth	Nuts	DOC	LLNut	Chl a	FCM	FRRF	Hilton	Ventouras	Kolber
1	200	X	X	X	X	49 X 50	X			
2	200									0.5L
3	200								6L	
4	150	X	X	X	X	51 X 52	X			
5	150									0.5L
6	150								6L	
7	DCM	X	X	X	X	53 X 54	X	5L		
8	DCM									0.5L
9	DCM								6L	
10	100	X	X	X	X	55 X 56	X	5L		
11	100									0.5L
12	100								6L	
13	75	X	X	X	X	57 X 58	X 3	5L		
14	75						6.5			0.5L
15	75								6L	
16	45	X	X	X	X	59 X 60	X	5L		
17	45									0.5L
18	45								6L	
19	25	X	X	X	X	61 X 62	X	7L		
20	25									0.5L
21	25								6L	
22	5	X	X	X	X	63 X 64	X	5L		
23	5							5L		0.5L
24	5								6L	

NOTES:

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Minimum

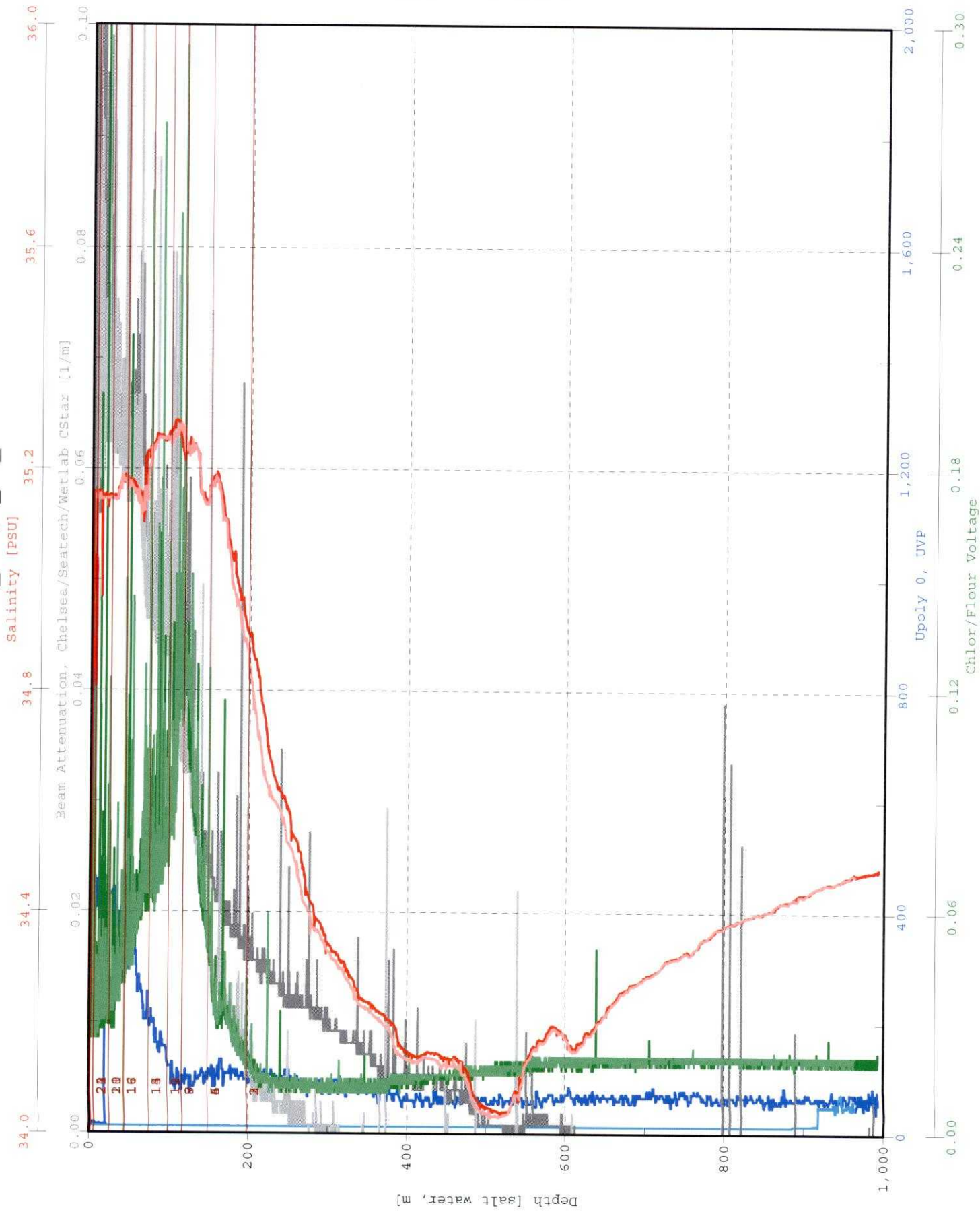
Station Number: 4
Cast Number: 1
Operators:

Date: 2/8/2008 (GMT)
Time: 05:38:00Z 435 (GMT)
Position: 22° 19.974' N 156° 14.972' W

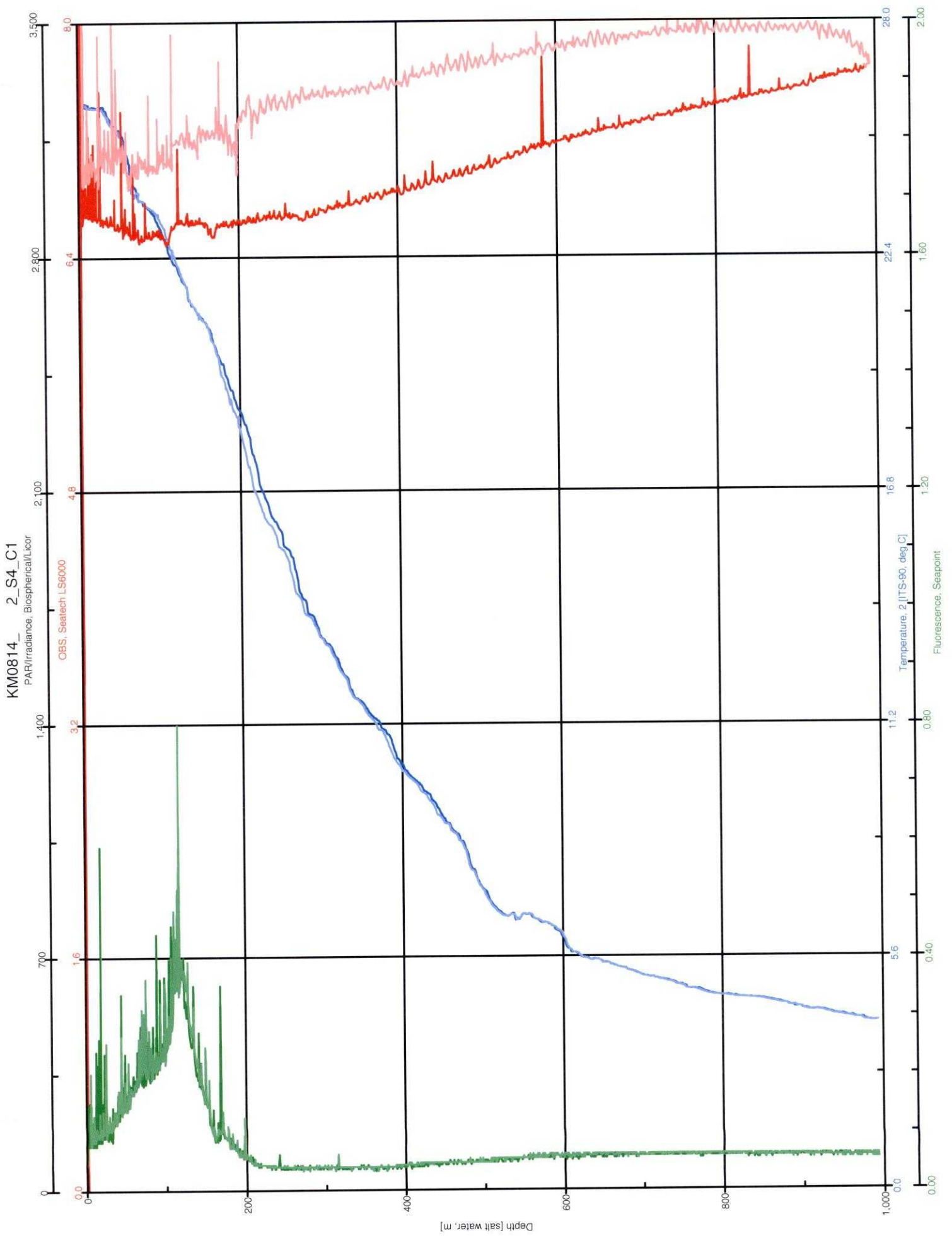
Rosette Position	Desired Depth	Duhamal	Craig	Wilson						
1	200			1.5L						
2	200	5L								
3	200		6L							
4	150			1.5L						
5	150	5L								
6	150		6L							
7	DCM			1.5L						
8	DCM	5L								
9	DCM		6L							
10	100			1.5L						
11	100	5L								
12	100		6L							
13	75			1.5L						
14	75	5L								
15	75		6L							
16	45			1.5L						
17	45	5L								
18	45		6L							
19	25			1.5L						
20	25	10L								
21	25		6L							
22	5			1.5L						
23	5	5L								
24	5		6L							

NOTES:

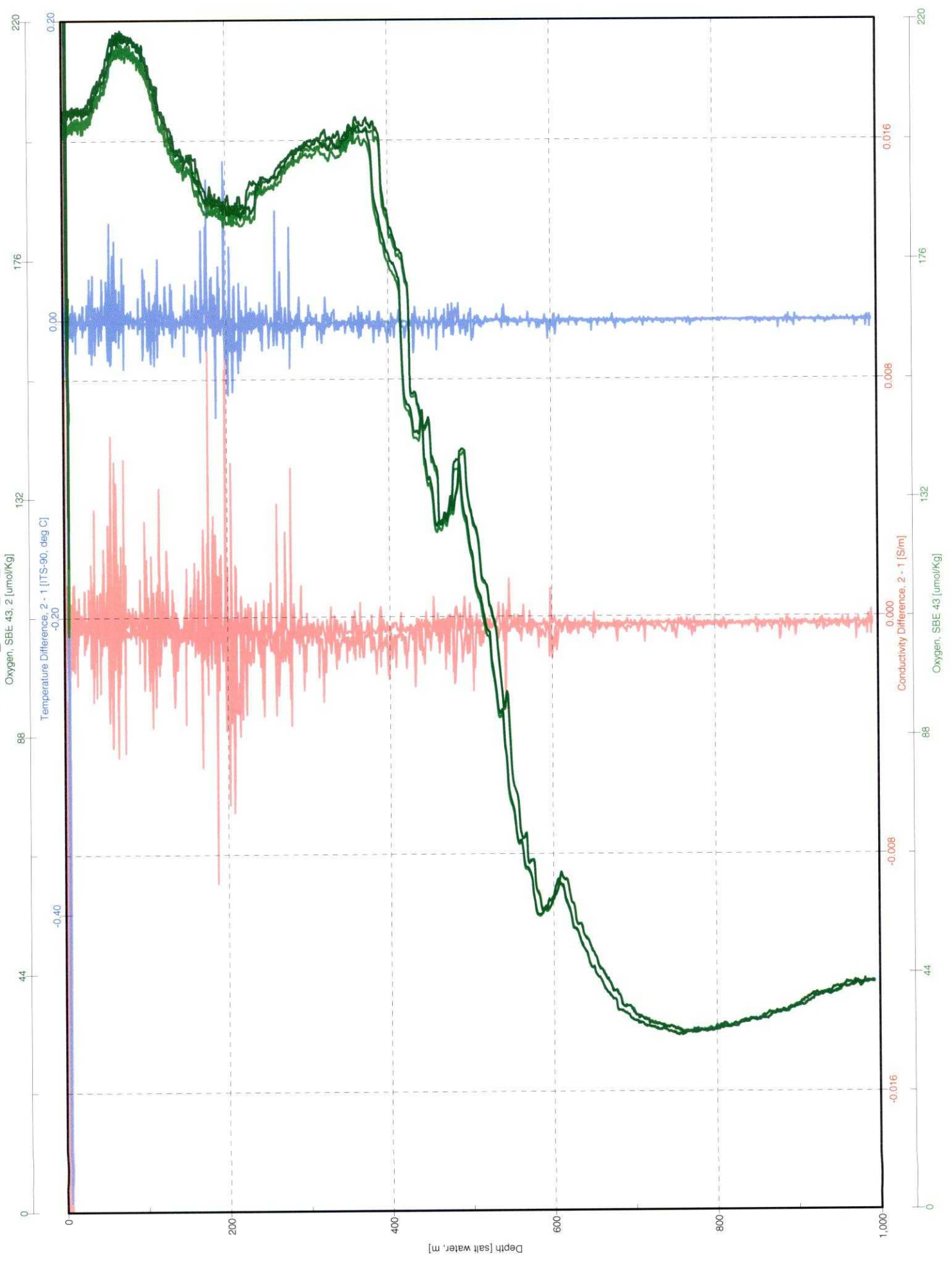
KM0814_d_01_S4_C1



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



KM0814_3_S4_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.3	SP

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	CMORE B

Station: 4	Cast: 2
Latitude start: 22° 19.958' N end: " "	Longitude start: 156° 14.977' W end: 156° 14.976' W
Depth of water: 4647 meters	Date (GMT): (215) 08/21/2008
Pressure on Deck	Time: 07:54:31
Begin: .461-.514 End: .407-.530	Start Log: (215) 07:55:13 Z In Water: 07:59:50 Z
Max cast pressure: 200 dbar	Out of Water: (215) 08:33:56

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2	(215) 08:13:45	08:14:10	174.9	175	
3	(215) 08:15:20	08:15:50	150.9	150	
4		08:16:10	150.8	150	
5	(215) 08:17:37	08:17:50	115.4	DCM	115
6		08:18:10	115.8	DCM	115
7	(215) 08:19:05	08:19:30	100.1	100	
8		08:19:50	99.2	100	
9	(215) 08:21:11	08:21:30	75.3	75	
10		08:21:50	74.8	75	
11	(215) 08:23:17	08:23:30	45.6	45	
12		08:23:50	45.4	45	
13	(215) 08	08:24:10	45.0	45	
14	(215) 08:25:30	08:25:50	24.4	25	
15		08:26:10	25.2	25	
16		08:26:30	24.5	25	
17		08:30:10	10.4 db	10 db	(9m wire)
18		08:31:10	6.1	5 db	
19		08:31:30	5.7	5 db	
20		08:31:50	5.8	5 db	
21					
22					(215) 08:35:50 Z on Deck
23					
24					

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

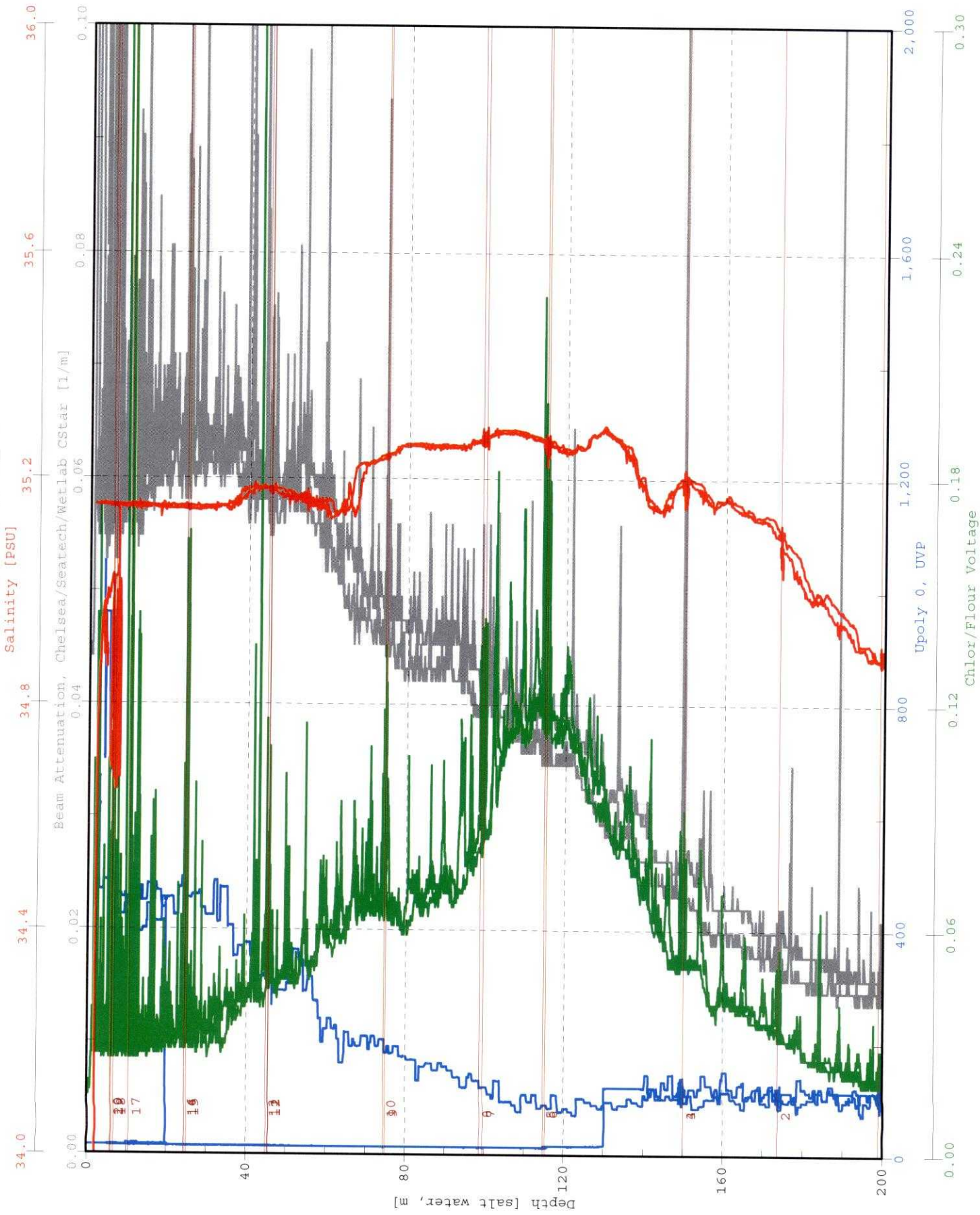
Station Number: 4
Cast Number: 2
Operators: SP, ZK

Date: 2/8/2008 (GMT)
Time: (215) 07:54:31Z (GMT)
Position: 22 19.56 , 156 14.97

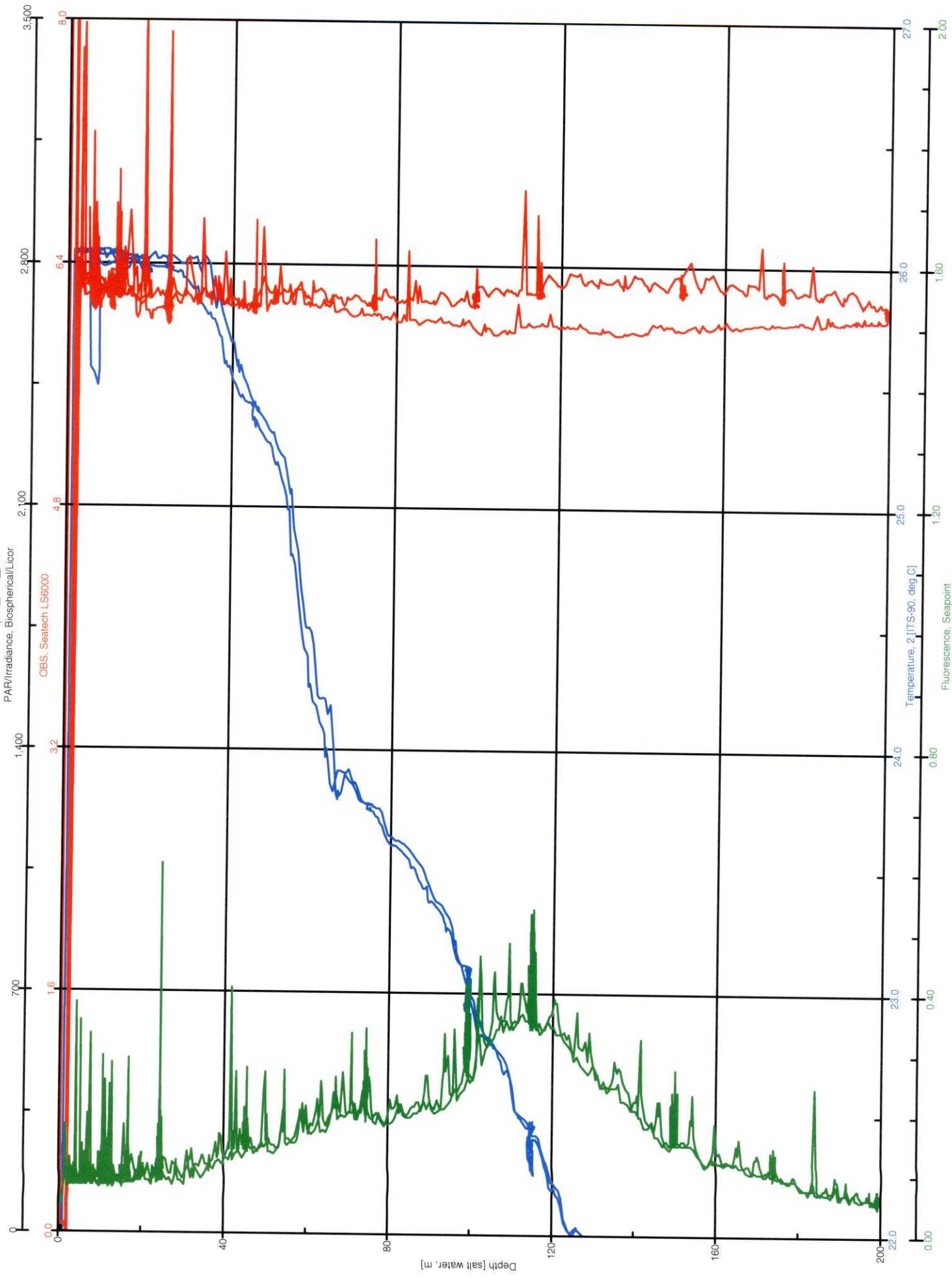
Rosette Position	Desired Depth	Breitlow	Li	Wilson						
1	200			2L						
2	175			2L						
3	150		10L							
4	150			2L						
5	DCM	8L								
6	DCM		10L							
7	100			2L						
8	100	8L								
9	75	8L		2L						
10	75		10L							
11	45			2L						
12	45	8.5L								
13	45		10L							
14	25	8L								
15	25			2L						
16	25		10L							
17	10			2L						
18	5			2L						
19	5	8.5L								
20	5		10L							
21										
22										
23										
24										

NOTES:

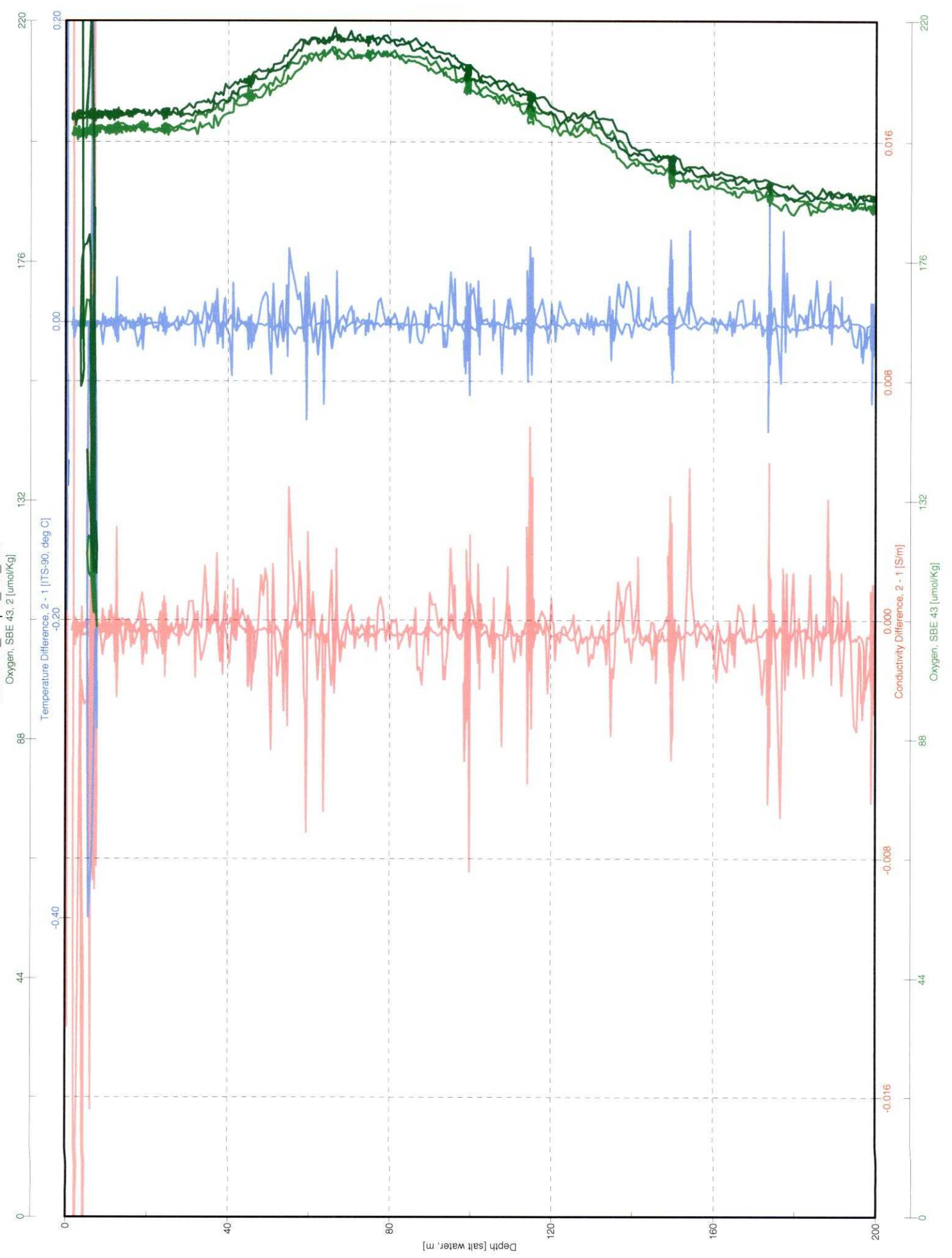
KM0814_a_p1_S4_C2



KM0814_02_S4_C2



KM0814_ p3_S4_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator SP
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	Did cast to 80 dbar - but after
	Sampling at 45 db - needed to get the
	Deep Chloro max - went back
	down to 120 → then 115 db

Station: 4	Cast: 3
Latitude start: 22 19.958' N	Longitude start: 156 14.976' W
end:	end:
Depth of water: 4648 meters	Date (GMT): (215) 08/02/2008
Pressure on Deck	Time: 09:09:15Z
Begin: 796-.807	Start Log: (215) 09:12:00Z
End: 454-.39	In Water: 09:19:28Z
Max cast pressure: 80 → 120 dbar	Out of Water: 09:57:03

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	(215) 09:29:35	09:29:50	75.3	75 75	09:22:07 @ 10m
2		09:30:10Z	74.8	75 db	
3		09:30:30	75.4	75 db	
4		09:30:50	75.2	75	
5		09:31:10	75.8	75	
6		09:31:30	75.4	75	
7	(215) 09:33:58	09:35:30	44.8	45 db	
8		09:35:50	44.7	45 db	
9		09:36:10	44.9	45	
10		09:36:30	44.7	45	
11		09:37:00	44.7	45	
12		09:37:30	44.5	45 db	Missed Sampling at Dcm
13	(215) 09:43:31	09:43:50	114.7	25 Dcm 115	so go back down
14		09:44:10	114.9	25 Dcm 115	
15		09:44:30	115.3	25 Dcm 115	
16		09:44:50	114.9	25 Dcm 115	
17		09:45:10	114.5	25 Dcm 115 db	
18		09:45:30	115.1	25 Dcm 115 db	now return to 5
19	(215) 09:52:14	09:52:30	5.9	5 db	4m wire (but sit at 25 so
20		09:52:50Z	6.8 db	5 db	4m wire winds ops can change)
21		09:53:10Z	6.3	5 db	
22		09:53:30	6.7	5 db	
23		09:53:50	6.4	5 db	
24		09:54:10	6.7 db	5 db	

C-MORE CRUISE LOG

OPEREX

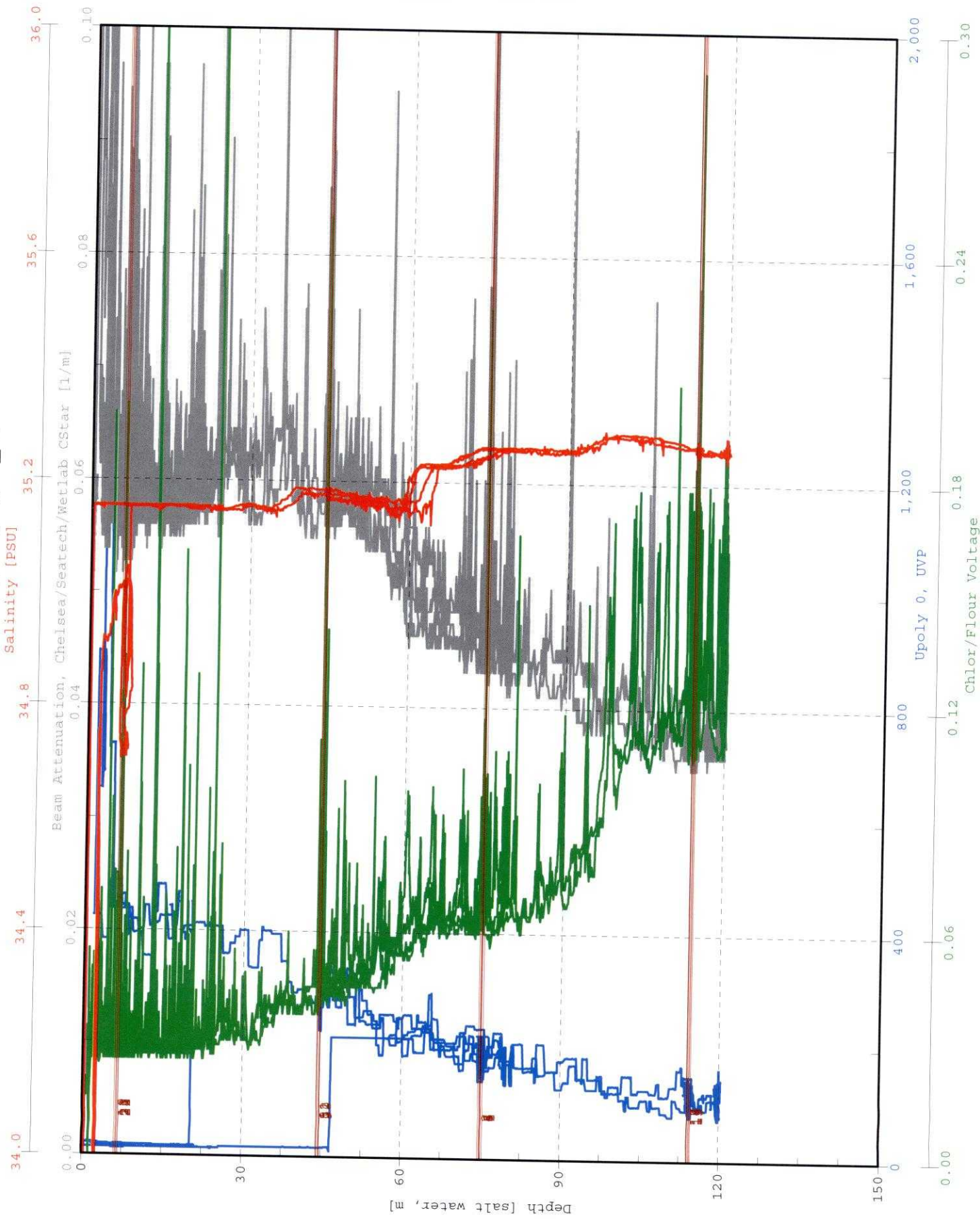
Station Data Sheet

Station Number: 4 Date: 2/8/2008 (GMT)
 Cast Number: 3 Time: 9:09:44 (GMT)
 Operators: SP, ZK Position: 22 19.56 , 156 14.97

Rosette Position	Desired Depth	Krey								
1	75	12								
2	75	12								
3	75	12								
4	75	12								
5	75	12								
6	75	12								
7	45	12								
8	45	12								
9	45	12								
10	45	12								
11	45	12								
12	45	12								
115 13	Dur 25	12								
115 14	Dur 25	12								
115 15	Dur 25	12								
115 16	Dur 25	12								
115 17	Dur 25	12								
115 18	Dur 25	12								
19	5	12								
20	5	12								
21	5	12								
22	5	12								
23	5	12								
24	5	12								

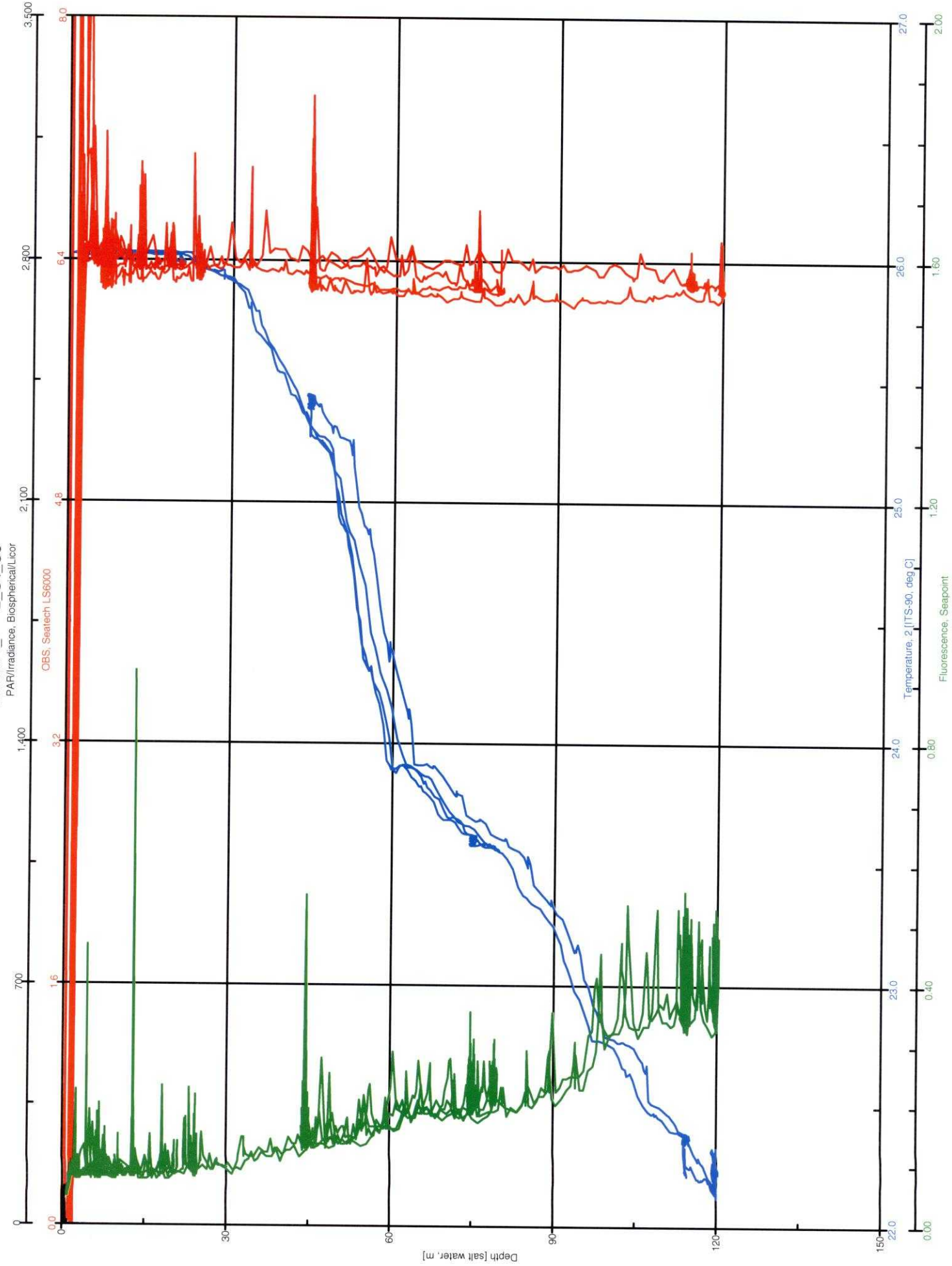
NOTES:

KM0814_d_21_S4_C3

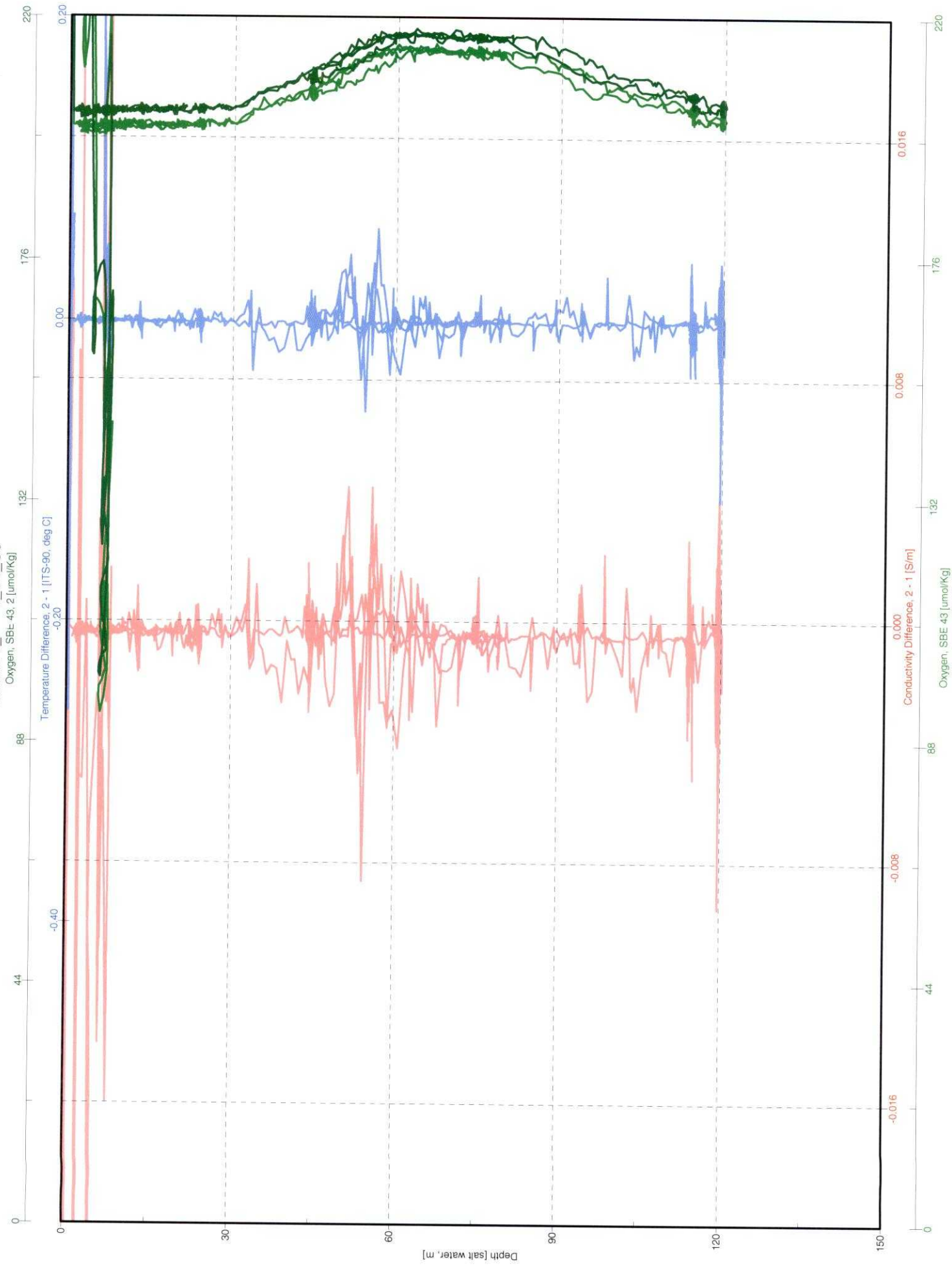


Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_2_S4_C3



KM0814_3_S4_C3



Pump Status	off
Scan Count	68353
Pressure, Digiquartz [db]	0.4437
Depth [salt water, m]	0.4413
PAR/Irradiance, Biospherical/Licor	4.263e+001
Temperature [ITS-90, deg C]	22.73126
Temperature Difference, 2 - 1 [ITS-90, deg C]	1.11862
Conductivity [S/m]	0.0001821
Conductivity Difference, 2 - 1 [S/m]	0.1178112
Oxygen, SBE 43 [ml/l]	6.238902
Oxygen, SBE 43, 2 [ml/l]	6.330163
OBS, Seatech LS6000	0.00000
Fluorescence, Seapoint	5.128e-002
Beam Transmission, Chelsea/Seatech/Wetlab CStar [%]	97.45182
Voltage 4	0.018
Voltage 5	0.00000

km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.2	Operator updyke
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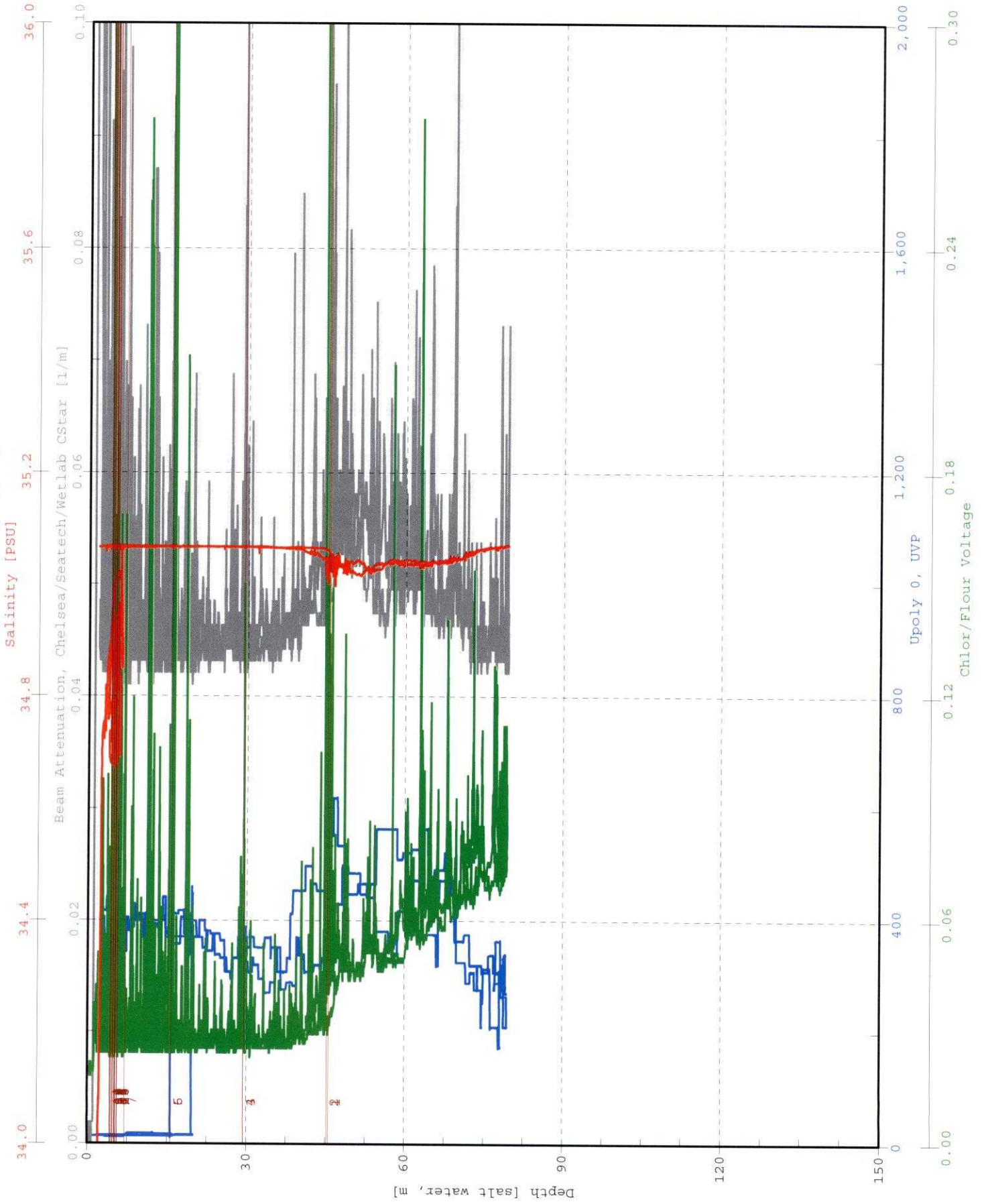
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: A 5	Cast: A 1
Latitude start: 22° 16.107' N end:	Longitude start: 156° 42.354' W end:
Depth of water: 1797 meters	Date (GMT): (215) 08/02/2008
Pressure on Deck	Time: 14:40:00
Begin:	Start Log: 14:40:00
End:	In Water: 14:42:00
Max cast pressure: 80 dbar	Out of Water:

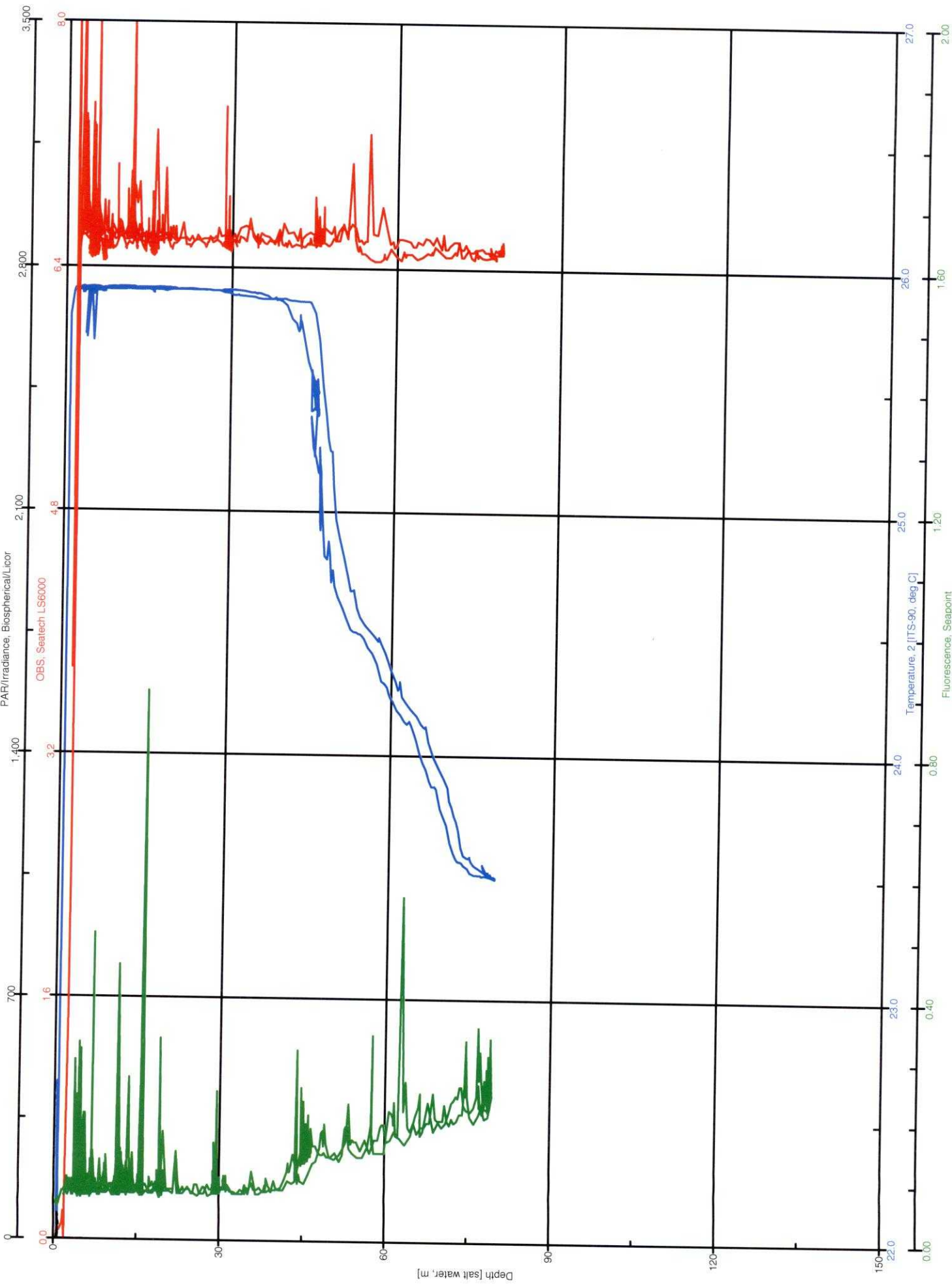
Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	14:54:15	14:54:30	45.8	45	
2		14:54:45	45.5	45	
3	14:56:15	14:56:30	30.0	30	
4		14:56:45	29.4	30	
5	14:58:15	14:58:30	15.6	15	
6		14:58:45	15.7	15	
7	15:01:15	15:01:30	7.0	5	
8	15:02:45	03:00	5.2	5	
9		:15	4.7	5	
10		:30	4.4	5	
11		:45	5.3	5	
12		04:00	4.9	5	
13		15	5.2	5	
14		30	4.5	5	
15		45	5.4	5	
16		05:00	5.1	5	
17		:15	4.7	5	
18		:30	4.5	5	
19		:45	4.9	5	
20		06:00	5.1	5	
21		:15	4.9	5	
22		:30	4.9	5	
23		:45	5.0	5	
24		07:00	5.1	5	

KM0814_di_1_S5_C1

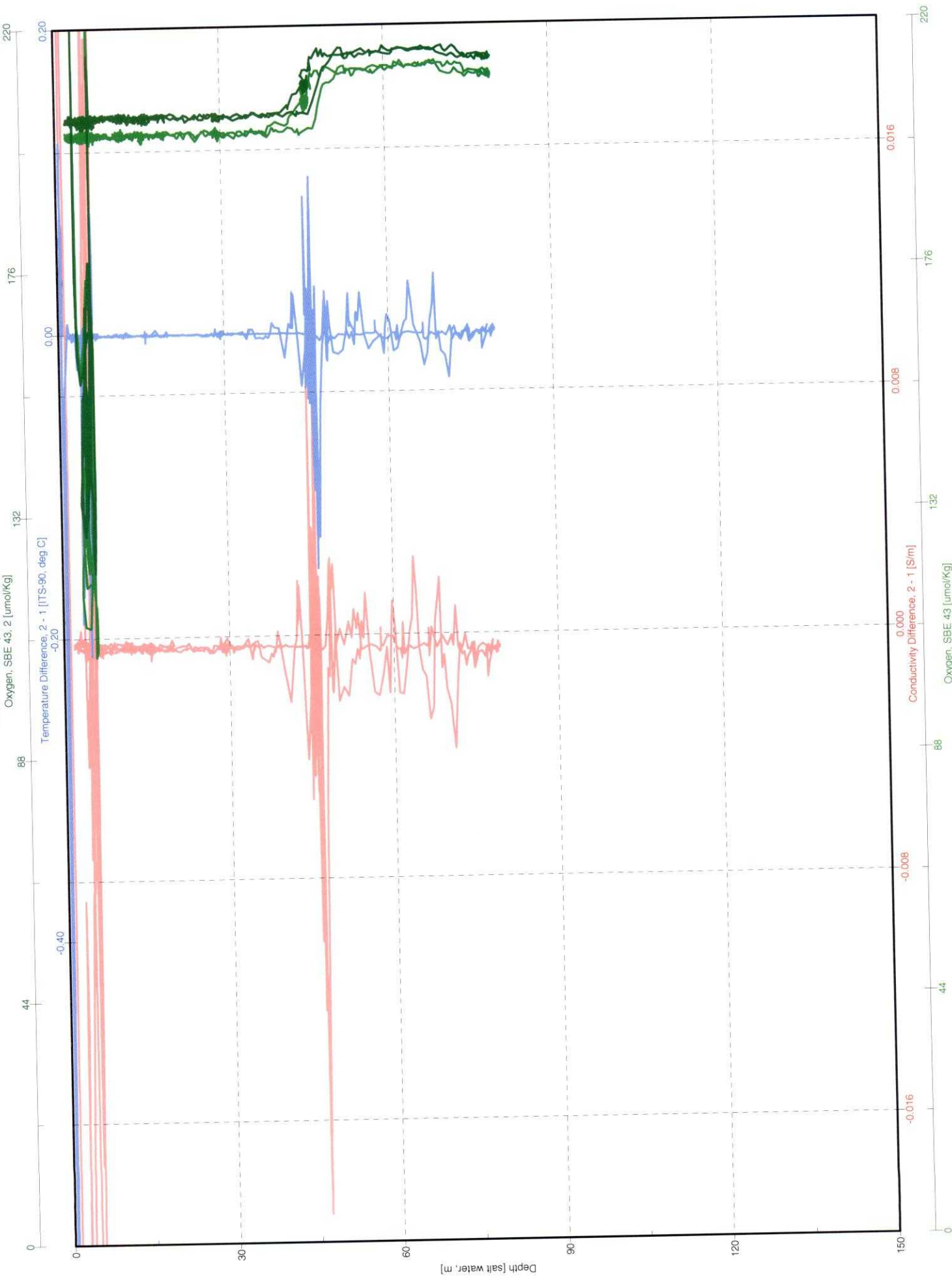


KM0814_d1_1_-_S5_C1

PAR/Irradiance, Biospherical/Licor



KM0814_d1..._S5_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.2	Operator b updyke
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 5	Cast: 2
Latitude start: 22° 14.738' N	Longitude start: 156° 43.764' W
end: 22° 14.739' N	end: 156° 43.765' W
Depth of water: 1818 meters	Date (GMT): (215) 08/02/2008
Pressure on Deck	Time: 16:30:00
Begin: 0.75	Start Log: 16:41:00
End: 0.45	In Water: 16:43:00
Max cast pressure: 550 dbar	Out of Water: 17:31:30

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	17:09:30	17:09:45	200.5	200	
2		17:10:00	200.7	200	
3		17:10:15	201.0	200	
4	17:12:30	17:12:45	199.8	150	
5		17:13:00	199.6	150	
6		17:13:15	150.4	150	
7	17:15:15	17:15:30	115.9	DCM	115 db
8		17:15:45	115.5	DCM	
9		17:16:00	115.7	DCM	
10	17:17:30	17:17:45	99.5	100	
11		17:18:00	99.6	100	
12		17:18:15	99.8	100	
13	17:20:00	17:20:15	74.6	75	
14		17:20:30	75.1	75	
15		17:20:45	75.2	75	
16	17:22:45	17:23:00	45.1	45	
17		17:23:15	44.9	45	
18		17:23:30	45.0	45	
19	17:25:00	17:25:15	24.5	25	
20		17:25:30	24.8	25	
21		17:25:45	25.1	25	
22	17:28:30	17:28:45	4.9	5	
23		17:29:00	6.0	5	
24		17:29:15	5.7	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Minimum

Station Number: 5 Date: 8/2/2008 (215) (GMT)

Cast Number: 2 Time: (GMT)

Operators: ZK, BU, AF

Position:

Target Depth 550

Rosette Position	Desired Depth	Nuts	DOC	LLNut	Chl a	FCM	FRRF	Hilton	Ventour as	Kolber
1	200	x	x	x	x	65 X 66	x			
2	200									0.5L
3	200								6L	
4	150	x	x	x	x	67 X 68	x			
5	150									0.5L
6	150								6L	
7	DCM	x	x	x	x	69 X 70	x	5L		
8	DCM									0.5L
9	DCM								6L	
10	100	x	x	x	x	71 X 72	x	5L		
11	100									0.5L
12	100								6L	
13	75	x	x	x	x	73 X 74	x	5L		
14	75									0.5L
15	75								6L	
16	45	x	x	x	x	75 X 76	x	5L		
17	45									0.5L
18	45								6L	
19	25	x	x	x	x	77 X 78	x	7L		
20	25									0.5L
21	25								6L	
22	5	x	x	x	x	79 X 80	x	5L		
23	5							5L		0.5L
24	5								6L	

NOTES:

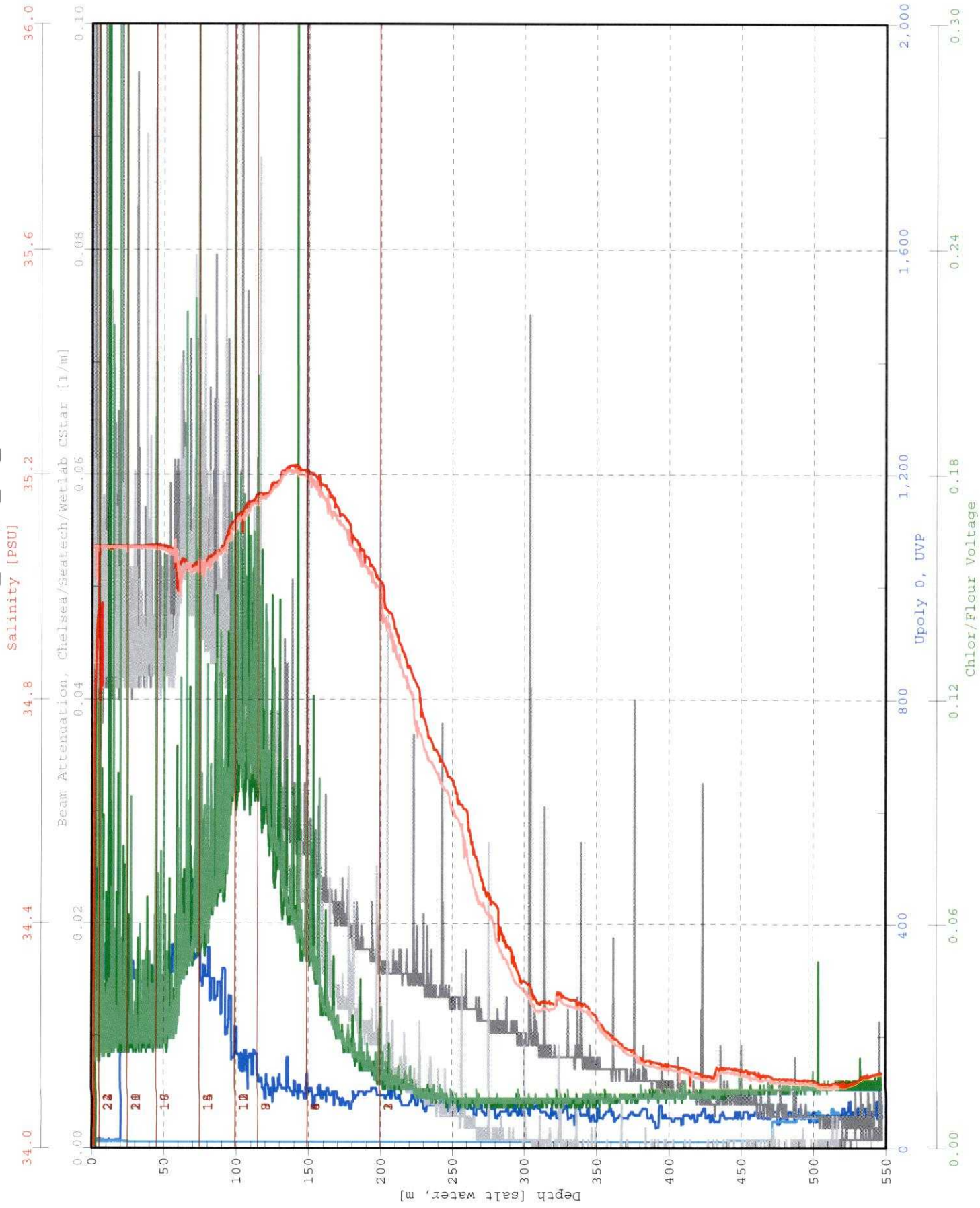
C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Minimum

Station Number: 5 Date: 8/2/2008 (215) (GMT)
 Cast Number: 2 Time: (GMT)
 Operators: ZK, BU, AF Position:

Rosette Position	Desired Depth	Duhamel	Krey	Wilson						
1	200			1.5L						
2	200	5L								
3	200		6L							
4	150			1.5L						
5	150	5L								
6	150		6L							
7	DCM			1.5L						
8	DCM	5L								
9	DCM		6L							
10	100			1.5L						
11	100	5L								
12	100		6L							
13	75			1.5L						
14	75	5L								
15	75		6L							
16	45			1.5L						
17	45	5L								
18	45		6L							
19	25			1.5L						
20	25	10L								
21	25		6L							
22	5			1.5L						
23	5	5L								
24	5		6L							

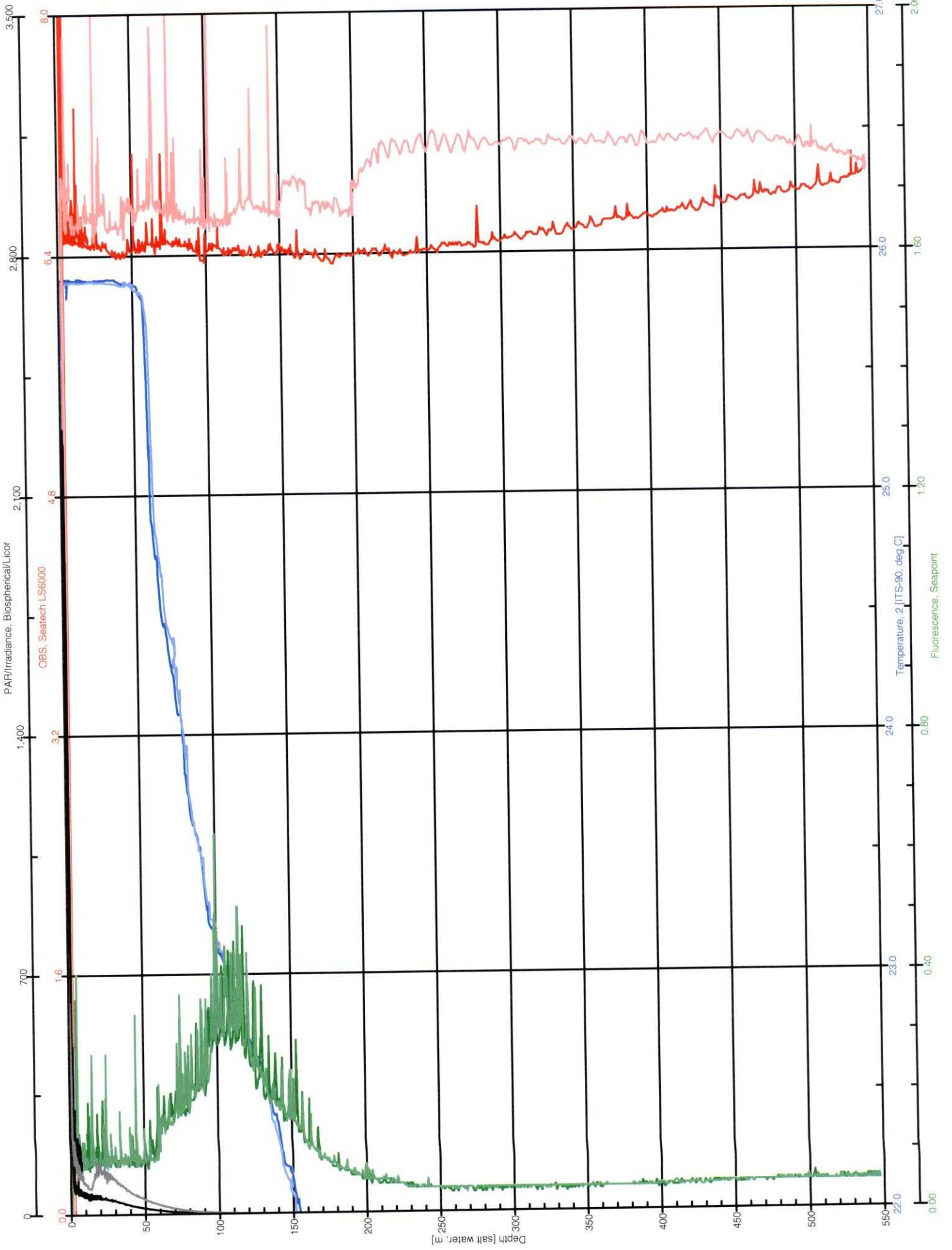
NOTES:

KM0814_d_p1_S5_C2

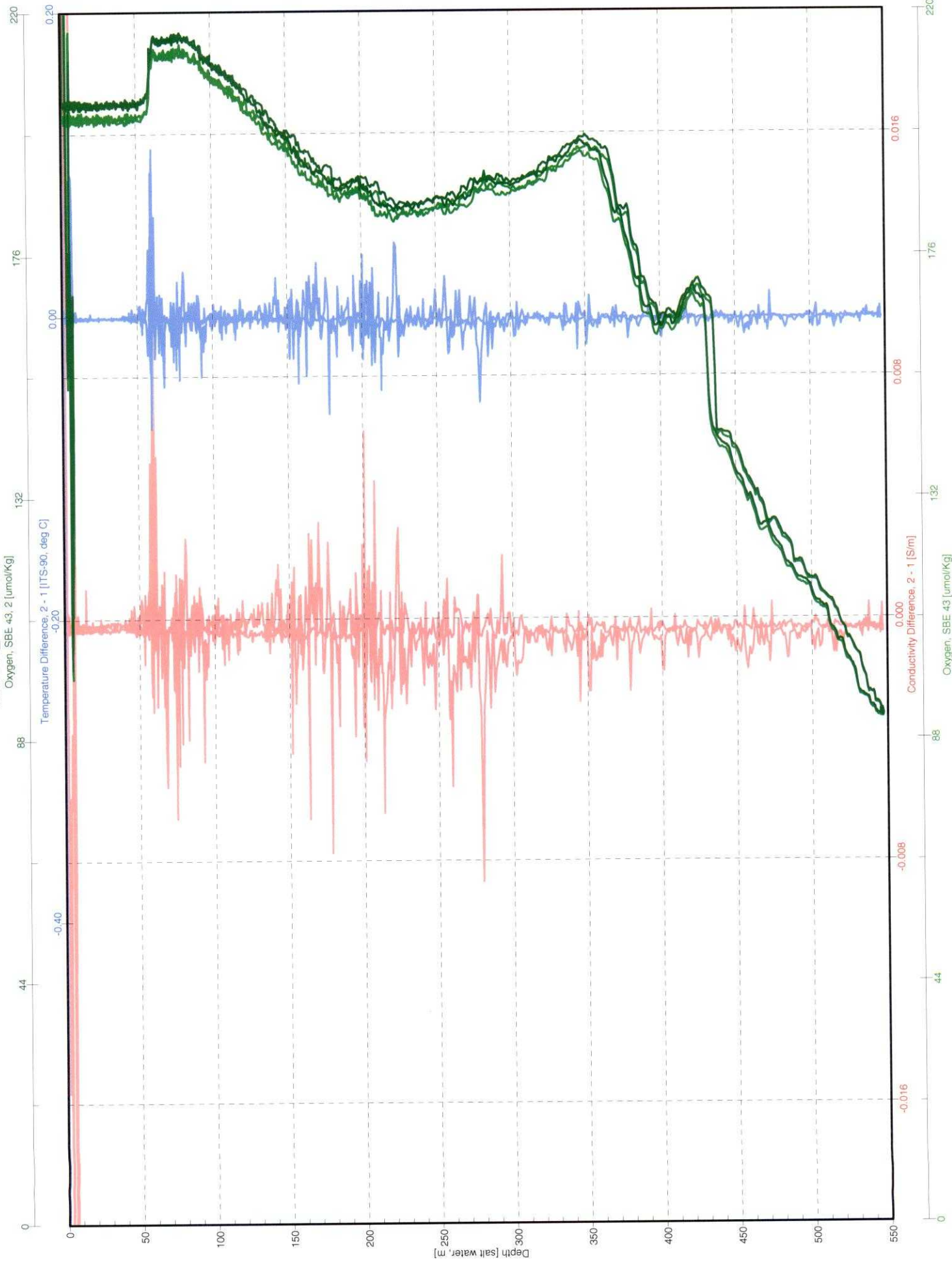


KM0814_2_S5_C2

PAR/Irradiance, Biospherical/Licor



KM0814_3_S5_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.1	Steve

Station: 5	Cast: 3
Latitude start: 22 14.364' N end: same	Longitude start: 156° 44.238' W end: 156° 44.239' W
Depth of water: 4672 meters	Date (GMT): (215) 08 02/2008
Pressure on Deck	Time: 18:32:00
Begin: 0.365 End: 0.451 - 363	Start Log: 18:32:20 In Water: (215) 18:34:58Z Out of Water: (215) 19:12:51Z
Max cast pressure: 250 dbar	

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
CMORE B	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	(215) 18:52:21	18:52:50Z	200.3	200 db	Turn on deck LS6000 = 0.488 (daylight)
2	(215) 18:54:25	18:54:50Z	150.4	150 db	18:38:35Z @ 10m
3		18:55:10Z	150.5	150	LS6000 = 6.58 (in water)
4	(215) 18:56:40	18:57:10Z	112.1	DCM	112 dbar
5		18:57:30Z	112.0	DCM	112 dbar
6		18:57:50Z	111.8	DCM	112 dbar
7		18:59:10	100.2	100	
8	(215) 19:00:28	19:00:50	75.5	75	
9		19:01:10	75.2	75	
10		19:01:30	75.2	75	
11	(215) 19:02:	19:03:10	45.1	45	
12		19:03:30	45.2	45	
13		19:03:50	45.1	45	
14	(215) 19:05:00	19:05:30	24.8	25	
15		19:05:50	25.3	25	
16		19:06:10	25.0	25	
17		19:06:30	25.3	25	
18		19:06:50	24.9	25	
19		19:07:10	24.3	25	
20		19:07:30	25.5	25	
21		19:07:50	25.1	25	
22	(215) 19:09:42	19:10:10	6.1	5	4m wire → 3m wire
23		19:10:30	6.0	5	
24		19:10:50	5.8	5	19:15:25 on Deck

C-MORE CRUISE LOG
OPREX
Station Data Sheet

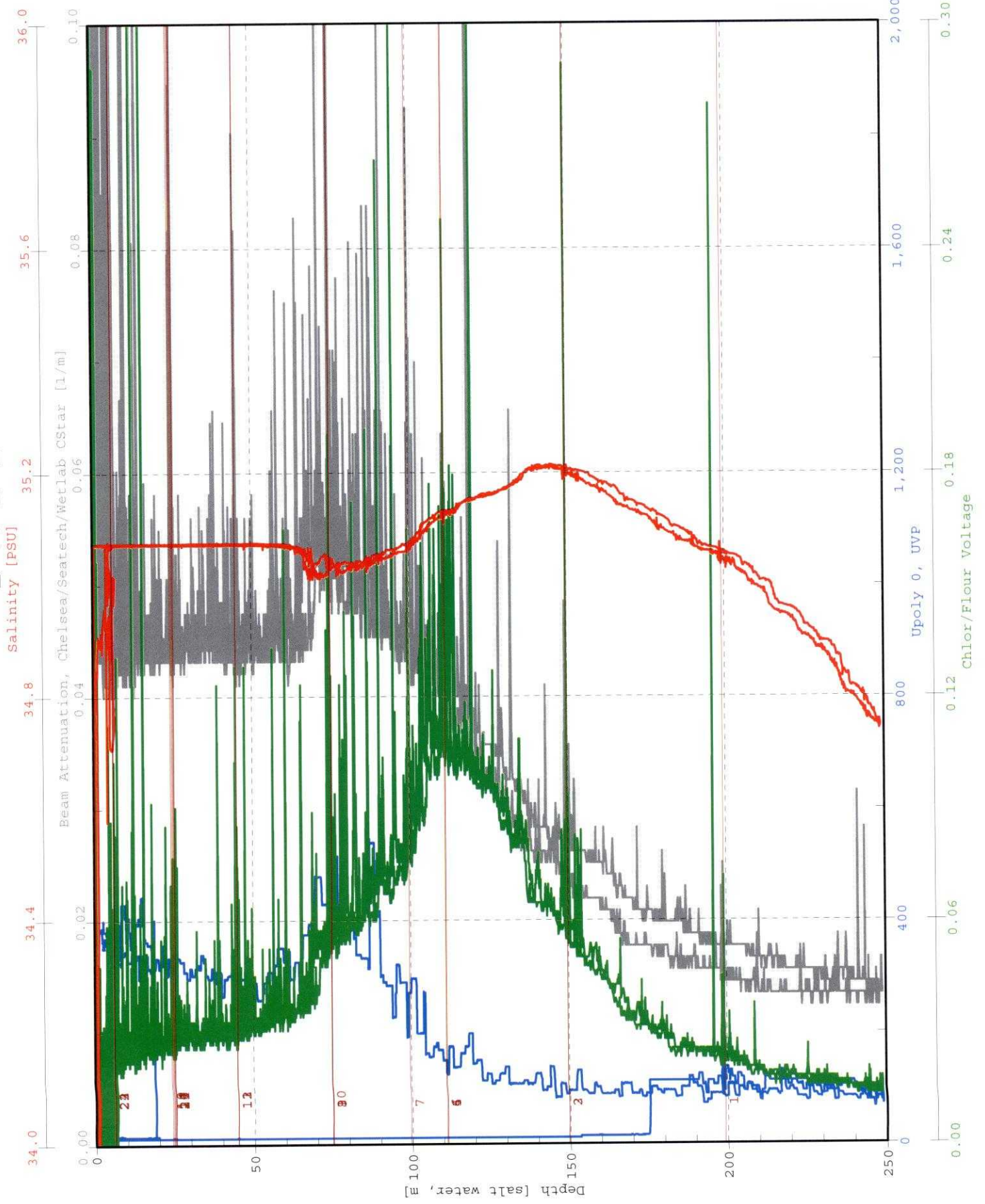
Station Number: 5
 Cast Number: 3
 Operators: ZIC SP KD AF

Date: 8/2/2008 (215) (GMT)
 Time: (215) 18:32:00 (GMT)
 Position: 22 14.364' N 156 44.238' W

Rosette Position	Desired Depth	Breitlow	Watkins	Fong	Li	Bjorkman	WILSON			
1	200			4L						
2	150			4L	7L					
3	150				10L					
4	DCM			4L	7L					
5	DCM	8L								
6	DCM				10L					
7	100	8L								
8	75			4L	7L					
9	75	8L								
10	75				10L					
11	45			4L	7L					
12	45	8.5L								
13	45				10L					
14	25			4L	7L					
15	25		12L							
16	25		12L							
17	25		12L							
18	25		12L							
19	25	8L								
20	25					6L				
21	25				10L					
22	5			4L	7L					
23	5	8.5L								
24	5				10L					

NOTES: Please do not dump CTD water until Sam Wilson has sampled! Please check with ALLI BEFORE emptying!

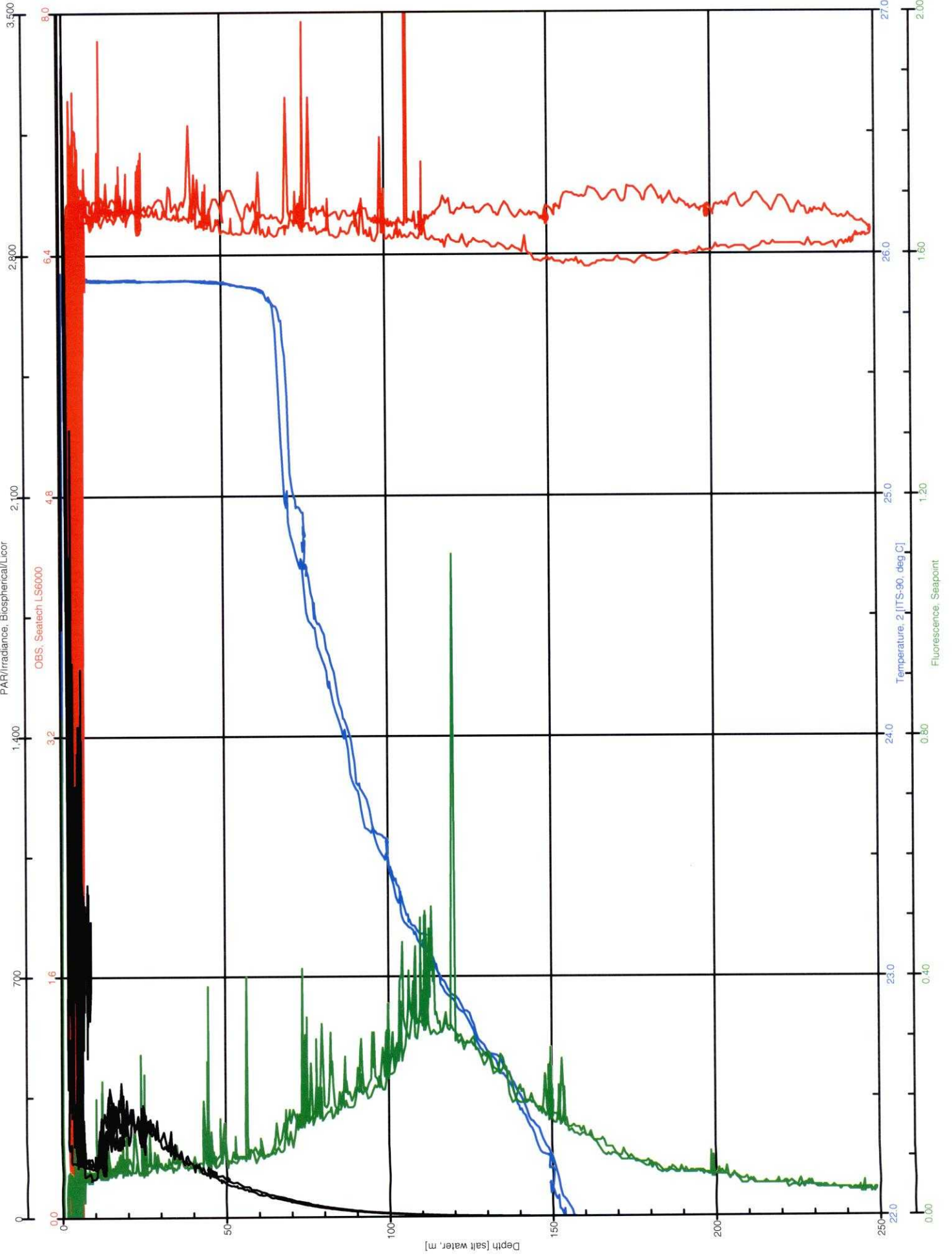
KM0814_d_01_S5_C3



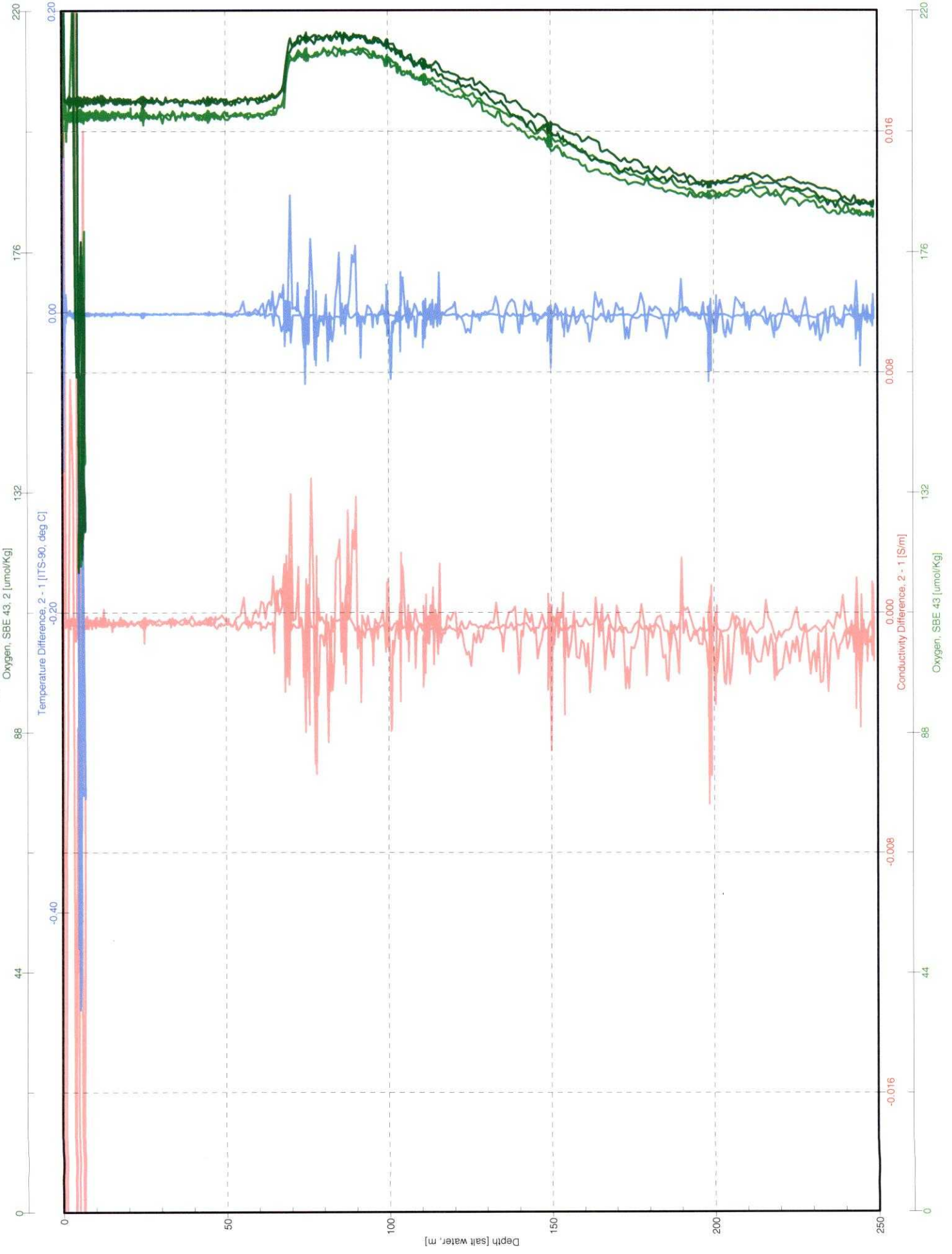
KM0814_2_S5_C3

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



KM0814_3_S5_C3



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator Updyke
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 6	Cast: 1
Latitude start: 22° 14.936' N end: 22° 14.941' N	Longitude start: 156° 44.418' W end: 156° 44.3
Depth of water: 4817 meters	Date (GMT): (216) 08/02/ 2008
Pressure on Deck Begin: 0.60 End: 0.40	Time: 07:45:00 Start Log: 07:45:00 In Water: 07:49:00 Out of Water: 08:36:00
Max cast pressure: 500 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	08:12:00	08:12:30	200.4	200	
2	"	08:12:45	201.0	200	
3	08:15:00	08:15:15	149.4	150	
4	"	08:15:30	149.6	150	
5	08:17:30	08:17:45	100.4	DCM	100 dbar
6	↓	08:18:00	99.7	DCM	
7		08:18:15	99.5	DCM	
8		08:18:30	100.5	100	
9		08:18:45	99.7	100	
10	08:20:30	08:20:45	74.1	75	
11	"	08:21:00	74.7	75	
12	08:22:30	08:22:45	45.2	45	
13	↓	08:23:00	45.0	45	
14		08:23:15	45.2	45	
15		08:23:30	45.4	45	
16	↓	08:23:45	45.1	45	
17	08:24:45	08:25:15 24:00	24.1	25	
18	↓	08:25:30	24.2	25	
19		08:25:45	24.6	25	
20		08:26:00	24.4	25	
21		↓	08:26:15	24.1	25
22	08:30:15	08:30:30	5.5	5	
23	↓	08:30:45	5.2	5	
24		08:31:00	5.6	5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 6

Date: 8/3/08 (216) (GMT)

Cast Number: 1

Time: 0750 (2250 HST) (GMT)

Operators: BU, KB, SW, AF
Target Depth 200

Position: 22° 14.936' N
156° 44.418' W

Gonna happen

Rosette Position	Desired Depth	Core				<input checked="" type="checkbox"/> Kolber	<input checked="" type="checkbox"/> Ventouras
Rosette Position	Desired Depth	Nuts	LLNut	Chl a	FCM	FRRF	DNA/RNA
1	200	X	X	X	81 X 82	X	
2	200						12L
3	150	X	X	X	83 X 84	X	
4	150						
5	DCM	X	X	X	85 X 86	X	
6	DCM						12L
7	DCM						
8	100	X	X	X	87 X 88	X	
9	100						
10	75	X	X	X	89 X 90	X	
11	75						
12	45	X	X	X	91 X 92	X	
13	45						12L
14	45						
15	45						
16	45						
17	25	X	X	X	93 X 94	X	
18	25						
19	25						
20	25						
21	25						
22	5	X	X	X	95 X 96	X	
23	5						12L
24	5						

HPLC

X

X

X

X

X

X

X

X

NISKIN 23 OVER BUDGET - FEED FOR UPCOMING CASTS

C-MORE CRUISE LOG

OPREX

Station Data Sheet: Core Minimum

Station Number: 6 Date: 8/3/08 (216) (GMT)

Cast Number: 1 Time: 0750 (082250HST) (GMT)

Operators: BU, SW, KB Position: 22° 14.936' N 156° 44.418' W

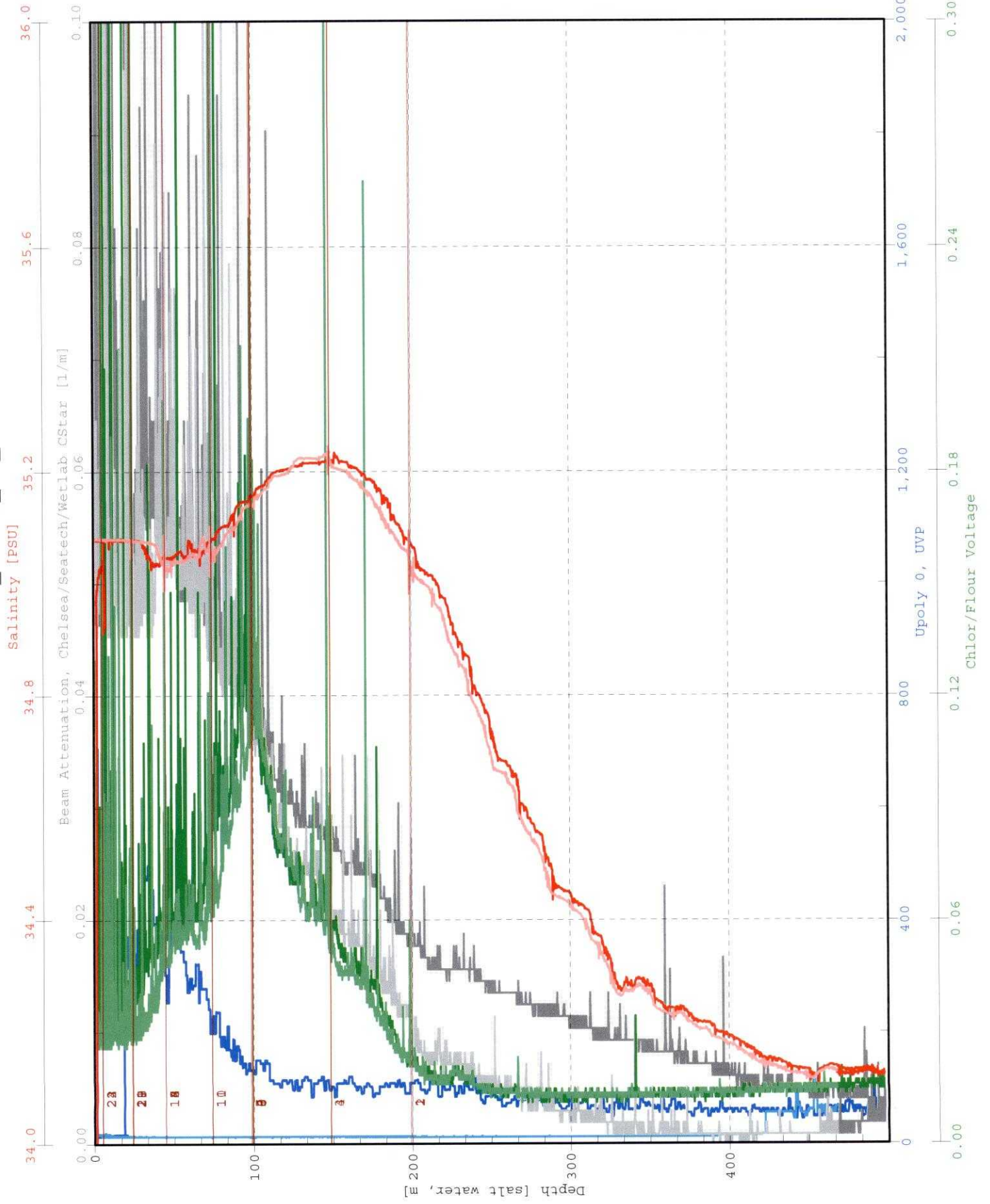
Target Depth 200

Check yo' box...if sampling

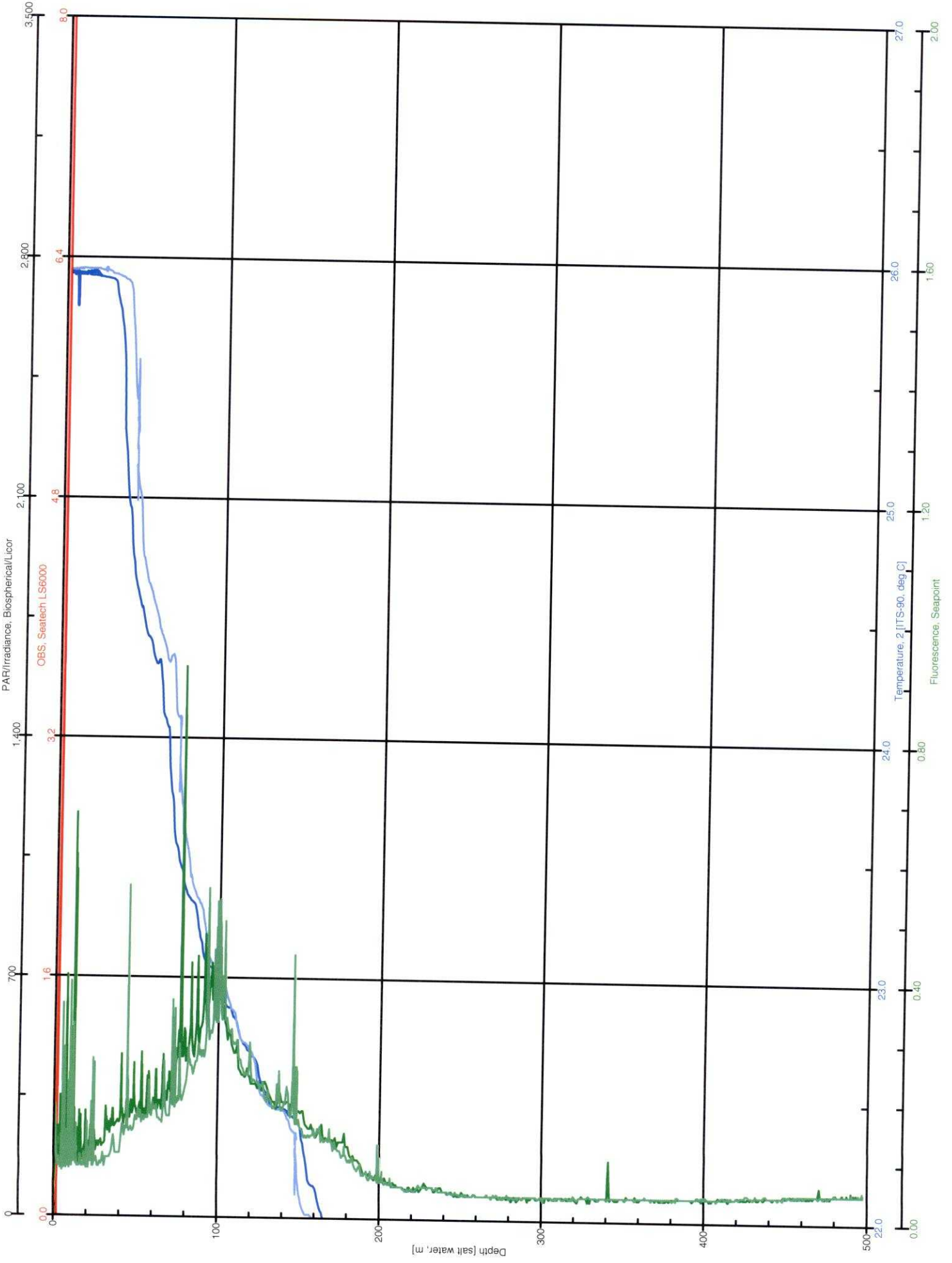
Rosette Position	Desired Depth	Alt. Breitlow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel	Hilton	Li	Watkins	Cajit
Rosette Position	Desired Depth	Toxins	BP	Virus	RNA	Gas	Phosphorus	Alk Phosphatase	Culture	Diatom DNA	N2 fixation	HPLC
1	200		20ML	10ML								2L
2	200											
3	150		20ML	10ML								2L
4	150				2L					10L		
5	DCM		20ML	10ML								2L
6	DCM											
7	DCM				2L					10L		
8	100		20ML	10ML								2L
9	100								1L			
10	75		20ML	10ML								2L
11	75				2L					10L		
12	45		20ML	10ML						10L		2L
13	45											
14	45	3L			2L							
15	45										12L	
16	45										12L	
17	25		20ML	10ML						10L		2L
18	25	3L					6L					
19	25				2L	2L		2L	5L			
20	5										12L	
21	5										12L	
22	5		20ML	10ML					5L			2L
23	5				2L	2L			5L			
24	5				2L					10L		



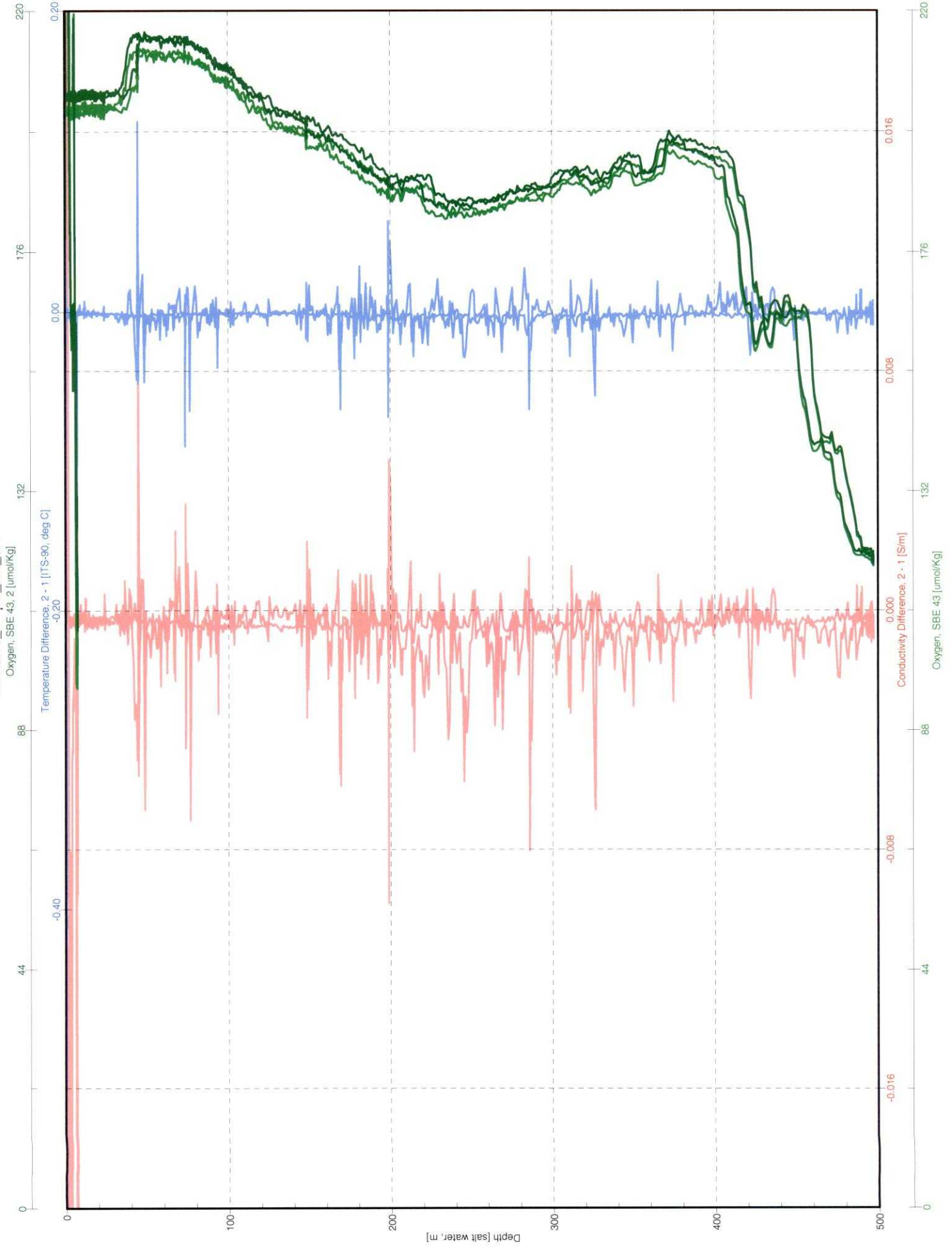
KM0814_disp1_S6_C1



KM0814_d1_v1_--_S6_C1
PAR/Irradiance, Biospherical/Licor



KM0814_c , J_S6_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 7	Cast: 1
Latitude start: 22N 34.983'	Longitude start: 157W 0.004'
end: 22N 34.982'	end: 157W 0.003'
Depth of water: 4610 meters	Date (GMT): (216) 08/03/2008
Pressure on Deck	Time: 11:07:47
Begin: 0.62	Start Log: 11:07:47
End: 0.39	In Water: 11:10:18
Max cast pressure: 500 dbar	Out of Water: 12:01:10

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		11:38:55	200.45	200	DCM = 108 dbar
3	11:41:21	11:41:40		150	
4		11:42:00		150	
5	11:44:30	11:44:45		DCM	
6		11:45:00	109.84	DCM	
7		11:45:20	109.85	DCM	
8	11:46:30	11:46:50	99.65	100	
9		11:47:10	100.4	100	
10	11:49:00	11:49:20	74.75	75	
11		11:49:40	75.53	75	
12	11:51:22	11:51:40	45.29	45	
13		11:52:05	45.95	45	
14		11:52:20	45.01	45	
15		11:52:35	45.05	45	
16		11:52:50	45.28	45	
17	11:54:10	11:54:35	25.10	25	
18		11:54:50	25.73	25	
19		11:55:15	25.44	25	
20		11:55:35	25.82	25	
21		11:56:20	25.43	25	
22				5	
23	11:58:30	11:58:55		5	
24		11:59:15		5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 7 Date: 8/3/2008 (216) (GMT)

Cast Number: 1 Time: 11:07:47 (GMT)

Operators: SD, AF, JB, ZK Position:
Target Depth 200

Gonna happen

X X

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	97 X 98	X	X	
2	200							12L
3	150	X	X	X	99 X 100	X	X	
4	150							
5	DCM	X	X	X	101 X 102	X	X	
6	DCM							12L
7	DCM							
8	100	X	X	X	103 X 104	X	X	
9	100							
10	75	X	X	X	105 X 106	X	X	
11	75							
12	45	X	X	X	107 X 108	X	X	
13	45	X	X	X	X	NO FILE	X	12L
14	45					X		X
15	45							
16	45							
17	25	X	X	X	109 X 110	X	X	
18	25							
19	25							
20	25							
21	25							
22	25	X	X	X	111 X 112	X	X	
23	5							12L
24	5	X	X	X	111 X 112	X	X	

Also collecting DOC for CORE SAMPLES!

Niskin 12 MISFIRED NO H₂O COLLECTED CORE FROM NISKIN 13

Niskin 22 fired @ 25m, instead of 5m
Shift core samples to Niskin 24

C-MORE CRUISE LOG

OPPEREX

Station Data Sheet: Core Minimum

Station Number: 7 Date: 8/3/2008 (216) (GMT)

Cast Number: 1 Time: (GMT)

Operators: SD, AF, JB Position:

Target Depth 200

Check yo' box...if sampling

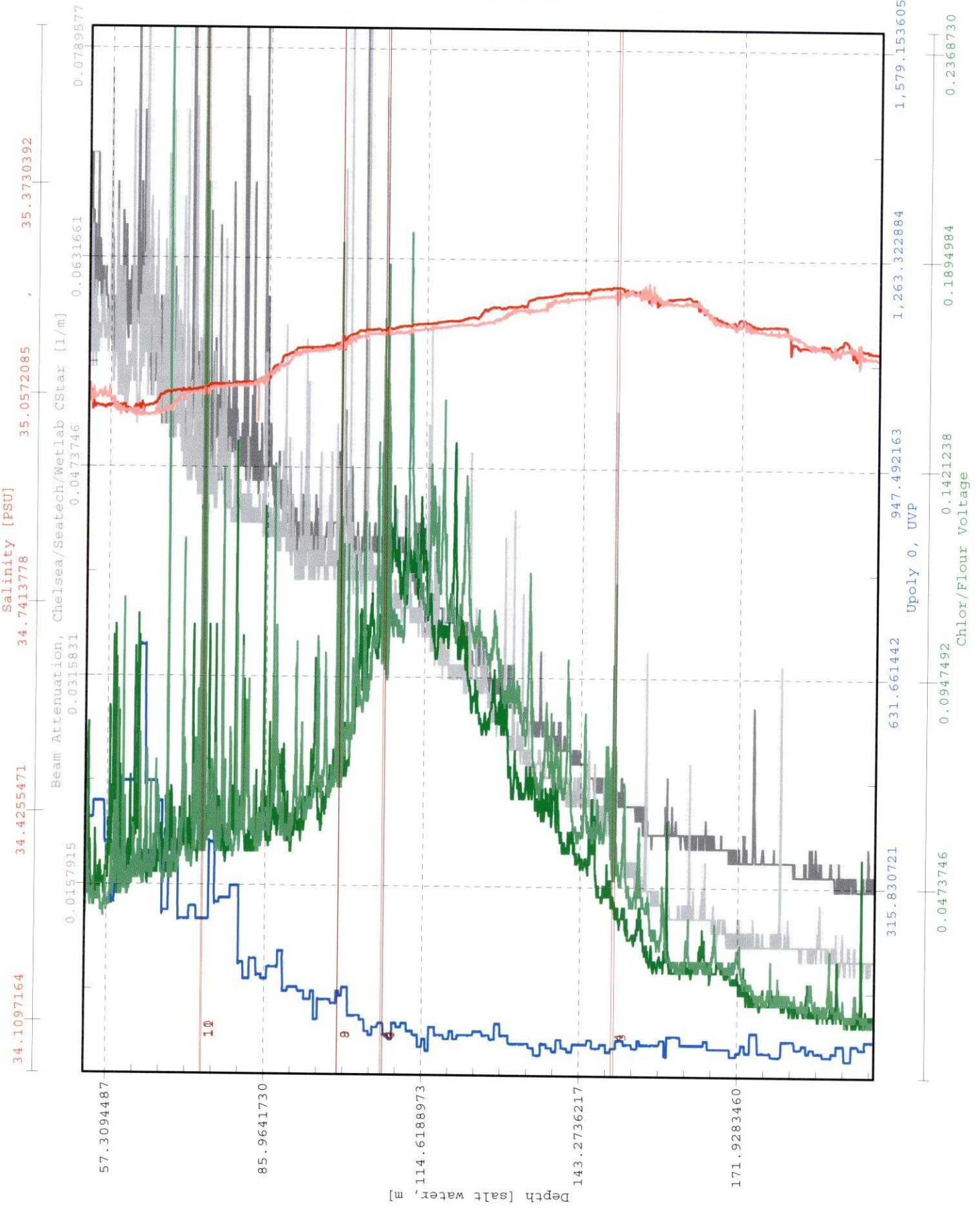
Rosette Position	Desired Depth	Alt. Breitlow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel	Hilton	Li	Watkins
Rosette Position	Desired Depth	Toxins	BP	Virus	RNA	Gas	Phosphorus	Alk Phosphatase	Culture	Diatom DNA	N2 fixation
1	200		20ML	10ML							
2	200										
3	150		20ML	10ML							
4	150				2L					10L	
5	DCM		20ML	10ML							
6	DCM										
7	DCM				2L					10L	
8	100		20ML	10ML							
9	100								1L		
10	75		20ML	10ML							
11	75				2L					10L	
12	45		20ML	10ML						10L	
13	45										
14	45	3L			2L						
15	45										12L
16	45										12L
17	25		20ML	10ML						10L	
18	25	3L					6L				
19	25				2L	2L		2L	5L		
20	25										12L
21	25										12L
22	25		20ML	10ML		2L					
23	5								5L		
24	5				2L				5L	10L	

Niskin 22 fired @25m, instead of 5m

Shift core samples to Niskin 24

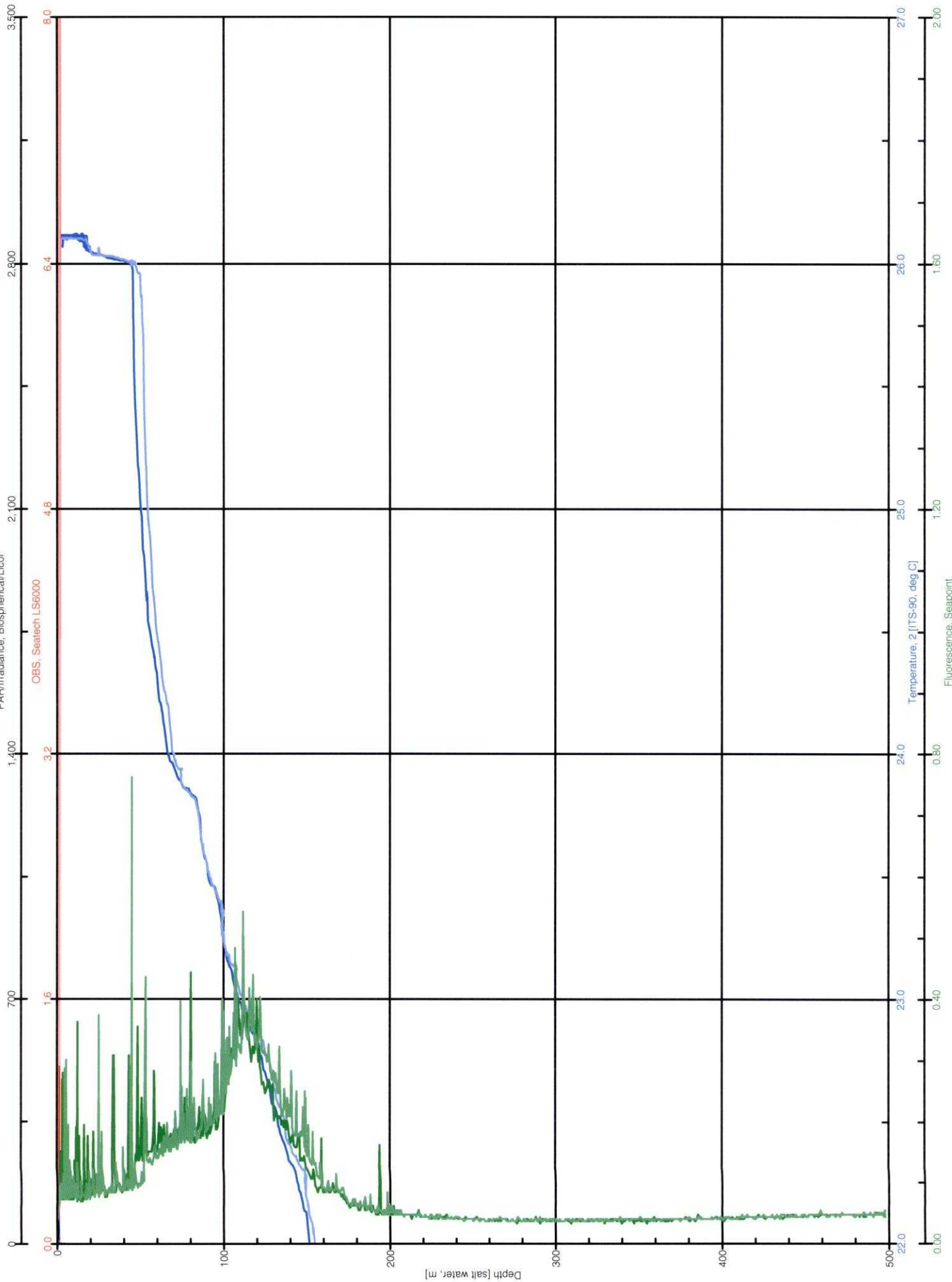
Niskin 12 MISFIRED - NO H2O, COLLECTED CORE FROM NISKIN 13

KM0814_d_p1_S7_C1



KM0814_2_S7_C1

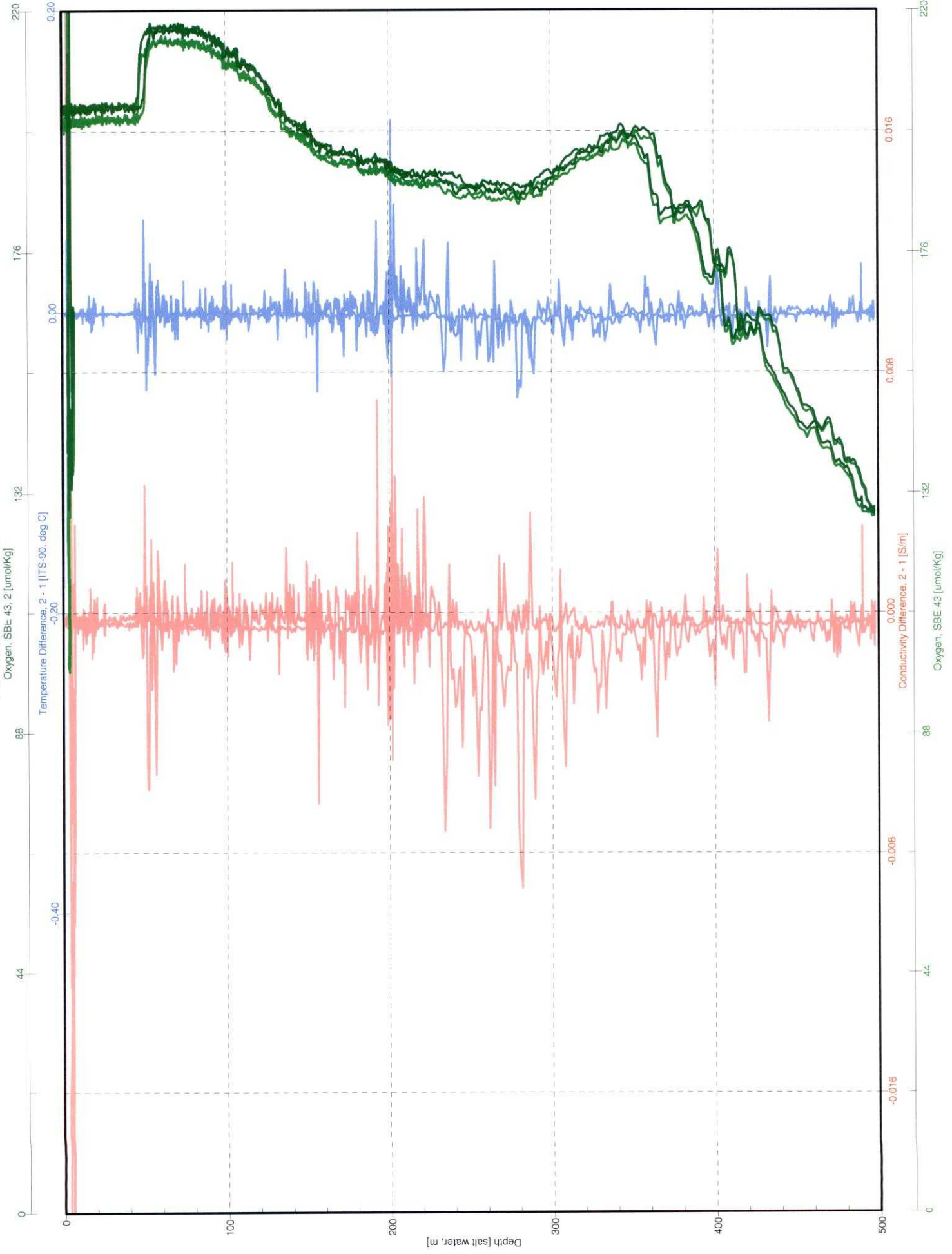
PAR/Irradiance, Biospherical/Licor



Temperature, 2 [ITS-90, deg C]

Fluorescence, Seapoint

KM0814_3_S7_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.3	CALIC

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 8	Cast: 1
Latitude start: 22N 49.22'	Longitude start: 157W 14.983'
end: 22N 50.005'	end: 157W 14.983'
Depth of water: 4497 meters	Date (GMT): 216 09 10 31 2008
Pressure on Deck	Time: 14:04:30
Begin: 0.6386	Start Log: 14:04:30
End: 0.34	In Water: 14:09:50
Max cast pressure: 500 dbar	Out of Water: 15:04:32

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		14:40:50	200.57	200	
3	14:43:02	14:43:20	151.0	150	} DCM
4		14:43:40	151.1	150	
5	14:45:17	14:45:40	124.50	DCM	
6		14:46:00	124.31	DCM	
7		14:46:20	124.67	DCM	
8	14:47:55	14:48:20	101.12	100	
9		14:48:40	101.25	100	
10	14:50:25	14:50:45	75.87	75	
11		14:51:05	75.85	75	
12	14:52:40	14:53:00	45.07	45	
13		14:53:20	44.40	45	
14		14:53:40	44.90	45	
15		14:54:00	44.75	45	
16		14:54:20	44.67	45	
17	14:55:36	14:56:00	25.73	25	
18		14:56:20	25.44	25	
19		14:56:40	25.25	25	
20		14:57:00	25.72	25	
21		14:57:20		25	
22	15:01:37	15:01:50	5.22	5	
23		02:10	4.86	5	
24		02:30	4.92	5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 8 Date: 8/3/2008 (216) (GMT)

Cast Number: 1 Time: (GMT)

Operators: Position:
Target Depth 200

Gonna happen

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts DOC	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	X ¹¹³⁻¹¹⁴	X	X	
2	200							12L
3	150	X	X	X	X ¹¹⁵⁻¹¹⁶	X	X	
4	150							
5	DCM	X	X	X	X ¹¹⁷⁻¹¹⁸	X	X	
6	DCM							12L
7	DCM							
8	100	X	X	X	X ¹¹⁹⁻¹²⁰	X	X	
9	100							
10	75	X	X	X	X ¹²¹⁻¹²²	X	X	
11	75							
12	45	X	X	X	X ¹²³⁻¹²⁴	X	X	
13	45							12L
14	45							
15	45							
16	45							
17	25	X	X	X	X ¹²⁵⁻¹²⁶	X	X	
18	25							
19	25							
20	25							
21	25							
22	5	X	X	X	X ¹²⁷⁻¹²⁸	X	X	
23	5							12L
24	5							

C-MORE CRUISE LOG

OPREX

Station Data Sheet: Core Minimum

Station Number: 8 Date: 8/3/2008 (216) (GMT)

Cast Number: 1 Time: (GMT)

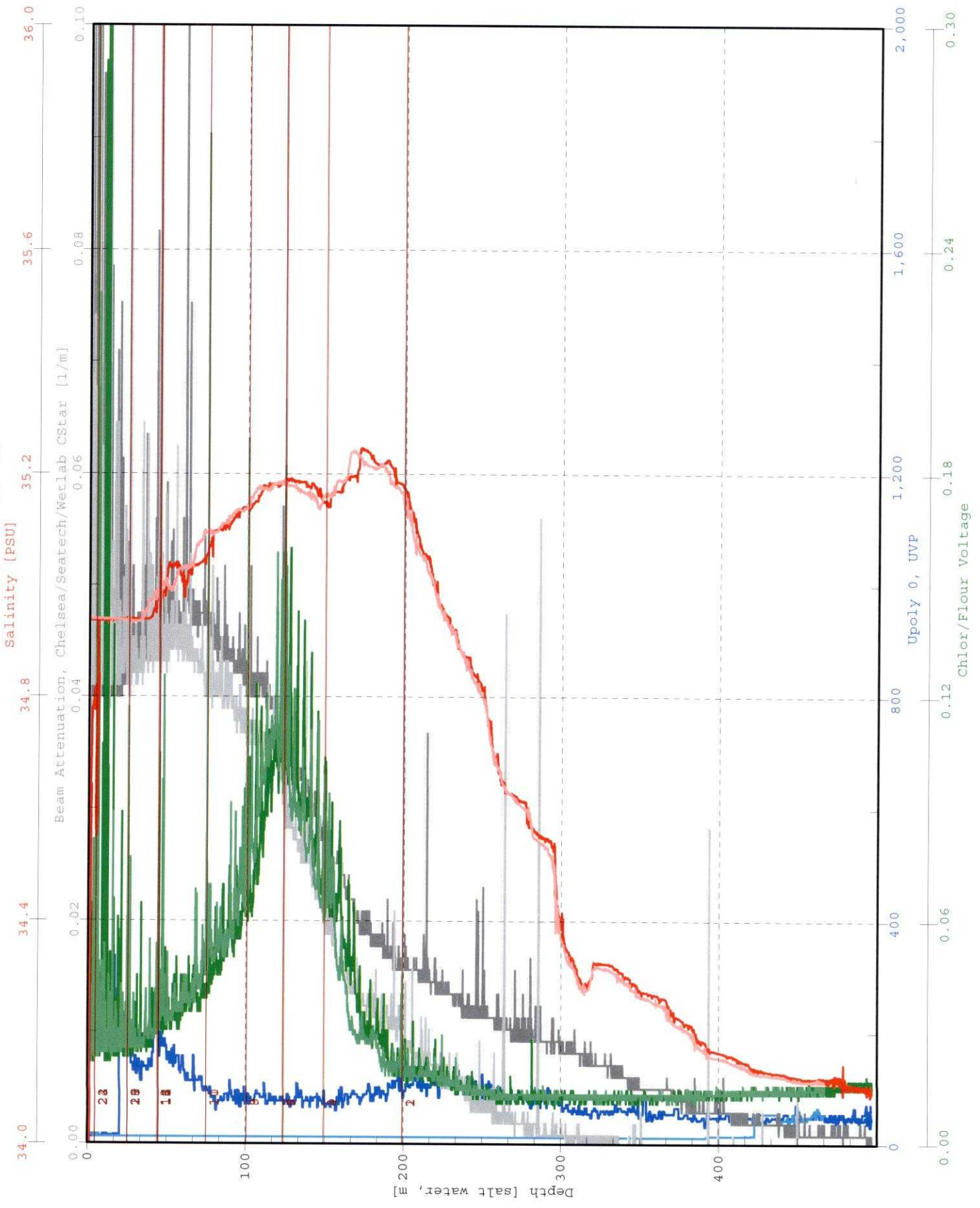
Operators: Position:

Target Depth 200

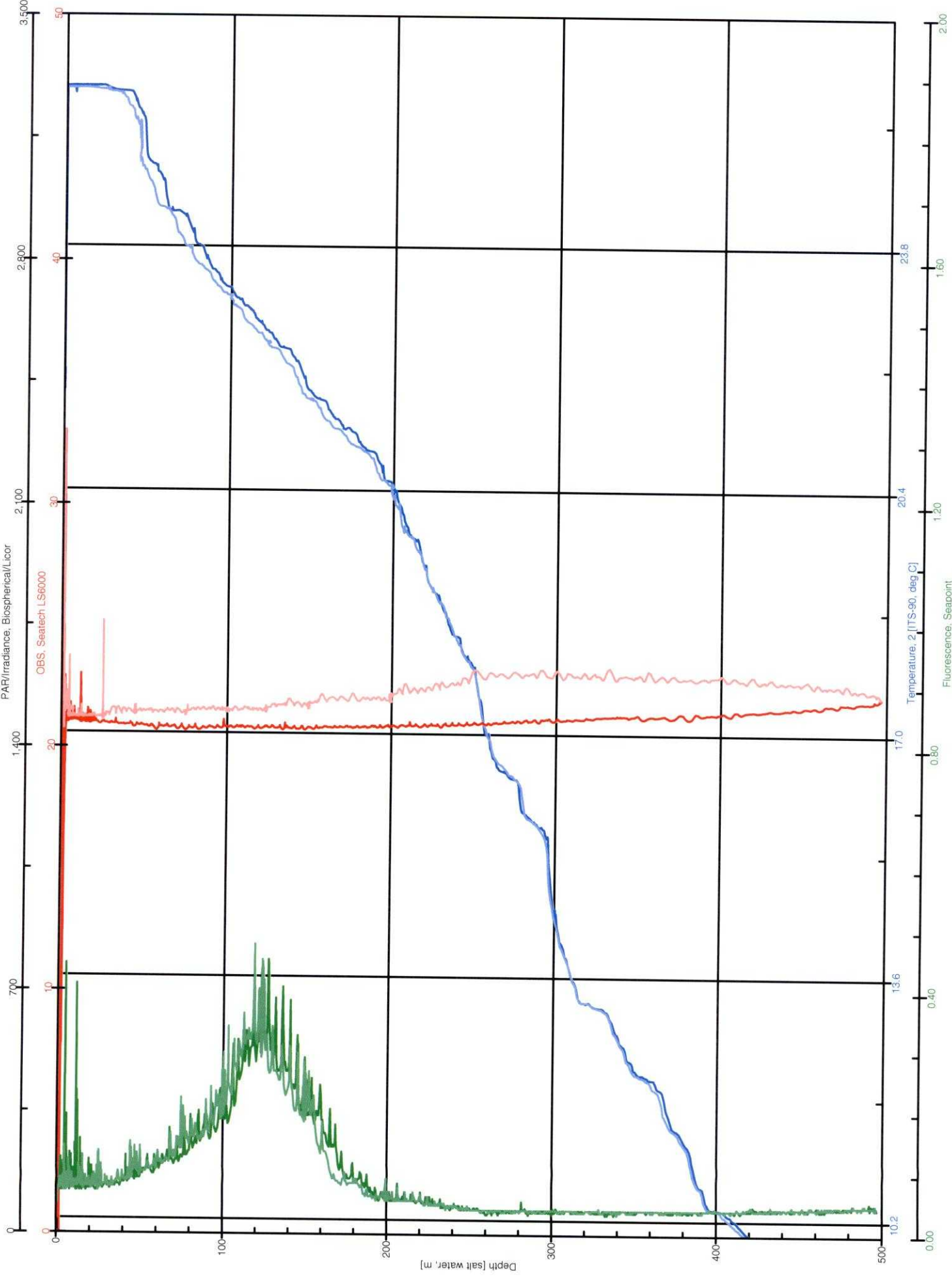
Check yo' box...if sampling

Rosette Position	Desired Depth	Alt. Breitlow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel	Hilton	Li	Watkins
Rosette Position	Desired Depth	Toxins	BP	Virus	RNA	Gas	Phosphorus	Alk Phosphatase	Culture	Diatom DNA	N2 fixation
1	200		20ML	10ML							
2	200										
3	150		20ML	10ML							
4	150				2L					10L	
5	DCM		20ML	10ML							
6	DCM										
7	DCM				2L					10L	
8	100		20ML	10ML							
9	100								1L		
10	75		20ML	10ML							
11	75				2L					10L	
12	45		20ML	10ML						10L	
13	45										
14	45	3L			2L						
15	45										12L
16	45										12L
17	25		20ML	10ML						10L	
18	25	3L					6L				
19	25				2L	2L		2L	5L		
20	25										12L
21	25										12L
22	5		20ML	10ML		2L			5L		
23	5										
24	5				2L					10L	

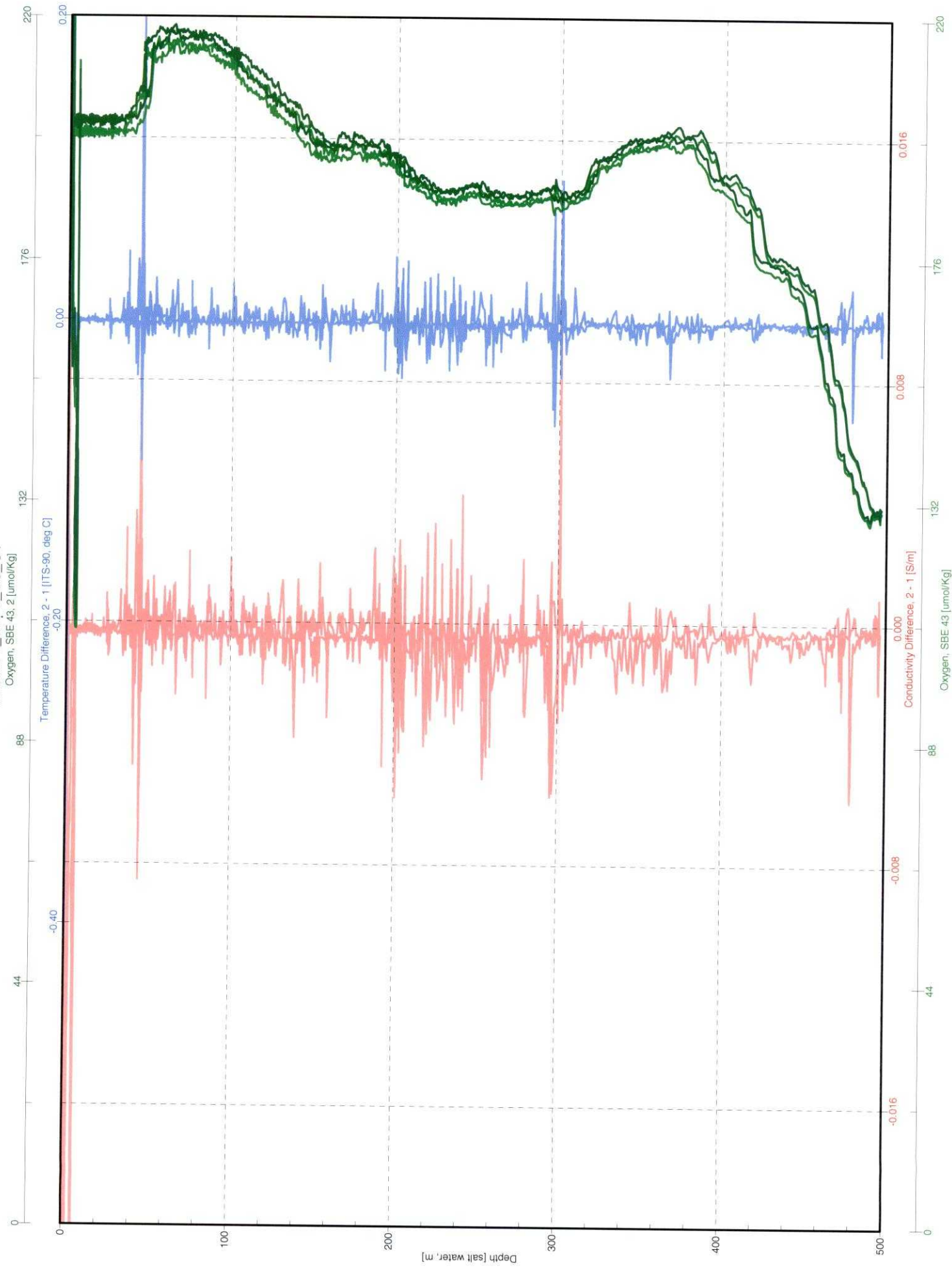
KM0814_disp1_S8_C1



KM0814_01_12_S8_C1



KM0814 a., j_S8_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 9	Cast: 1
Latitude start: 23N 4.996'	Longitude start: 157° 30.014' W
end:	end:
Depth of water: 4453 meters	Date (GMT): 216 0810 ⁰³ 2008
Pressure on Deck	Time: 17:05:08
Begin: 0.60	Start Log: 17:08:10
End:	In Water: 17:15:00
Max cast pressure: 500 dbar	Out of Water:

Trip/Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	17:39:50	17:40:10	199.66	200	at 10m: 17:17:15
2		17:40:30	200.30	200	DCM x 118
3		17:40:50	199.99	200	
4		17:41:10	199.60	200	
5	17:42:55	17:43:15	149.64	150	
6		17:43:35	149.81	150	
7		17:43:55	149.90	150	
8	17:45:20	17:45:40	118.20	DCM	
9		46:00	118.40	DCM	
10		46:20	118.36	DCM	
11	17:47:16	17:47:35	101.04	100	
12		:55	100.75	100	
13		48:15	100.98	100	
14	17:49:15	17:49:35	75.05	75	
15		17:49:55	74.62	75	
16		17:50:15	75.08	75	
17	17:51:30	17:51:55	45.29	45	
18		52:15	45.18	45	
19	17:53:20	17:53:35	24.93	25	
20		55	25.05	25	
21		54:15	25.11	25	
22	17:57:38	17:57:55	5.27	5	
23		58:15	5.73	5	
24		58:35	5.12	5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Maximum

Station Number: 9 Date: 8/3/2008 (GMT)
 Cast Number: 1 Time: 17:05:08 (07:05 HST) (GMT)
 Operators: AF, SW, MNC, JB, PC, JH Position: 23° 4.996' N, 157° 30.0' W

Rosette Position	Desired Depth	FRRF	HPLC	Psi	PC/PN	PPO4				
1	200	x								
2	200		2L	4						
3	200				2 (10L)					
4	200				3 (10L)					
5	150	x								
6	150		2L	5						
7	150				7✓	7				
8	DCM	x								
9	DCM		2L	6						
10	DCM				8✓	8				
11	100	x								
12	100		2L	7						
13	100				9✓	9				
14	75	x								
15	75		2L	8						
16	75				10✓	10				
17	45	x		9						
18	45		2L		11	11				
19	25	x								
20	25		2L	10						
21	25				12	12				
22	5	x								
23	5		2L	12						
24	5				13	13				

NOTES:

Psi #23 - sample leaked - only filtered 3L

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Maximum

Station Number: 9 Date: 08/03/2008 (216) (GMT)
 Cast Number: 1 Time: 17:05:08 (07:05 HST) (GMT)
 Operators: AF, SW, MNC, JB, PC, JH Position: 23°4,196'N, 157°30.0'W

Rosette Position	Desired Depth	Oxygen	Temp	pH	DIC	Nuts	DOC	LLNuts	Chl a	FCM
1	200	1	20.3	1	X	X	X	X	X	129 X 130
2	200									
3	200									
4	200									
5	150	2	22.0	2	X	X	X	X	X	131 X 132
6	150									
7	150									
8	DCM	3	23.5	3	X	X	X	X	X	133 X 134
9	DCM									
10	DCM									
11	100	5	22.4	4	X	X	X	X	X	135 X 136
12	100									
13	100									
14	75	7	23.38	5	X	X	X	X	X	137 X 138
15	75									
16	75									
17	45	8	23.6	6	X	X	X	X	X	139 X 140
18	45									
19	25									
20	25	9	17.98	7	X	X	X	X	X	141 X 142
21	25					X	X	X	X	X
22	5	10	18.8	8	X	X	X	X	X	143 X 144
23	5									
24	5									

NOTES:

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Maximum

Station Number: 9 Date: 08/03/2008 (216) (GMT)
 Cast Number: 1 Time: (GMT)
 Operators: AF, SW, MNC,JB, PC, JH Position:

Rosette Position	Desired Depth	Oxygen	Temp	pH	✓ DIC	✓ Nuts	✓ DOC	✓ LLNuts	✓ Chl a	FCM
1	200	1		1	X	X	X	X	X	X
2	200									
3	200									
4	200									
5	150	2		2	X	X	X	X	X	
6	150									
7	150									
8	DCM	3		3	X	X	X	X	X	X
9	DCM									
10	DCM									
11	100	5		4	X	X	X	X	X	X
12	100									
13	100									
14	75	7		5	X	X	X	X	X	X
15	75									
16	75									
17	45	8		6	X	X	X	X	X	X
18	45									
19	25									
20	25	9		7	X					
21	25					X	X	X	X	X
22	5	10		8	X	X	X	X	X	X
23	5									
24	5									

NOTES:

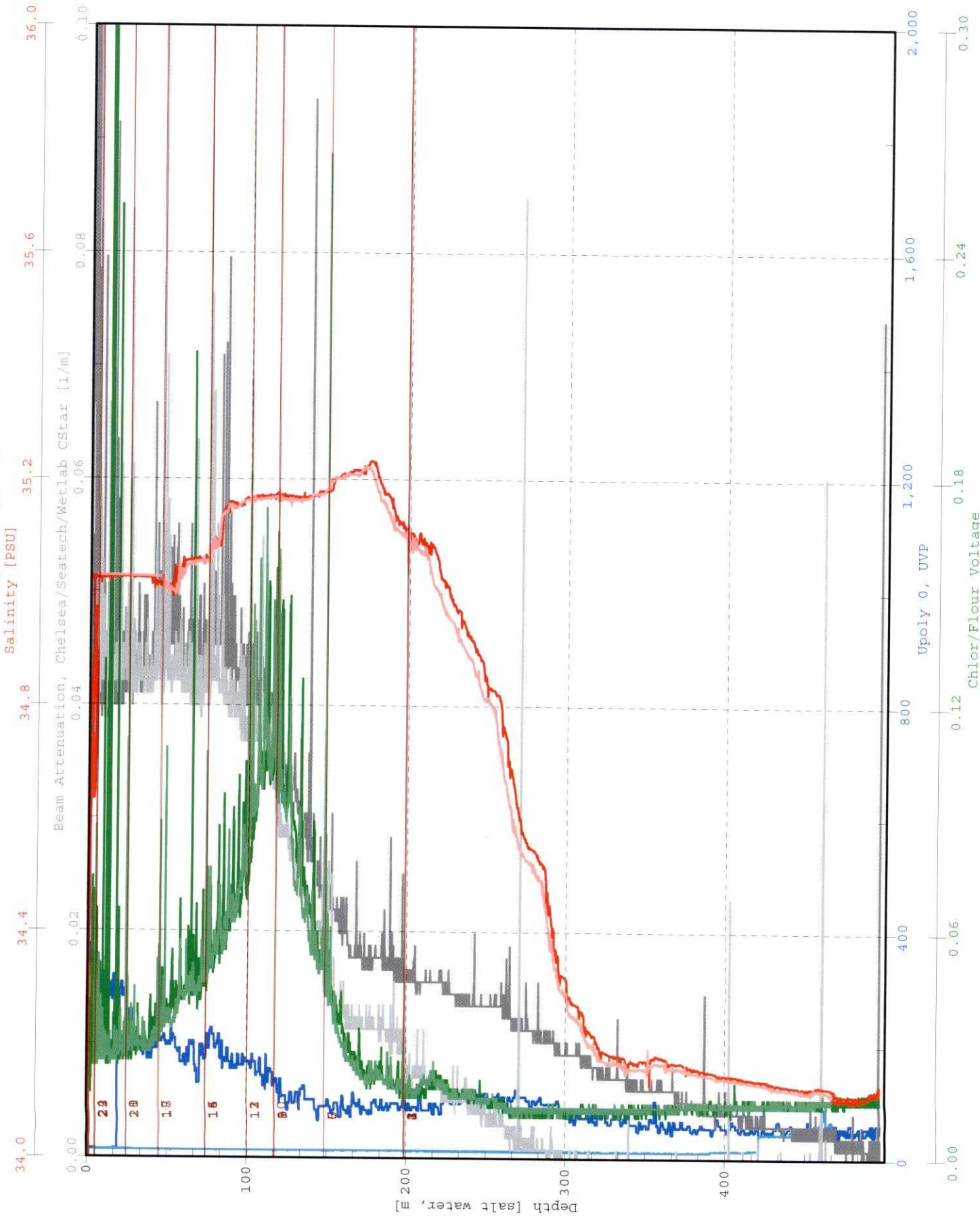
C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Maximum

Station Number: 9 Date: 08/03/2008 (216) (GMT)
 Cast Number: 1 Time: 17:05:08 (GMT)
 Operators: AF, SW, MNC, JB, PC, JH Position: 23 4.996'N, 157 30.014'W

Rosette Position	Desired Depth	FRRF	HPLC	Psi	PC/PN	PPO4				
1	200	x								
2	200		2L	4						
3	200			2 (10L)						
4	200			3 (10L)						
5	150	x								
6	150		2L	5						
7	150				7	7				
8	DCM	x								
9	DCM		2L	6						
10	DCM				8	8				
11	100	x								
12	100		2L	7						
13	100				9	9				
14	75	x								
15	75		2L	8						
16	75				10	10				
17	45	x		9						
18	45		2L		11	11				
19	25	x								
20	25		2L	10						
21	25				12	12				
22	5	x								
23	5		2L	12						
24	5				13	13				

NOTES:

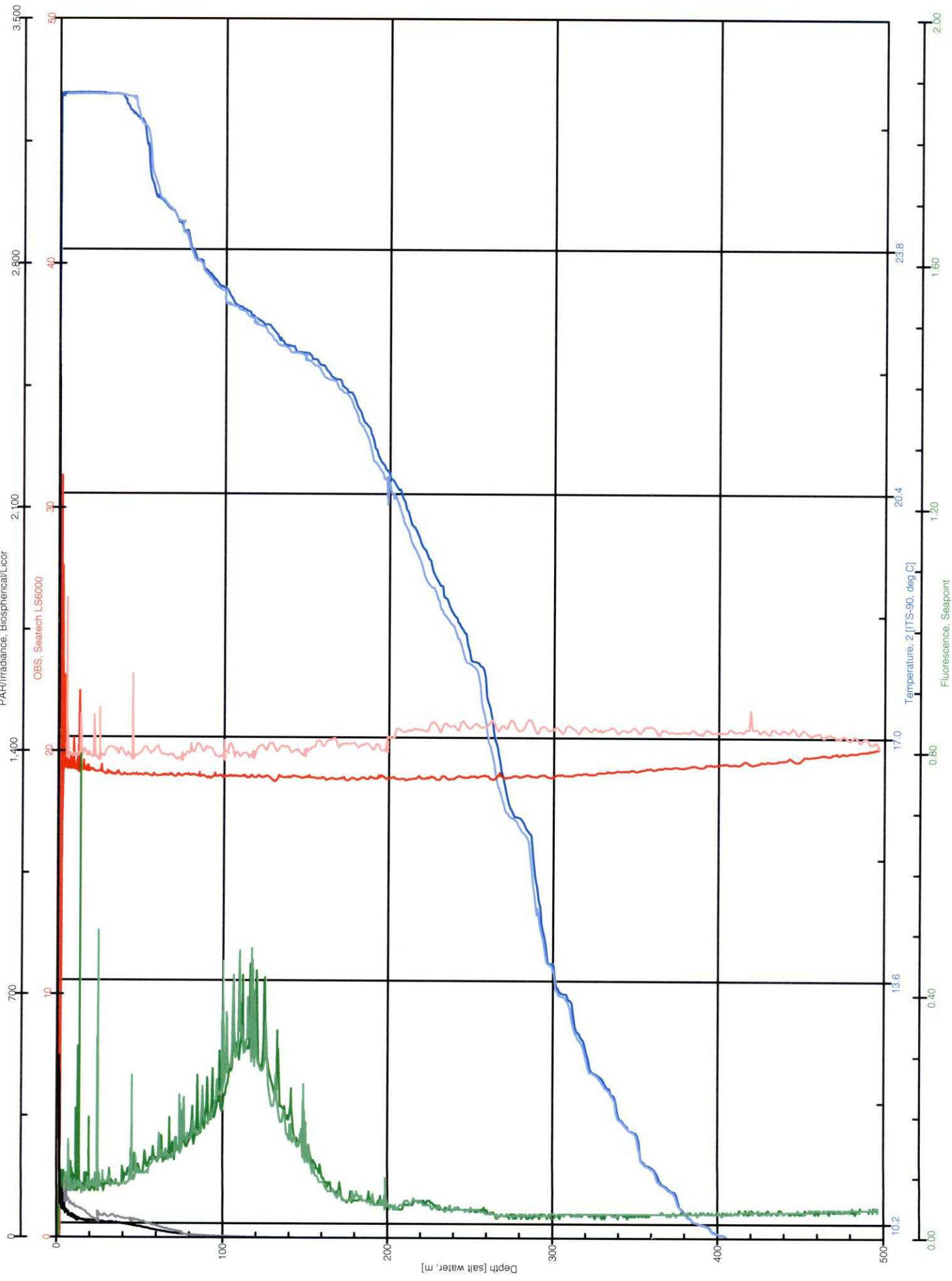
KM0814_d1.p1_s9_c1



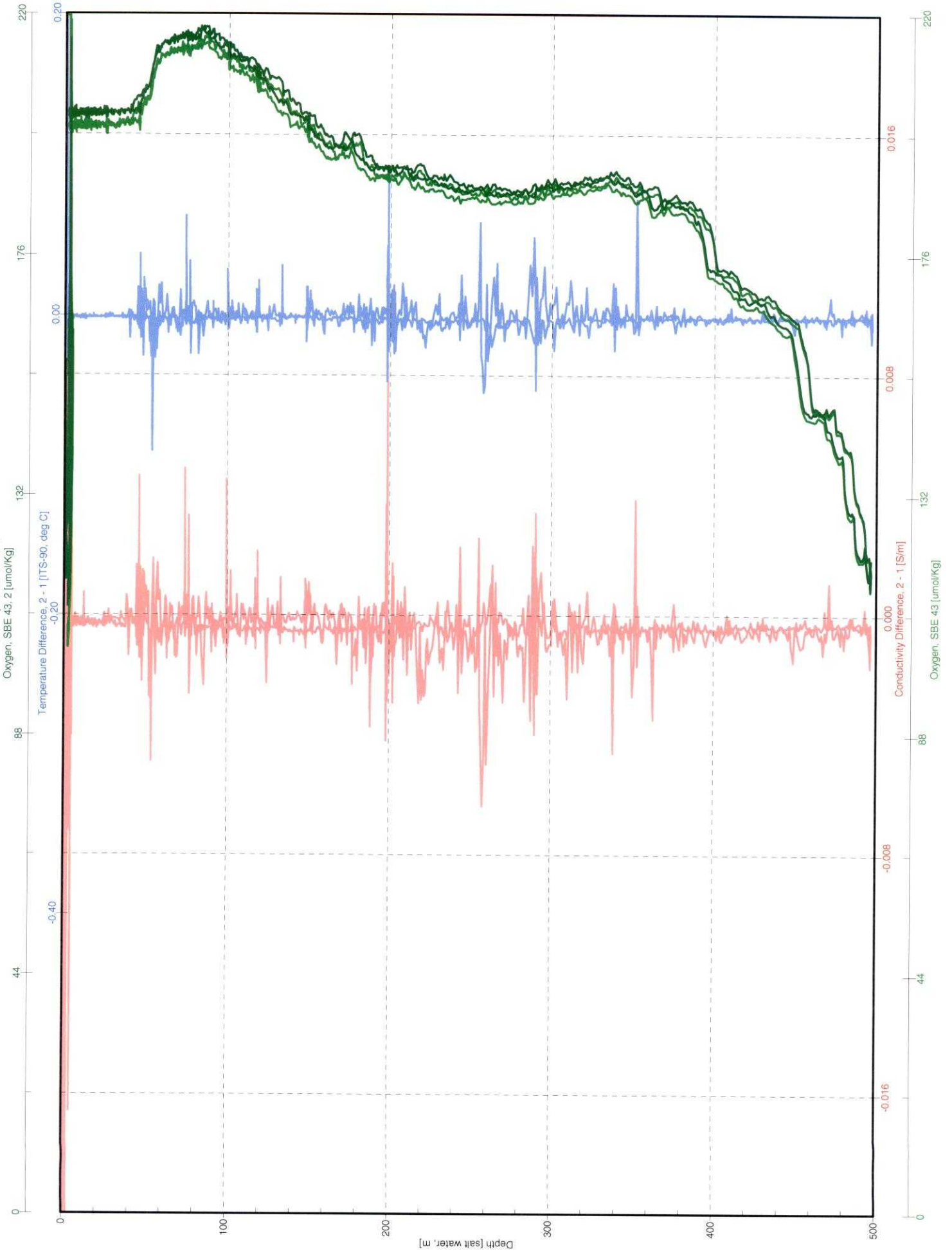
Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_G1_r2_S9_C1

PAR/Irradiance, Biospherical/Licor



KM0814_4_...3_S9_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 9	Cast: 2
Latitude start: 23 5.007'N	Longitude start: 157 29.992'W
end:	end:
Depth of water: 4455 meters	Date (GMT): 216 08/03/2008
Pressure on Deck	Time: 19:21:45
Begin: 0.6	Start Log: 19:22:26
End:	In Water: 19:23:45
Max cast pressure: 500 dbar	Out of Water:

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	19:47:55	19:48:20	200.5	200	DCM ≈ 103 dbar
2		19:48:40	200.12	200	
3	19:50:14	19:50:30	150.42	150	
4		19:50:50	150.39	150	
5	19:52:24	19:52:50	103.7	DCM	103 dbar
6		53:10	103.26	DCM	103 dbar
7		53:30	103.01	DCM	103
8	19:54:02	19:54:20	101.01	100	
9		19:54:40	100.62	100	
10	19:56:05	19:56:25	75.29	75	
11		19:56:45	75.70	75	
12	19:57:56	19:58:20	44.91	45	
13		19:58:40	44.85	45	
14		19:59:00	44.99	45	
15		19:59:20	44.51	45	
16		19:59:40	45.25	45	
17	20:00:41	20:01:30	25.08	25	
18		:50	25.07	25	
19		02:10	25.16	25	
20		02:30	24.64	25	
21		02:50	25.20	25	
22	20:04:25	20:04:40	5.31	5	
23		05:00	5.12	5	
24		05:20	5.20	5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 9 Date: 8/3/2008 (216) (GMT)

Cast Number: 2 Time: 19:27 (09:27 HST) (GMT)

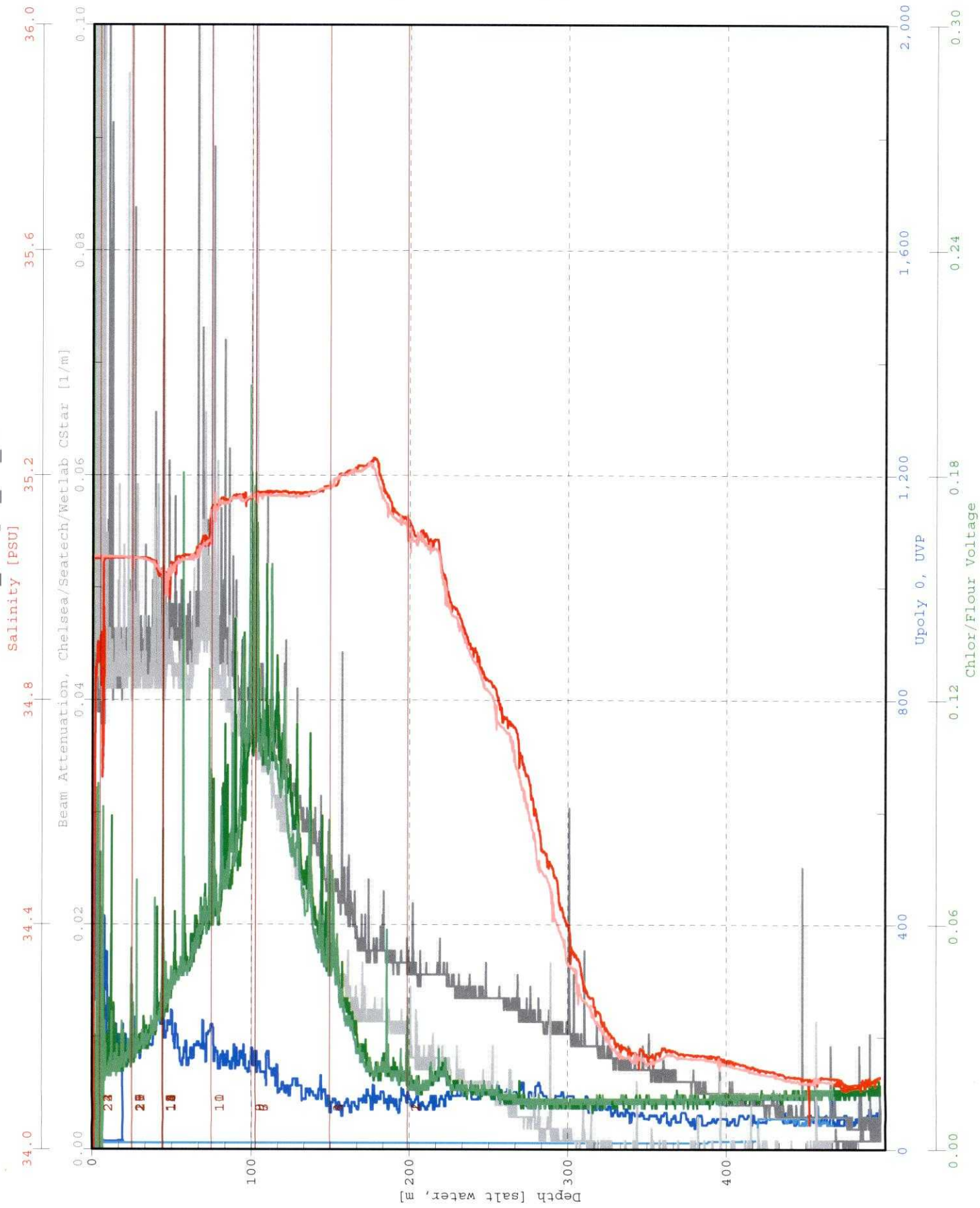
Operators: AF, PC, BU, KD, ZK, Position:

Check yo' box...if sampling

Target Depth 200

Rosette Position	Desired Depth	Ait. Breitlow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel	Hilton	Li	Watkins	Calli	Kolber	Ventouras	TOTAL
Rosette Position	Desired Depth	Toxins	BP	Virus	RNA	Gas	Phosphorus	Alk Phosphatase	Culture	Diatom DNA	N2 fixation	HPLC	FRRF	DNA/RNA	VOLUME
1	200		20ML	10ML								2L	0.5L	12L	2.8L
2	200											2L	0.5L	12L	2.8L
3	150		20ML	10ML						10L		2L	0.5L	12L	2.8L
4	150				2L							2L	0.5L	12L	2.8L
5	DCM		20ML	10ML								2L	0.5L	12L	2.8L
6	DCM														
7	DCM				2L					10L		2L	0.5L	12L	2.8L
8	100		20ML	10ML					1L			2L	0.5L	12L	2.8L
9	100											2L	0.5L	12L	2.8L
10	75		20ML	10ML								2L	0.5L	12L	2.8L
11	75				2L					10L					
12	45		20ML	10ML						10L			0.5L	10.8L	
13	45													12L	7L
14	45	3L			2L							2L			
15	45										12L				12L
16	45										12L				12L
17	25		20ML	10ML						10L			0.5L	10.8L	
18	25	3L					6L					2L			11L
19	25				2L	2L		2L	5L						11L
20	25										12L				12L
21	25										12L				12L
22	5		20ML	10ML	2L				5L			2L	0.5L	9.8L	
23	5													12L	12L
24	5				2L					10L					12L

KM0814_disp1_S9_C2

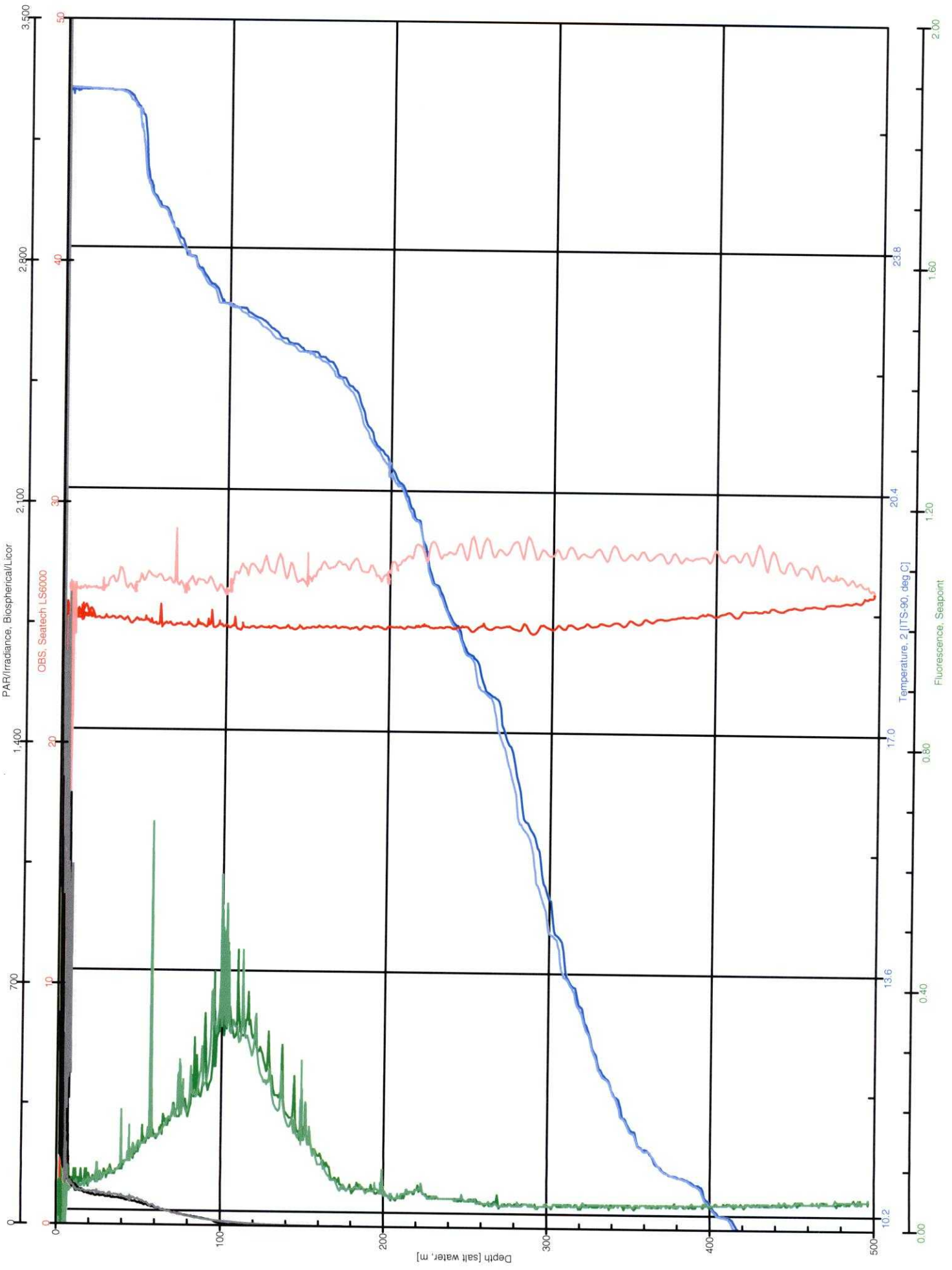


Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

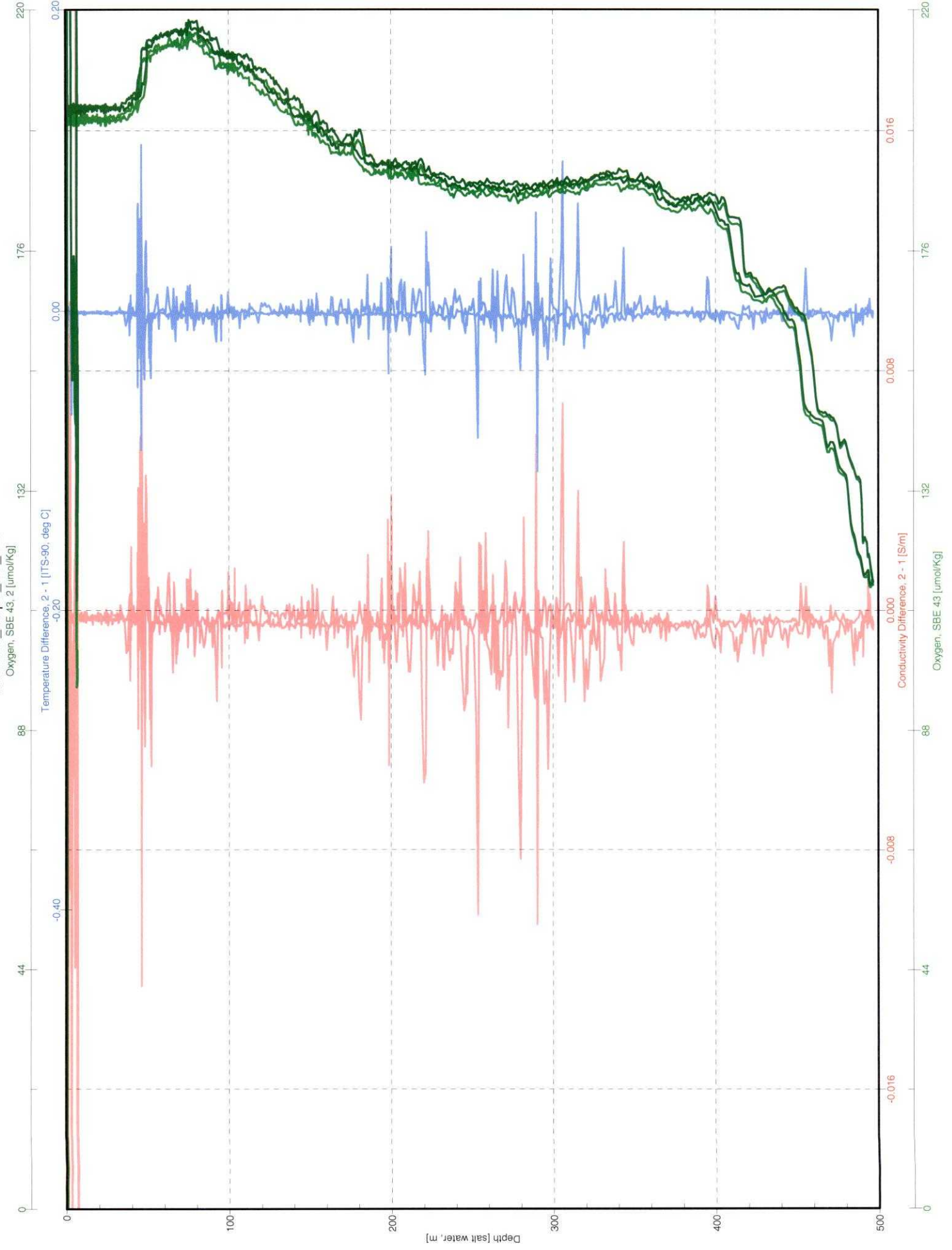
KM0814_c_p2_S9_C2

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



KM0814_u_p3_S9_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator updyke
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	pressure on deck started at 0.85 dbar, then dropped to 0.60 dbar before cast

Station: 10	Cast: 1
Latitude start: 23° 25.038'N end: 23° 25.032'N	Longitude start: 157° 29.986'W end: 157° 29.981'W
Depth of water: 4397 meters	Date (GMT): (216) 08/04/2008
Pressure on Deck Begin: 0.85 dbar End: 0.40 dbar	Time: 22:10:00 Start Log: 22:10:00 In Water: 22:14:00 Out of Water: 23:00:00
Max cast pressure: 500 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	22:37:45	22:38:00	200.4	200	
2		22:38:15	200.8	200	
3	22:40:30	22:40:45	149.7	150	
4		22:41:00	149.6	150	
5	22:42:30	22:42:45	123.9	DCM	120 dbar 124 dbar
6		22:43:00	124.1	DCM	
7		22:43:15	124.1	DCM	↓
8	22:44:45	22:45:30	100.1	100	
9		22:45:45	100.5	100	
10	22:47:30	22:47:45	75.5	75	
11		22:48:00	74.9	75	
12	22:50:15	22:50:30	45.0	45	
13		22:50:45	45.2	45	
14		22:51:00	45.3	45	
15		22:51:15	44.9	45	
16		22:51:30	45.6	45	
17	22:53:00	22:53:15	24.8	25	
18		22:53:30	24.8	25	
19		22:53:45	24.9	25	
20		22:54:00	24.9	25	
21		22:54:15	25.0	25	
22	22:56:00	22:56:15	6.0	5	
23		22:56:30	6.1	5	
24		22:56:45	5.6	5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 10 Date: 8/3/2008 (216) (GMT)

Cast Number: 1 Time: (GMT)

Operators: KD, BU, KB Position:

Target Depth 200 *JB, Koren*

Gonna happen

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts DOC	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	<i>145 X 146</i>	X	X	
2	200							12L
3	150	X	X	X	<i>147 X 148</i>	X	X	
4	150							
5	DCM	X	X	X	<i>149 X 150</i>	X	X	
6	DCM							12L
7	DCM							
8	100	X	X	X	<i>151 X 152</i>	X	X	
9	100							
10	75	X	X	X	<i>153 X 154</i>	X	X	
11	75							
12	45	X	X	X	<i>155 X 156</i>	X	X	
13	45							12L
14	45							
15	45							
16	45							
17	25	X	X	X	<i>157 X 158</i>	X	X	
18	25							
19	25							
20	25							
21	25							
22	5	X	X	X	<i>159 X 160</i>	X	X	
23	5							12L
24	5							

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 10 Date: 8/3/2008 (216) (GMT)

Cast Number: 1 Time: (GMT)

Operators: BU, KD, KB Position:

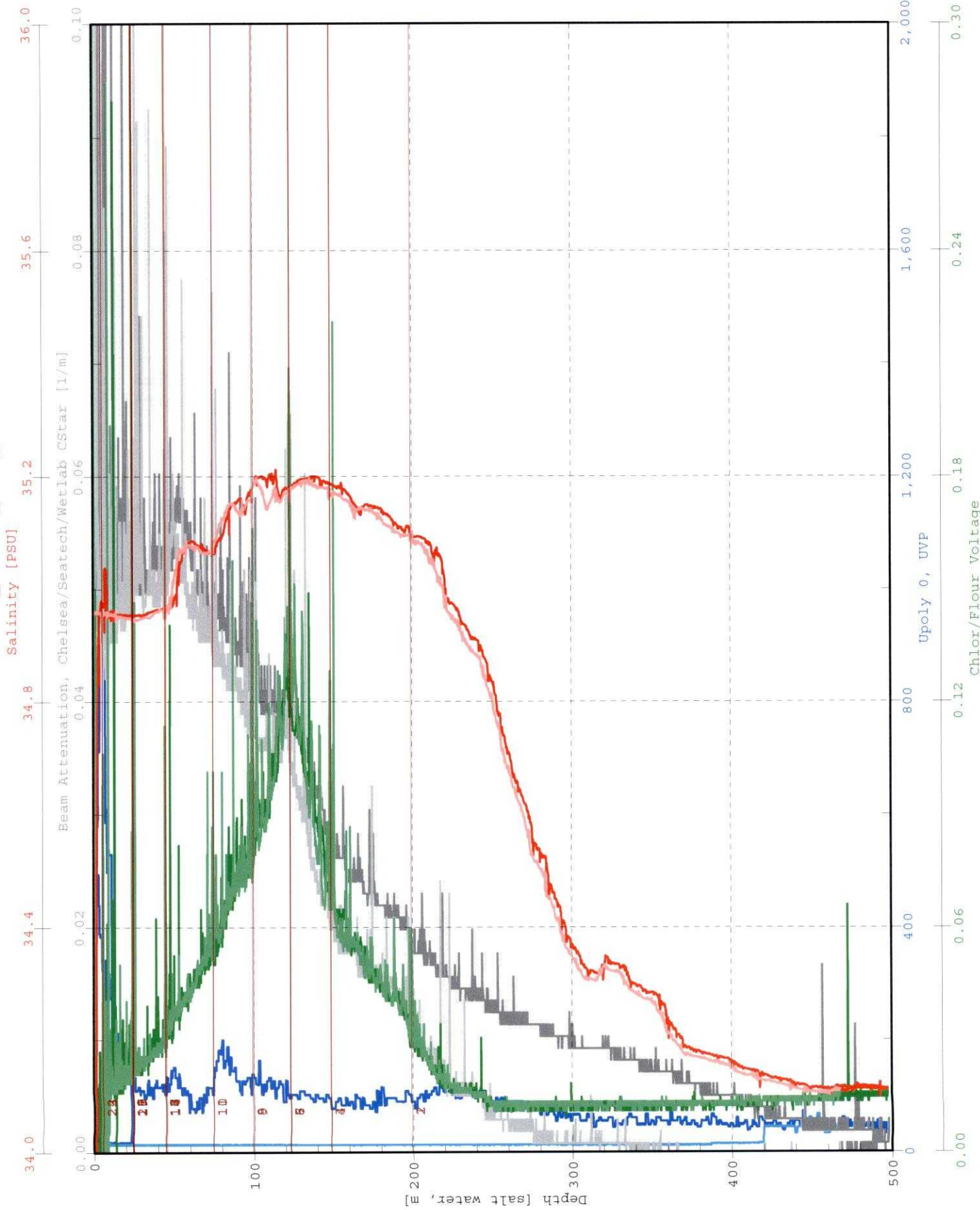
Target Depth 200

Check yo' box...if sampling

Rosette Position	Desired Depth	Alt. Breitlow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel Alk	Hilton	Li	Watkins
Rosette Position	Desired Depth	Toxins	BP	Virus	RNA	Gas	Phosphorus	Phosphatase	Culture	Diatom DNA	N2 fixation
1	200		20ML	10ML							
2	200										
3	150		20ML	10ML							
4	150				2L					10L	
5	DCM		20ML	10ML							
6	DCM										
7	DCM				2L					10L	
8	100		20ML	10ML							
9	100								1L		
10	75		20ML	10ML							
11	75				2L					10L	
12	45		20ML	10ML						10L	
13	45										
14	45	3L			2L				3L		
15	45										12L
16	45										12L
17	25		20ML	10ML						10L	
18	25	3L					6L				
19	25				2L	2L		2L	5L		
20	25										12L
21	25										12L
22	5		20ML	10ML		2L			5L		
23	5										
24	5				2L					10L	

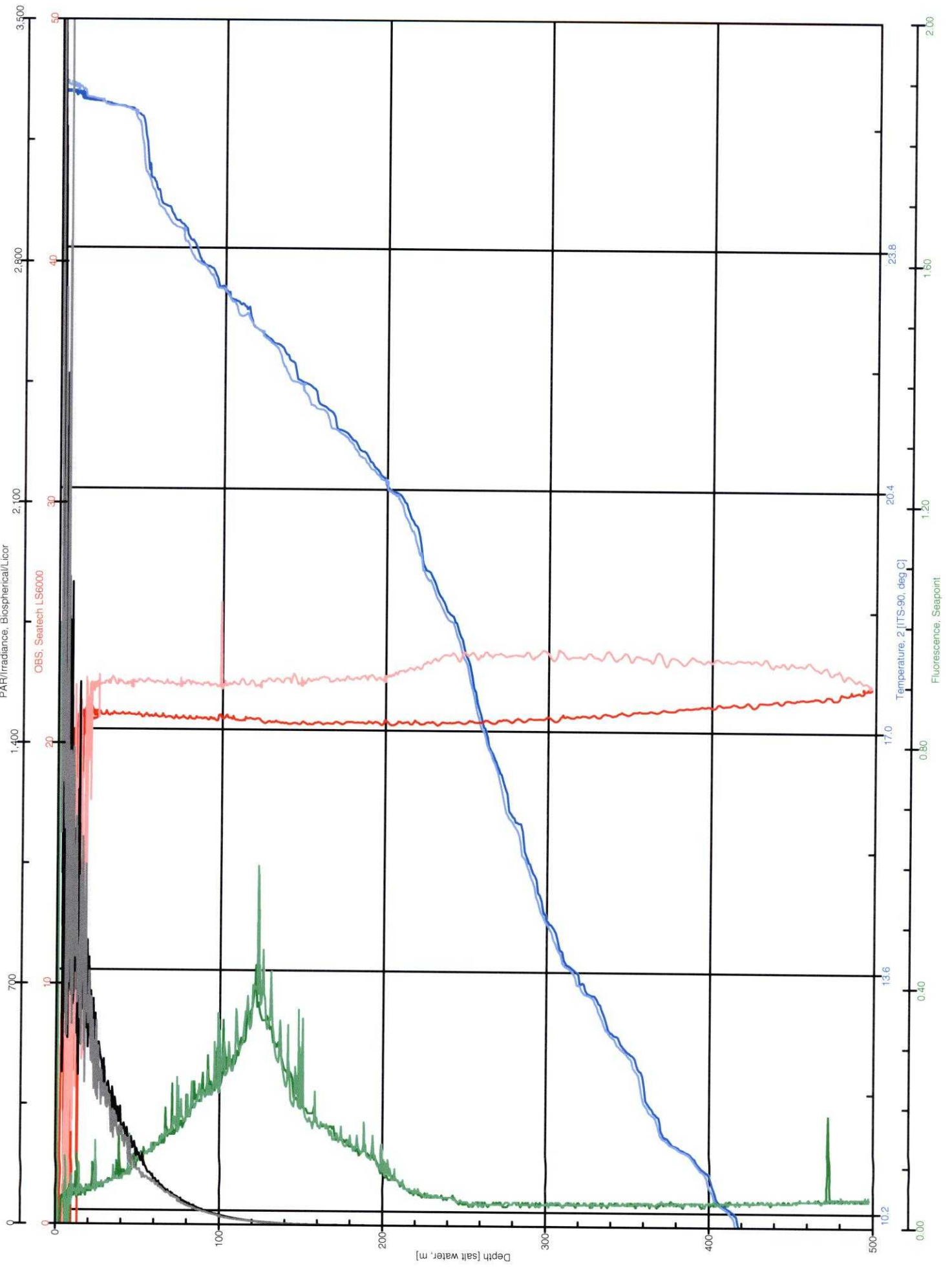
Hilton +9L @ 25m

KM0814_d. 01_S10_C1

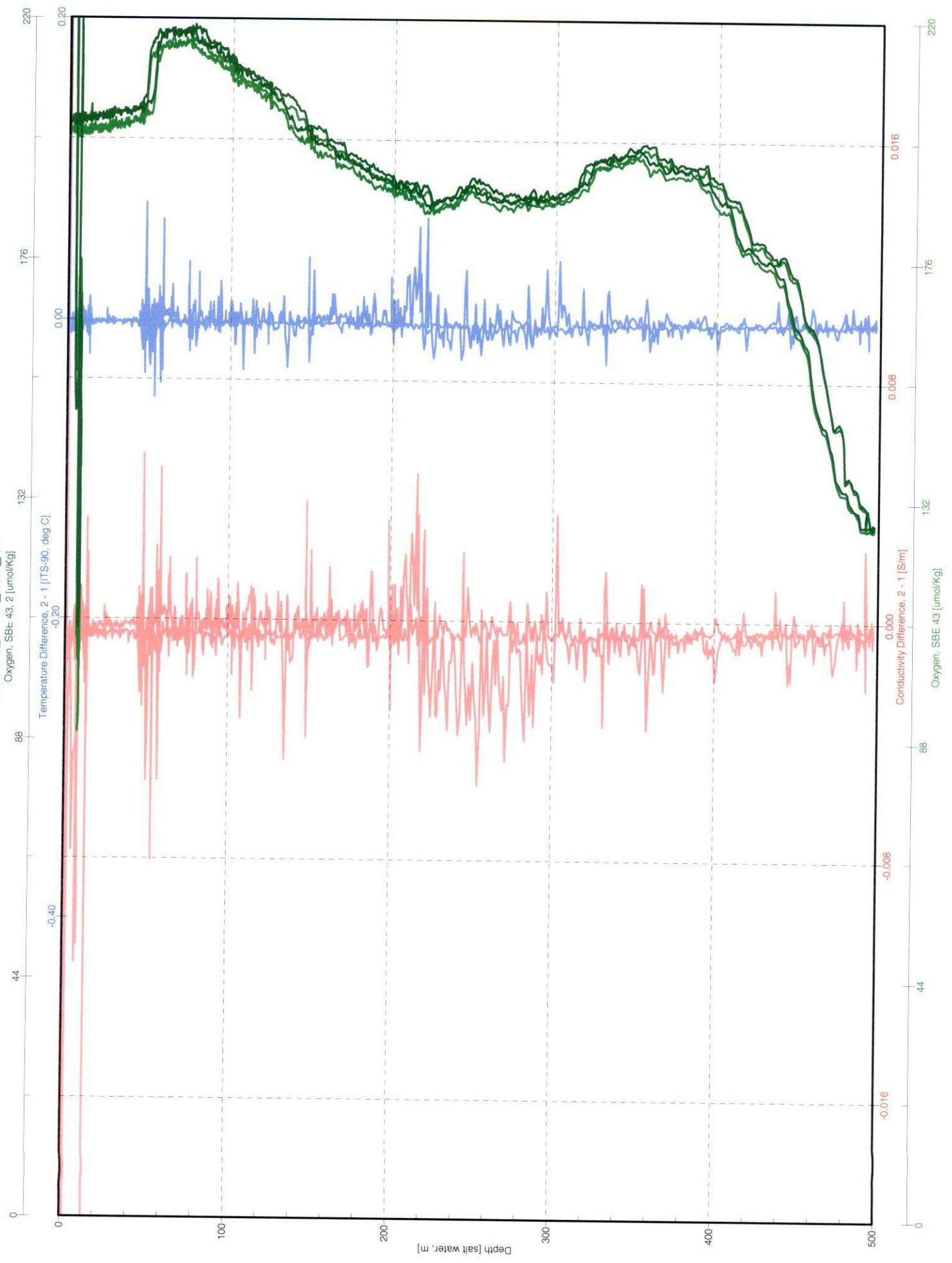


Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_2_S10_C1
PAR/Irradiance, Biospherical/Licor



KM0814_3_S10_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.5 26.7 °C	Ypdyke

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 11	Cast: 1
Latitude start: 23° 45.038' N end: 23 45.033' N	Longitude start: 157° 29.949' W end: 157° 29.952' W
Depth of water: 4328 meters	Date (GMT): (217) 00 104/ 2008
Pressure on Deck	Time: 01:20:00
Begin: 0.60 dbar	Start Log: 01:23:00z
End: 43 - 35	In Water: 01:31:00z
Max cast pressure: 500 dbar	Out of Water: (217) 02:14:17z

Trip/ Niskin	Time GMT	Confirm GMT	Pressure	Target Depth	Comments
	stopped	tripped			
1 (217)	01:54:45	01:55:00	200.9	200	
2		01:55:15	200.9	200	
3	01:57:15	01:57:30	150.0	150	
4	:	01:57:45	149.8	150	
5	01:59:00	01:59:15	129.5	DCM	130 dbar
6		01:59:30	130.0	DCM	↓
7		01:59:45	130.0	DCM	
8	02:01:15	02:01:30	100.2	100	
9		02:01:45	100.4	100	
10	02:03:00	02:03:15	75.1	75	
11		02:03:30	74.8	75	
12	02:05:00	02:05:15	44.5	45	
13		02:05:30	45.6	45	
14		02:05:45	45.1	45	
15		02:06:00	45.1	45	
16		02:06:15	45.2	45	
17	02:07:30	02:07:45	24.6	25	
18		02:08:00	24.9	25	
19		02:08:15	24.9	25	
20		02:08:30	24.4	25	
21		02:08:45	24.8	25	
22	02:11:00	02:11:15	6.2	5	
23		02:11:30	5.3	5	
24		02:11:45	5.2	5	02:16:25z on Deck

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

8/4/2008 (217)

Station Number: 11 Date: ~~8/3/2008 (216)~~ (GMT)
 Cast Number: 1 Time: (GMT)
 Operators: KD, BU, KB Position:
 Target Depth 200

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts DOC	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	• 161 162	X	X	
2	200							12L
3	150	X	X	X	• 163 164	X	X	
4	150							
5	DCM	X	X	X	• 165 166	X	X	
6	DCM							12L
7	DCM							
8	100	X	X	X	• 167 168	X	X	
9	100							
10	75	X	X	X	• 169 170	X	X	
11	75	X	X	X	'	X	X	
12	45	X	X	X	• 171 172	X	X	
13	45							12L
14	45							
15	45							
16	45							
17	25	X	X	X	• 173 174	X	X	
18	25							
19	25							
20	25							
21	25							
22	5	X	X	X	• 175 176	X	X	
23	5							12L
24	5							

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 10 Date: 8/3/2008 (216) (GMT)

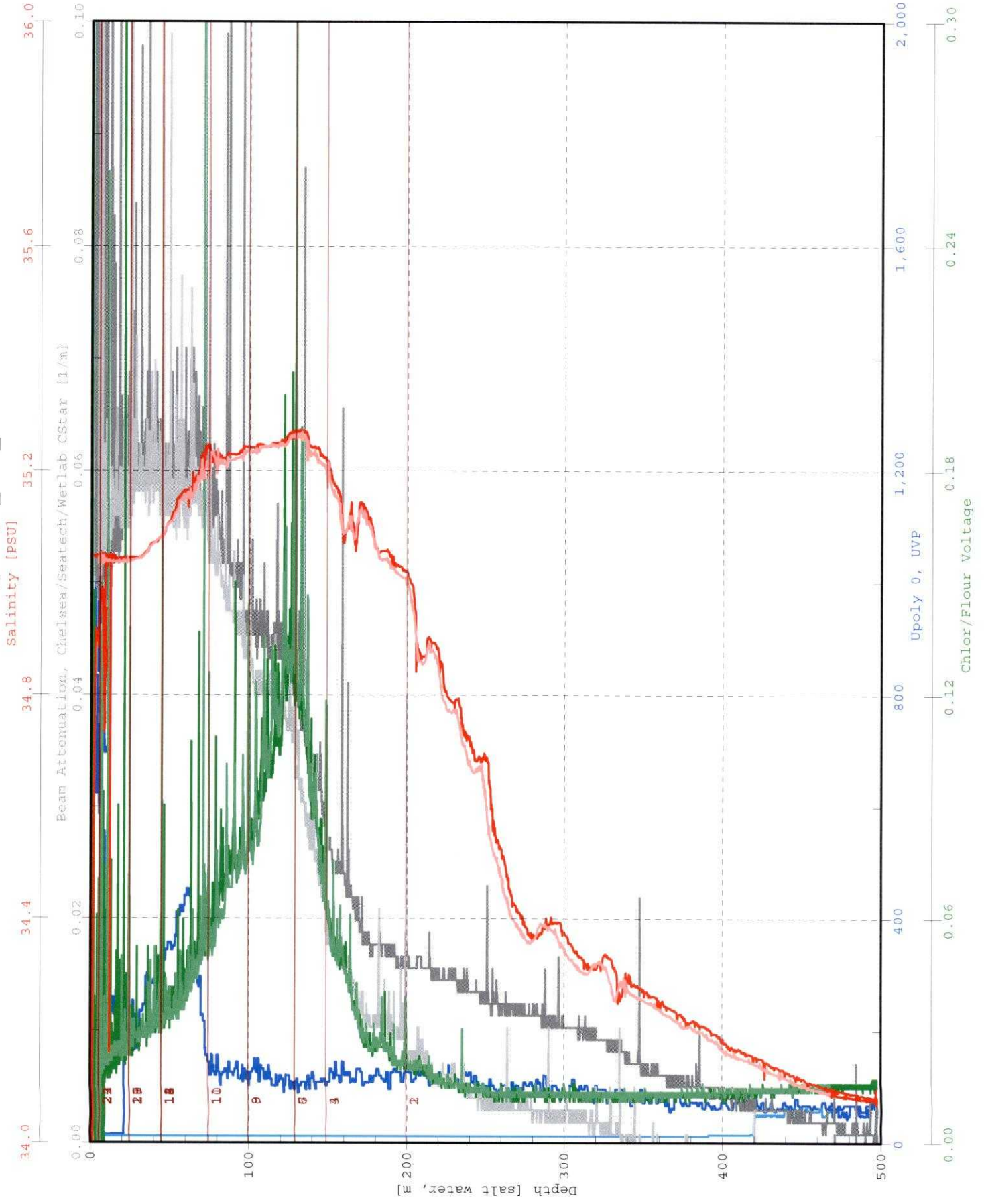
Cast Number: 1 Time: (GMT)

Operators: BU, KD, KB Position:

Target Depth 200 Check yo' box...if sampling

Rosette Position	Desired Depth	Alt. Breirow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel Alk	Hilton	Li	Watkins
1	200		20ML	10ML							
2	200										
3	150		20ML	10ML							
4	150				2L					10L	
5	DCM		20ML	10ML							
6	DCM										
7	DCM				2L					10L	
8	100		20ML	10ML							
9	100									1L	
10	75		20ML	10ML							
11	75				2L					10L	
12	45		20ML	10ML						10L	
13	45										
14	45	3L			2L						
15	45										12L
16	45										12L
17	25		20ML	10ML						10L	
18	25	3L					6L				
19	25				2L	2L		2L		5L	
20	25										12L
21	25										12L
22	5		20ML	10ML		2L			5L		
23	5										
24	5				2L					10L	

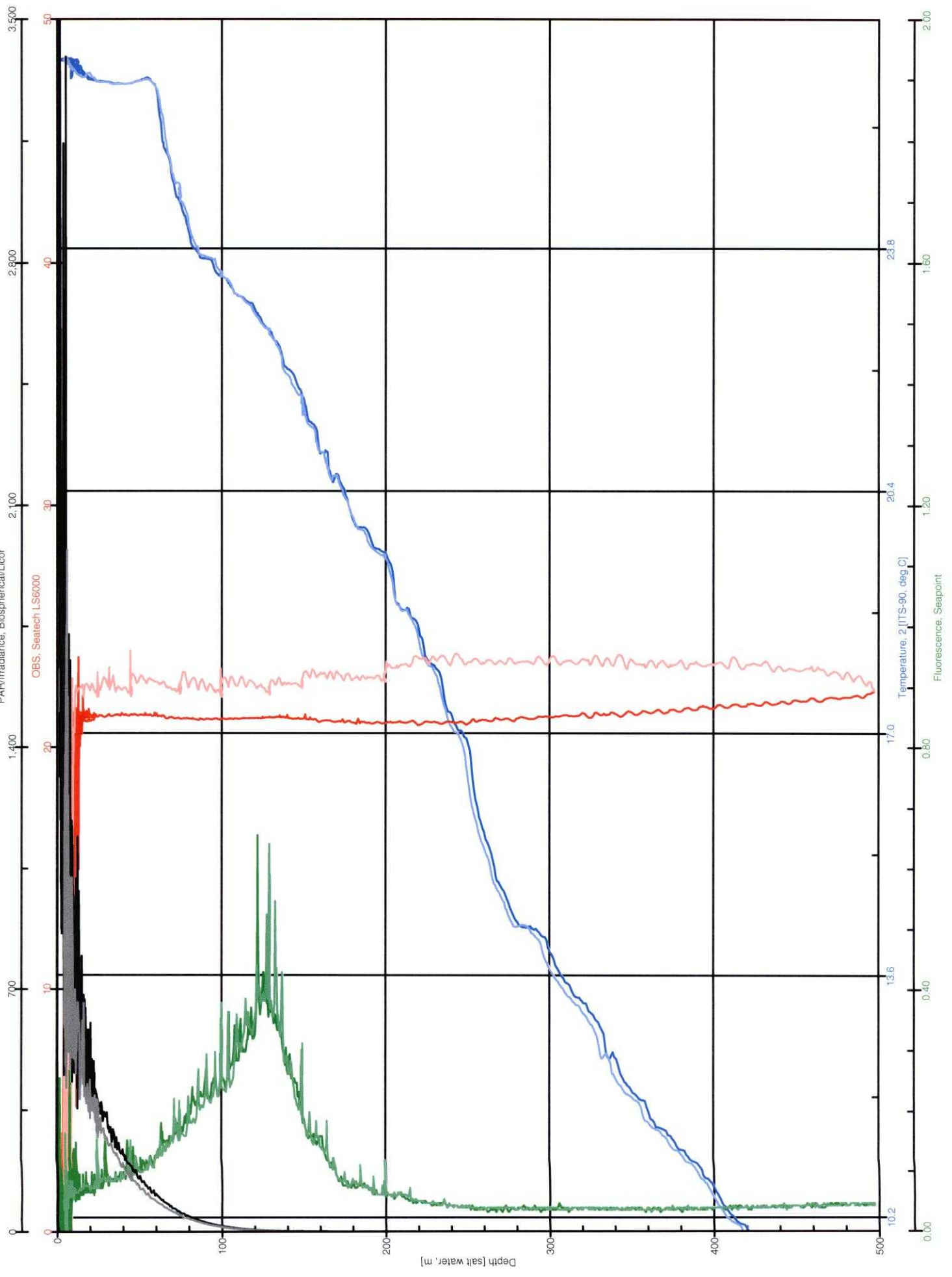
KM0814_d_ p1_S11_C1



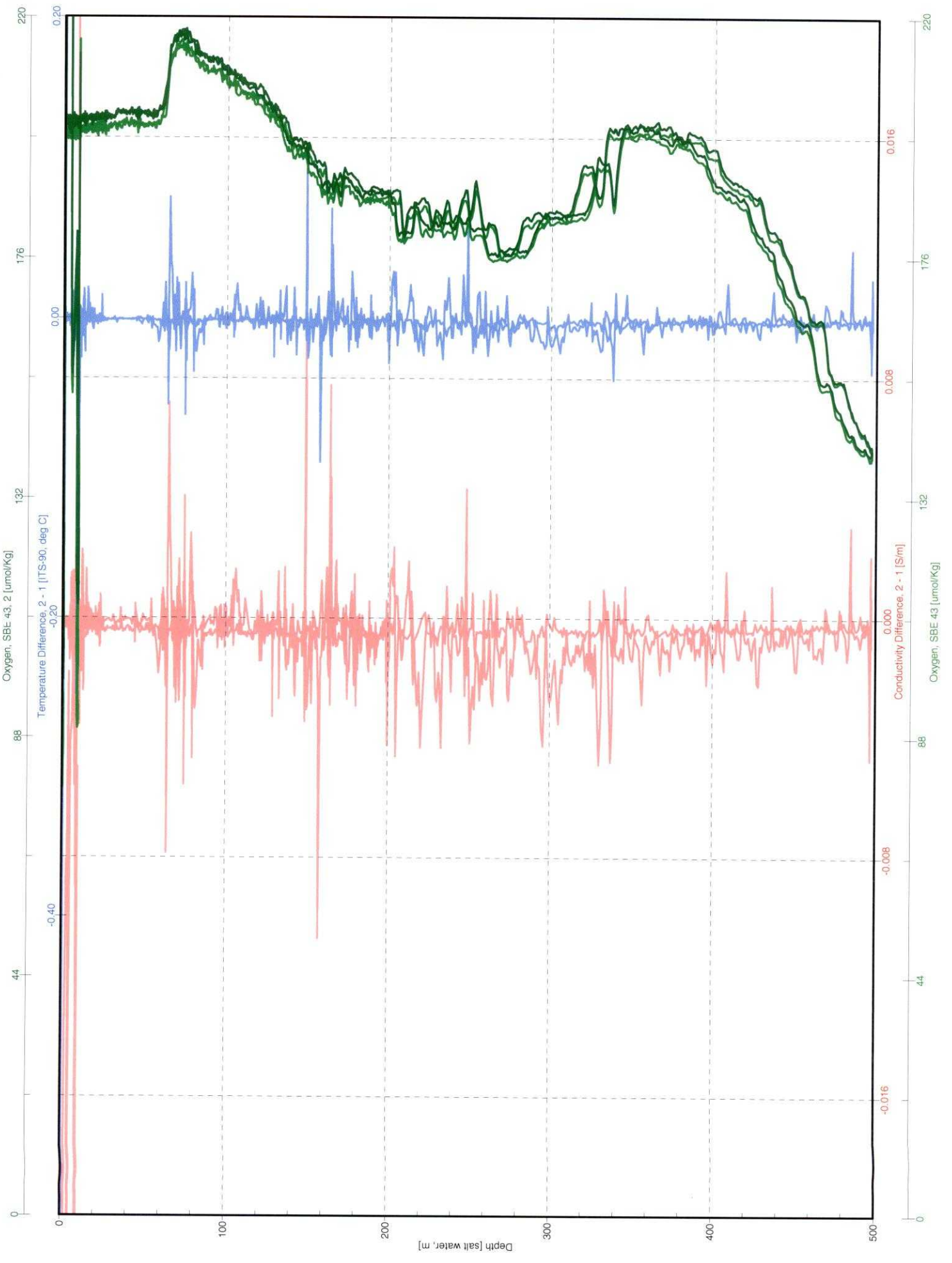
KM0814_2_S11_C1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



KM0814_C1_S11_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.7	JP

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	<u>Hung Tag line Recover pkg & redeploy</u>

Station: 12	Cast: 1
Latitude start: 24 5.006' N	Longitude start: 157° 30.007' W
end:	end:
Depth of water: 4359 meters	Date (GMT): (217) 08 10/11 2008
Pressure on Deck	Time: 05:18:58 Z
Begin: 0664 - 718 End: (420 in air) 419 - 355	Start Log: (217) 05:32:50 In Water: 5:56:35 (217) 05:42:50 06:00:29 Z
Max cast pressure: 500 dbar	Out of Water: (217) 06:45:57

Trip/ Niskin	GMT	GMT	Pressure	Target Depth	Comments
	Time stopped	Confirm tripped			
1	(217) 06:24:45	06:25:10	200.0	200 db	06:03:41 Tag line hung - pull back
2		06:25:30	200.1	200 db	up CTD
3	(217) 06:27:15	06:27:30	148.2	150	Recover 05:49:25 Z
4		06:27:50	148.2	150	Redeploy 05:58:52 Z
5	(217) 06:30:10	06:30:30	121.9	DCM	122
6		06:30:50	121.4	DCM	122
7		06:31:10	121.7	DCM	122
8	(217) 06:32:32	06:32:50	99.7	100	
9		06:33:10	99.8	100	
10	(217) 06:34:55	06:35:10	79.5	75	
11		06:35:30	73.9	75	
12	(217) 06:36:43	06:37:10	44.4	45	
13		06:37:30	43.7	45	
14		06:37:50	44.1	45	
15		06:38:10	44.2	45	
16		06:38:30 Z	44.3	45	
17	(217) 06:39:55	06:40:10	24.1	25	
18		06:40:30	24.3	25	
19		06:40:50	24.1	25	
20		06:41:10	23.7	25	
21		06:41:30	23.9	25	
22	(217) 06:42:39	06:42:50	5.0	5	(3m wire)
23		06:43:10	5.3	5	(3m ') CTD on Deck
24		06:43:30	5.6	5	(3m) (217) 06:46:17

48:13

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 12 Date: 8/4/2008 (217) (GMT)

Cast Number: 1 Time: 05:18:587 (GMT)

Operators: SP, RP, KW Position: 24° 5.006' N 157° 30.007' W
Target Depth 200

Gonna happen

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts DOC	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	177, 178 X	X	X	
2	200							12L
3	150	X	X	X	179, 180 X	X	X	
4	150							
5	DCM	X	X	X	181, 182 X	X	X	
6	DCM							12L
7	DCM							
8	100	X	X	X	183, 184 X	X	X	
9	100							
10	75	X	X	X	185, 186 X	X	X	
11	75	↓	↓	↓	↓	↓	↓	
12	45	X	X	X	187, 188 X	X	X	
13	45							12L
14	45							
15	45							
16	45							
17	25	X	X	X	189, 190 X	X	X	
18	25							
19	25							
20	25							
21	25							
22	5	X	X	X	191, 192 X	X	X	
23	5							12L
24	5							

core samples from Nisk 11

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 12 Date: 8/4/2008 (217) (GMT)

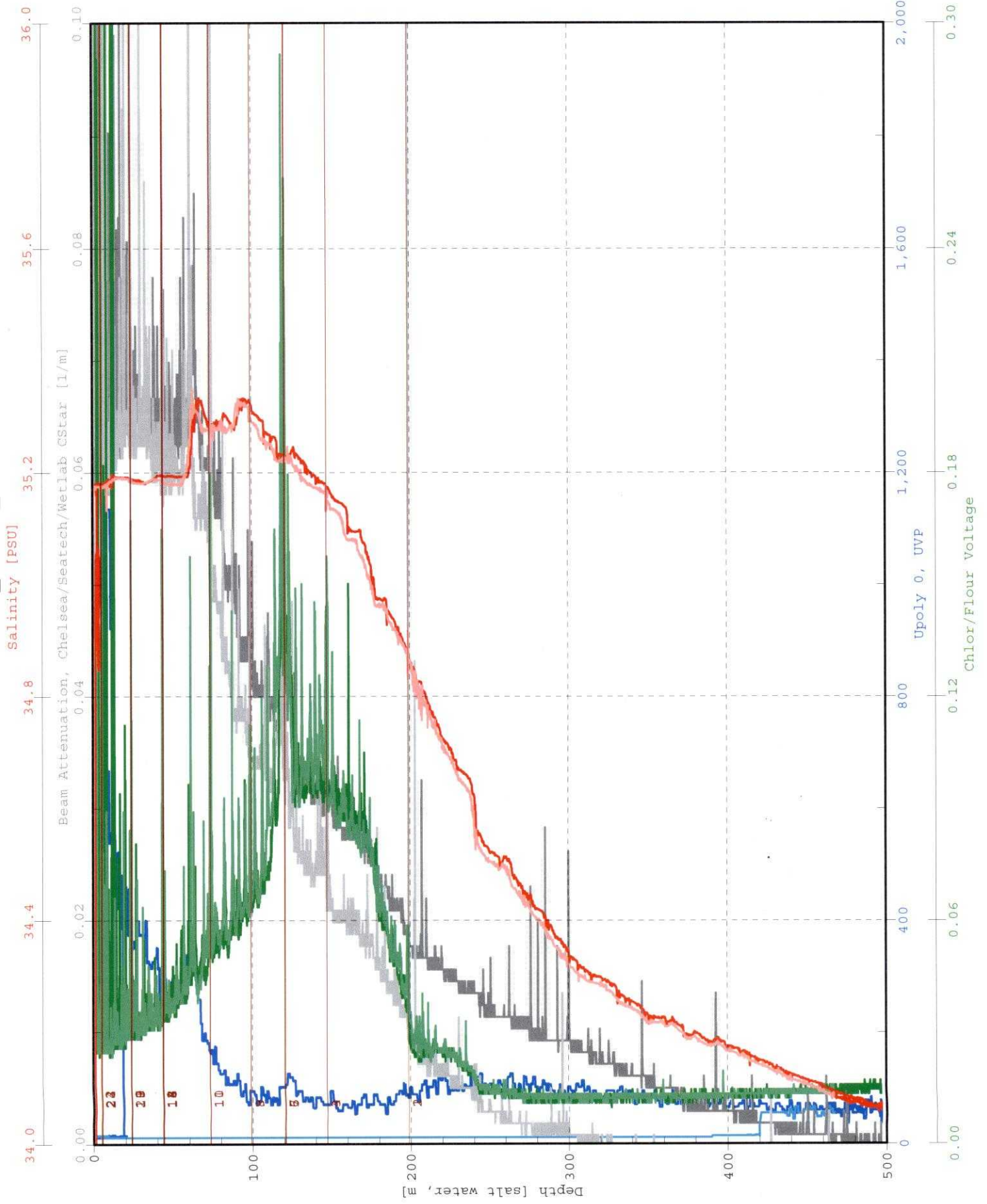
Cast Number: 1 Time: 05:18:58Z (GMT)

Operators: SP, RP, KW Position: 24° 5.006' N 30.007' W

Check yo' box...if sampling

Rosette Position	Desired Depth	Alt. Breithrow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel Alk	Hilton	Li	Watkins
1	200		X	X	X			X		X	X
2	200										
3	150		20ML	10ML							
4	150				2L					10L	
5	DCM		20ML	10ML							
6	DCM										
7	DCM				2L					10L	
8	100		20ML	10ML							
9	100									1L	
10	75		20ML	10ML							
11	75				2L					10L	
12	45		20ML	10ML						10L	
13	45										
14	45	3L			2L						
15	45										12L
16	45										12L
17	25		20ML	10ML						10L	
18	25	3L					6L				
19	25				2L	2L		2L	5L		
20	25										12L
21	25										12L
22	5		20ML	10ML		2L			5L		
23	5										
24	5				2L					10L	

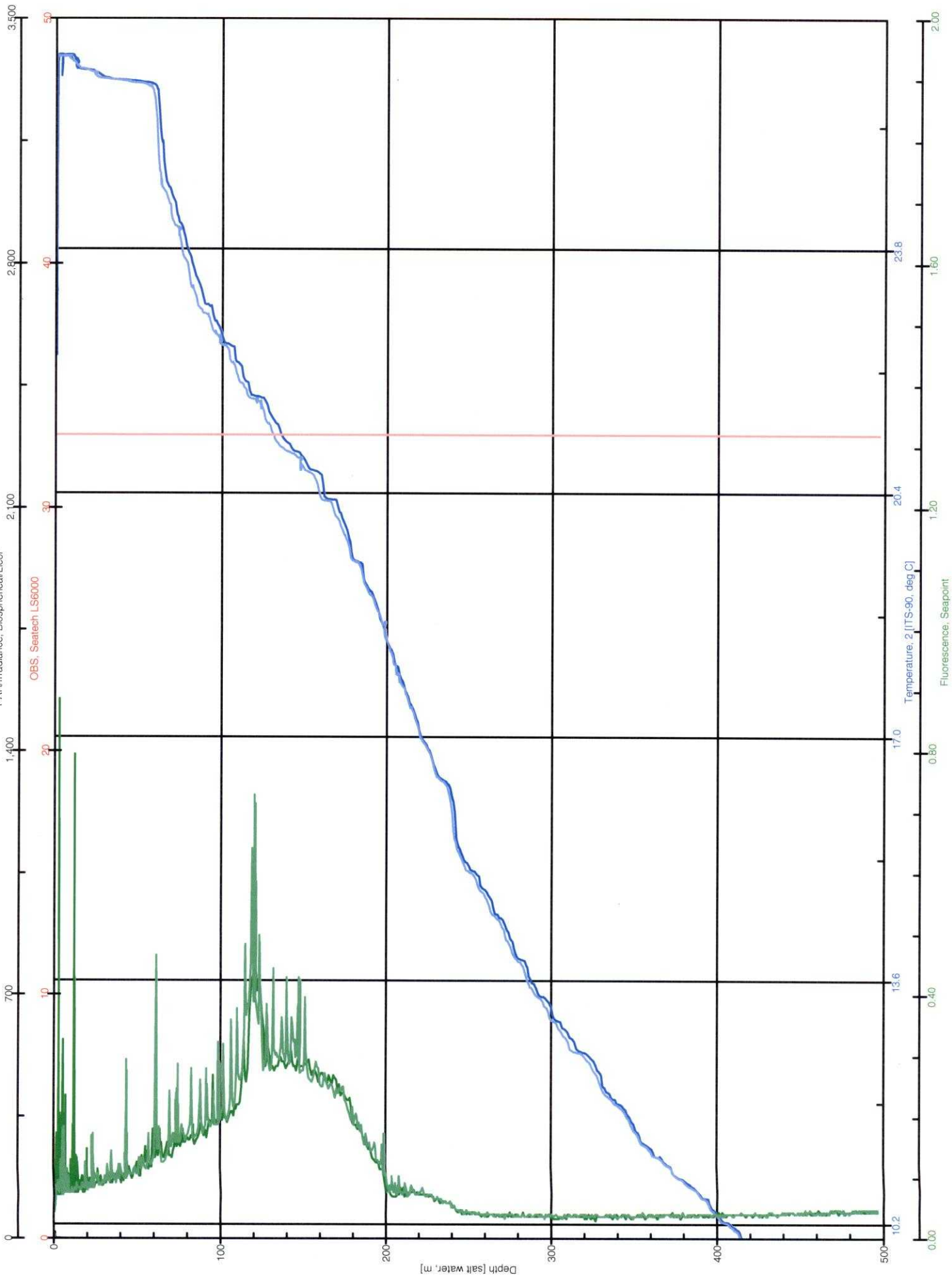
KM0814_d: _1_S12_C1



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

KM0814_1_S12_C1

PAR/Irradiance, Biospherical/Licor



OBS, Seatech LS6000

Temperature, 2 [ITS-90, deg C]

Fluorescence, Seapoint

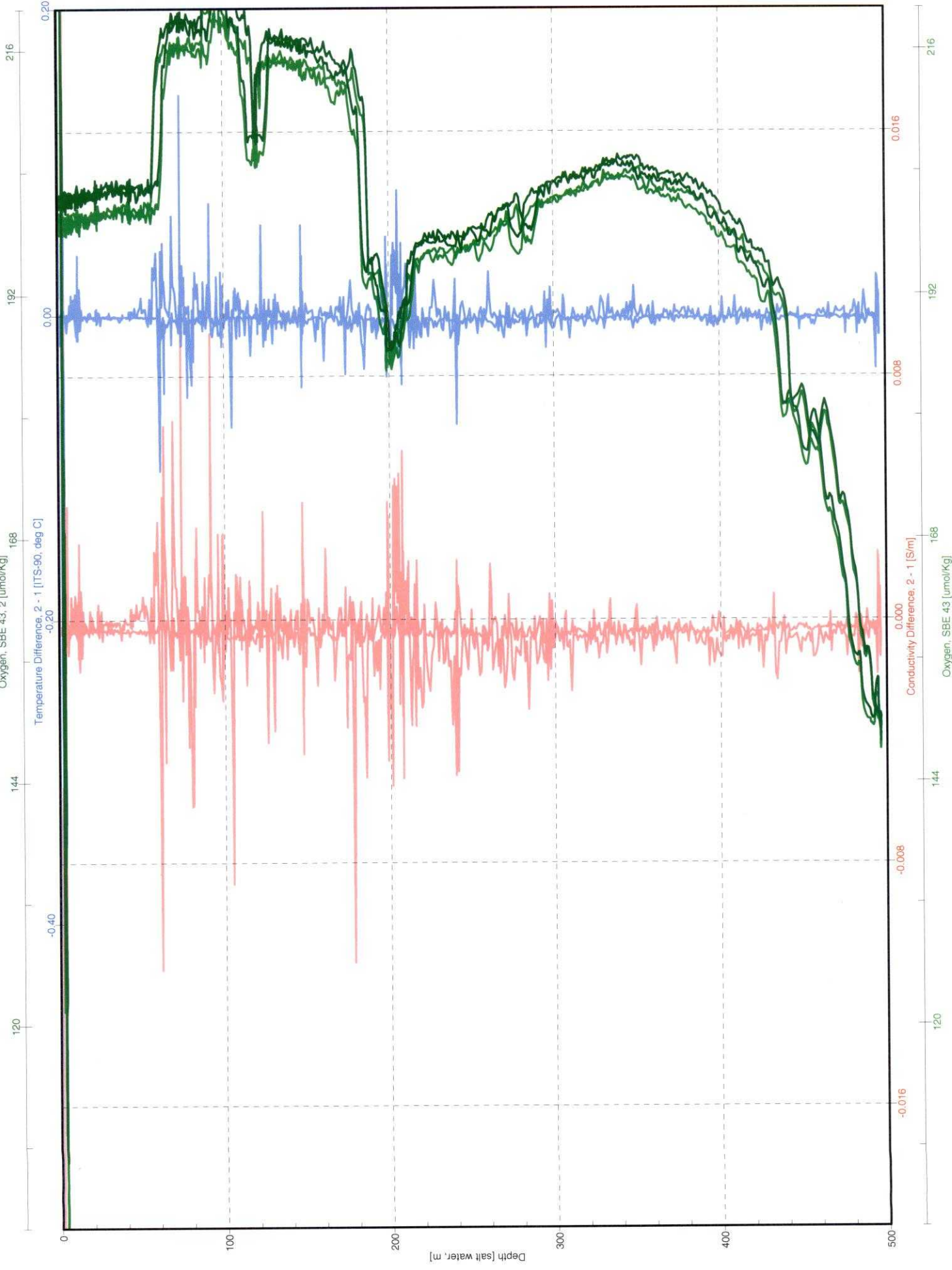
KM0814_c_S12_C1

Oxygen, SBE 43.2 [umol/Kg]

Temperature Difference, 2 - 1 [ITS-90, deg C]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
	12L	26.6	SP

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 13	Cast: 1
Latitude start: 24° 25.028' N end: 24° 25.062' N	Longitude start: 157° 29.831' W end: 157° 29.707' W
Depth of water: 4526 meters	Date (GMT): (217) 08 10/12008
Pressure on Deck	Time: 08:44:16z
Begin: .687	Start Log: 08:49:10z
End: .3139-.454	In Water: (217) 08:55:22z
Max cast pressure: 500 dbar	Out of Water: (217) 09:42:24z

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		09:23:10	200.0	200	
3	09:25:00	09:25:10	149.7	150	
4		09:25:30	149.8	150	
5	09:26:41	09:27:10	127.8	Dcm	128
6		09:27:30	127.6	Dcm	128
7		09:27:50	127.3	Dcm	128
8 (217) 09:29:19	09:29:50	100.4	100		
9		09:30:10	99.8	100	
10 (217) 09:31:30	09:31:50	74.3	75		
11		09:32:10	75.0	75	
12 (217) 09:33:55	09:34:10	43.9	45		
13		09:34:30	44.2	45	
14		09:34:50	44.5	45	
15		09:35:10	44.6	45	
16		09:35:30	44.3	45	
17 (217) 09:36:37	09:36:50	24.6	25		
18		09:37:10	24.7	25	
19		09:37:30	24.7	25	
20		09:37:50	24.5	25	
21		09:38:10	24.6	25	
22 (217) 09:39:59	09:40:10	6.2	5		(~3m wire)
23		09:40:30	6.2	5	
24		09:40:50	6.0	5	09:44:43z on Deck

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 13 Date: 8/4/2008 (217) (GMT)

Cast Number: 1 Time: (GMT)

Operators: AF, JB, LG, SD Position:
Target Depth 200

Gonna happen

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts DOC	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	193x194	X	X	
2	200							12L
3	150	X	X	X	195x196	X	X	
4	150							
5	DCM	X	X	X	197x198	X	X	
6	DCM							12L
7	DCM							
8	100	X	X	X	199x200	X	X	
9	100							
10	75	X	X	X	201x202	X	X	
11	75							
12	45	X	X	X	X	X	X	
13	45							12L
14	45	X	X	X	203x204	X	X	
15	45							
16	45							
17	25	X	X	X	205x206	X	X	
18	25							
19	25							
20	25							
21	25							
22	5	X	X	X	207x208	X	X	
23	5							12L
24	5							

MISFIRE

C-MORE CRUISE LOG

OPREX

Station Data Sheet: Core Minimum

Station Number: 13 Date: 8/04/2008 (217) (GMT)

Cast Number: 1 Time: (GMT)

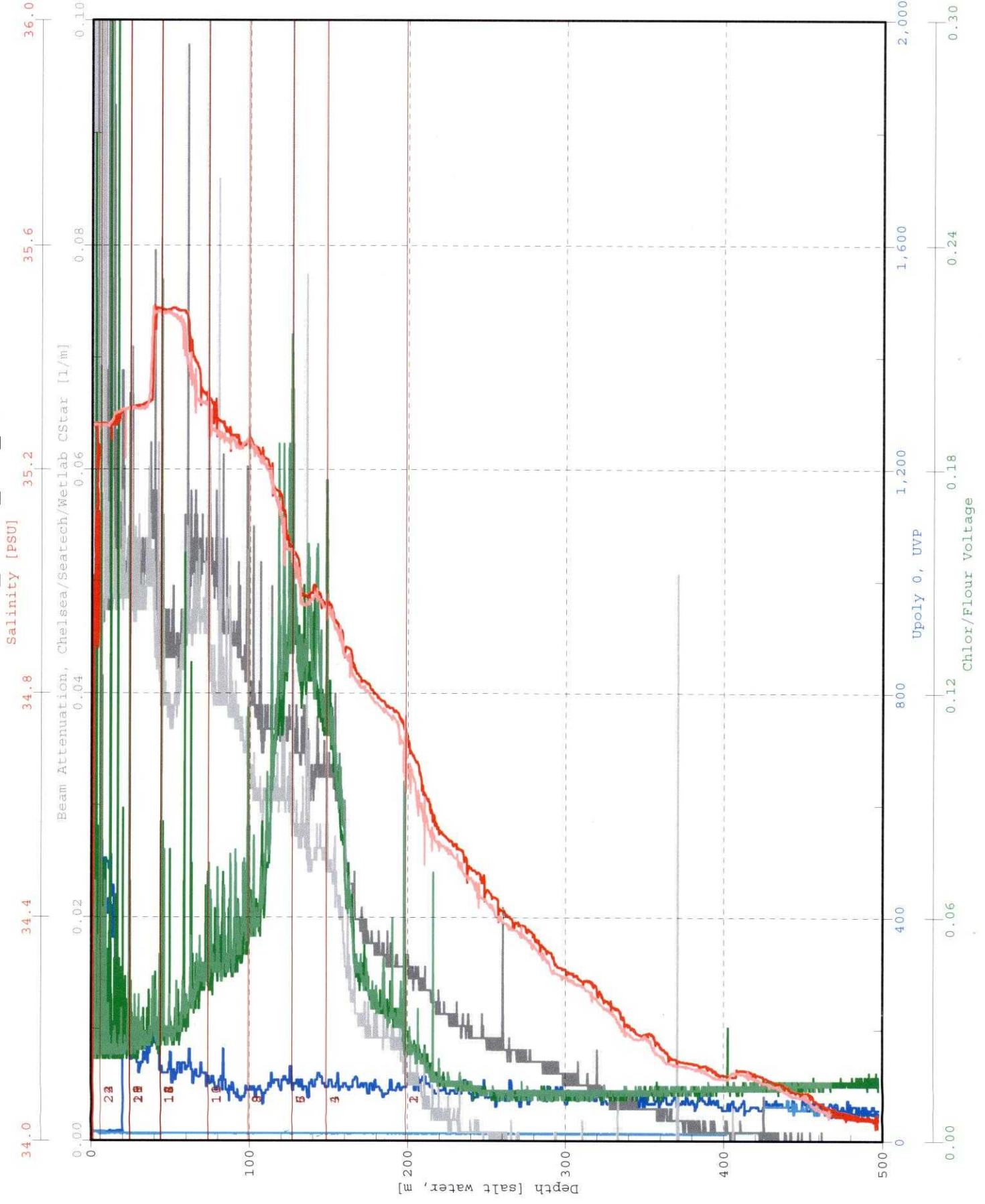
Operators: AF, PC, BU, KD, ZK Position:

Check yo' box...if sampling

Target Depth 200

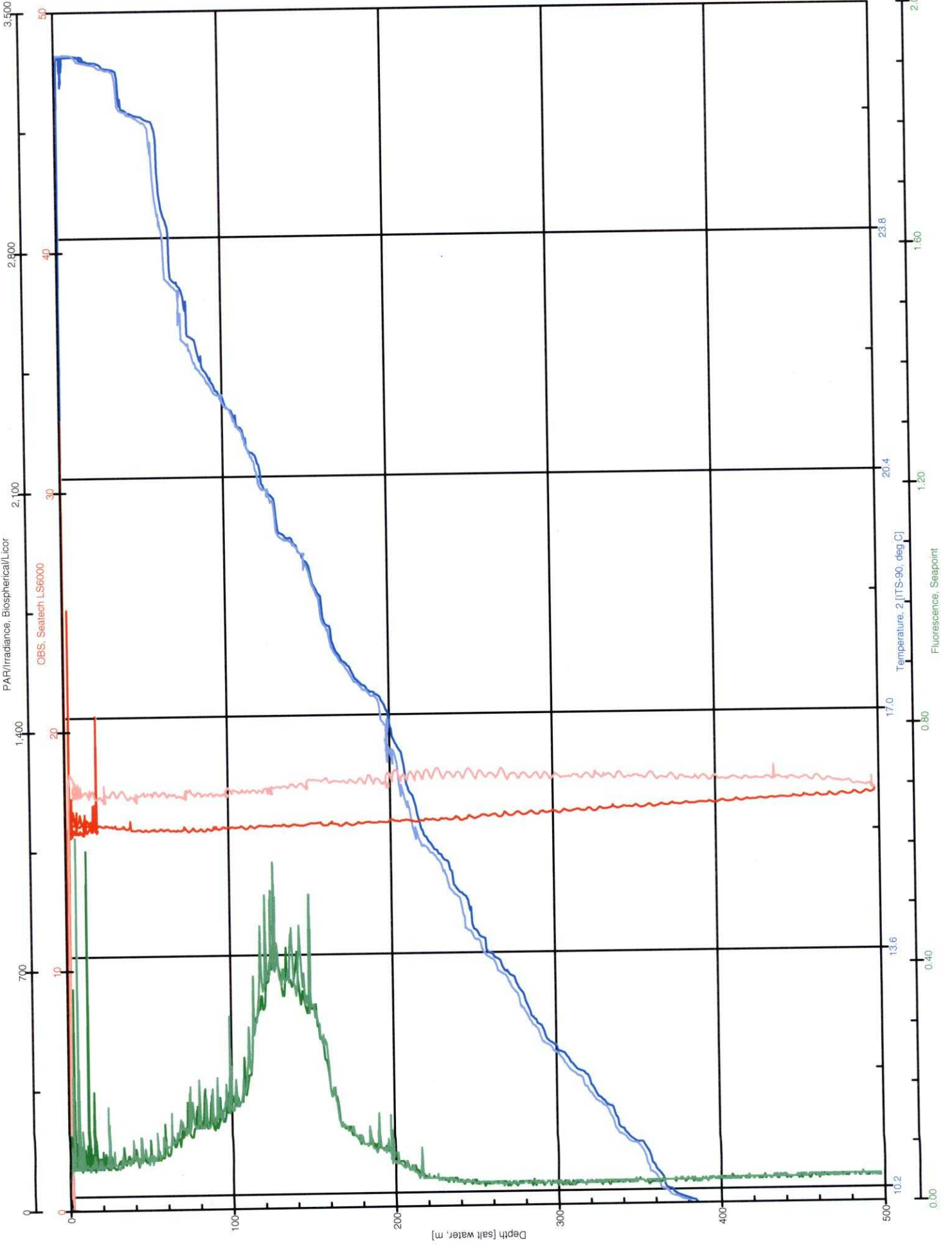
Rosette Position	Desired Depth	Alt. BreiFlow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel Alk Phosphatase	Hilton Culture	Li Diatom DNA	Watkins N2 fixation	Caill HPLC	Kolber FRRF	Ventouras DNA/RNA	TOTAL VOLUME
1	200	Toxins	BP	20ML	10ML	RNA	Gas	Phosphorus				2L	0.5L		2.8L
2	200													12L	12L
3	150			20ML	10ML							2L	0.5L		2.8L
4	150					2L				10L					12L
5	DCM			20ML	10ML							2L	0.5L		2.8L
6	DCM														
7	DCM					2L				10L					12L
8	100			20ML	10ML							2L	0.5L		2.8L
9	100								1L						1L
10	75			20ML	10ML							2L	0.5L		2.8L
11	75					2L				10L					12L
12	45			20ML	10ML					10L			0.5L		10.8L
13	45													12L	12L
14	45	3L				2L						2L			7L
15	45										12L				12L
16	45										12L				12L
17	25			20ML	10ML					10L			0.5L		10.8L
18	25	3L						6L							11L
19	25					2L	2L	2L	5L						11L
20	25										12L				12L
21	25										12L				12L
22	5			20ML	10ML		2L		5L			2L	0.5L		9.8L
23	5													12L	12L
24	5					2L				10L					12L

KM0814_d1_1_S13_C1

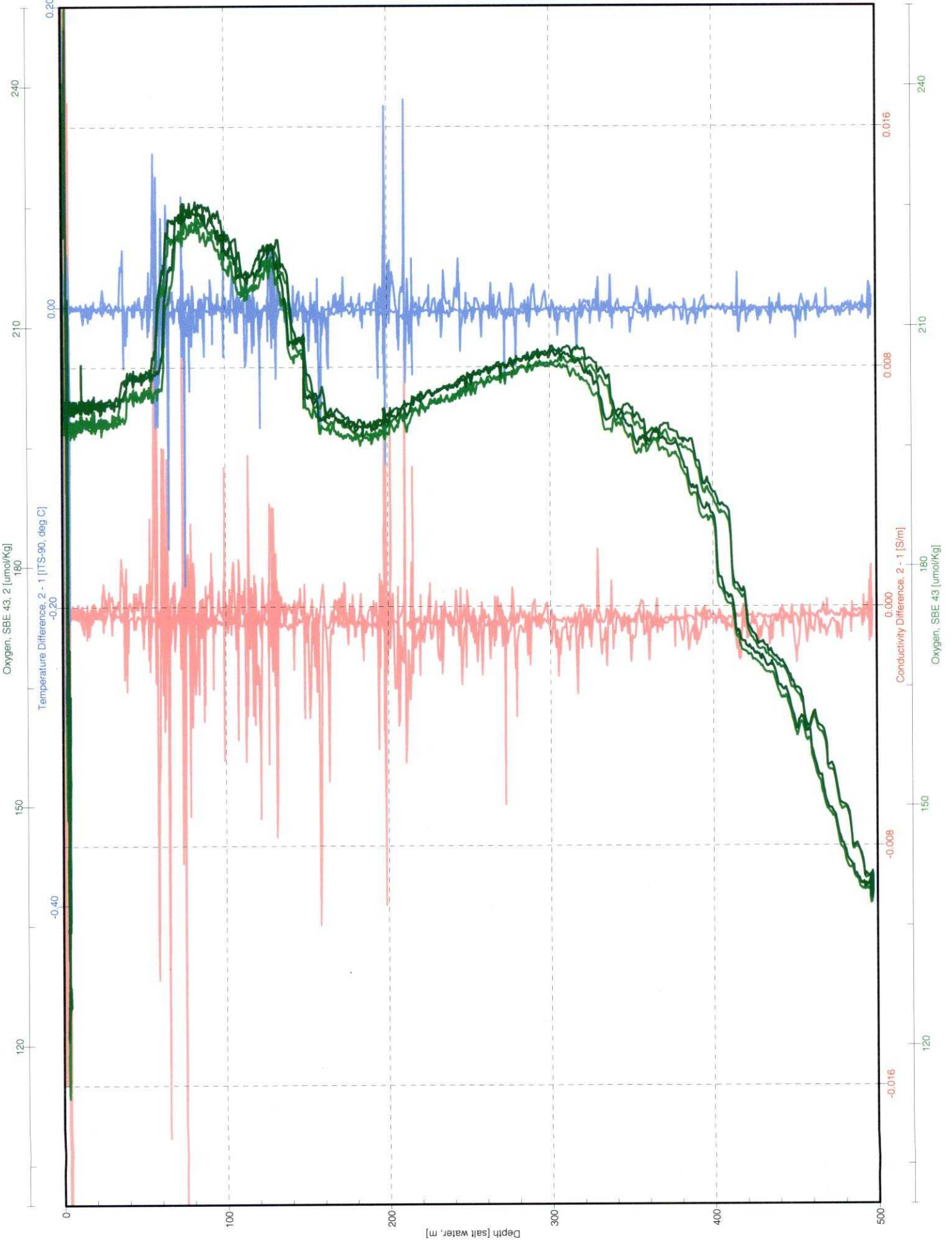


KM0814_c _S13_C1

PAR/Irradiance, Biospherical/Licor



KM0814_c ,_S13_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
	12L	26.6	

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	Kolbe Enrichment

Station: 13	Cast: 2
Latitude start: 24 d 25.063'N end:	Longitude start: 157° 29.708'W end:
Depth of water: 4542 meters	Date (GMT): (217) 08 10/12/08
Pressure on Deck	Time: 10:40:05 Z
Begin 0.64s End:	Start Log: 10:47:33 In Water: 10:49:45
Max cast pressure: 150 dbar	Out of Water: 11:19:43

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	11:05:37	11:05:50	45.27	45 db	
2		06:10	45.48	45 db	
3		06:30	45.62	45 db	
4		06:50	45.30	45	
5		07:10	45.49	45	
6		07:30	45.16	45	
7		07:50	45.12	45	
8		08:10	45.78	45	
9		08:30	45.88	45	
10		08:50	45.51	45	
11		09:10	45.65	45	
12		09:30	45.18	45	
13		09:50	45.7	45	
14		10:10	45.61	45	
15		10:30	45.18	45	
16		10:50	45.56	45	
17		11:10	45.47	45	
18		11:30	45.72	45	
19		11:50	45.78	45	
20		12:10	45.10	45	
21		12:30	45.2	45	
22		12:50	45.35	45	
23		13:10	45.68	45	
24		13:30	45.35	45	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 13 Date: 8/4/2008 (21.7) (GMT)

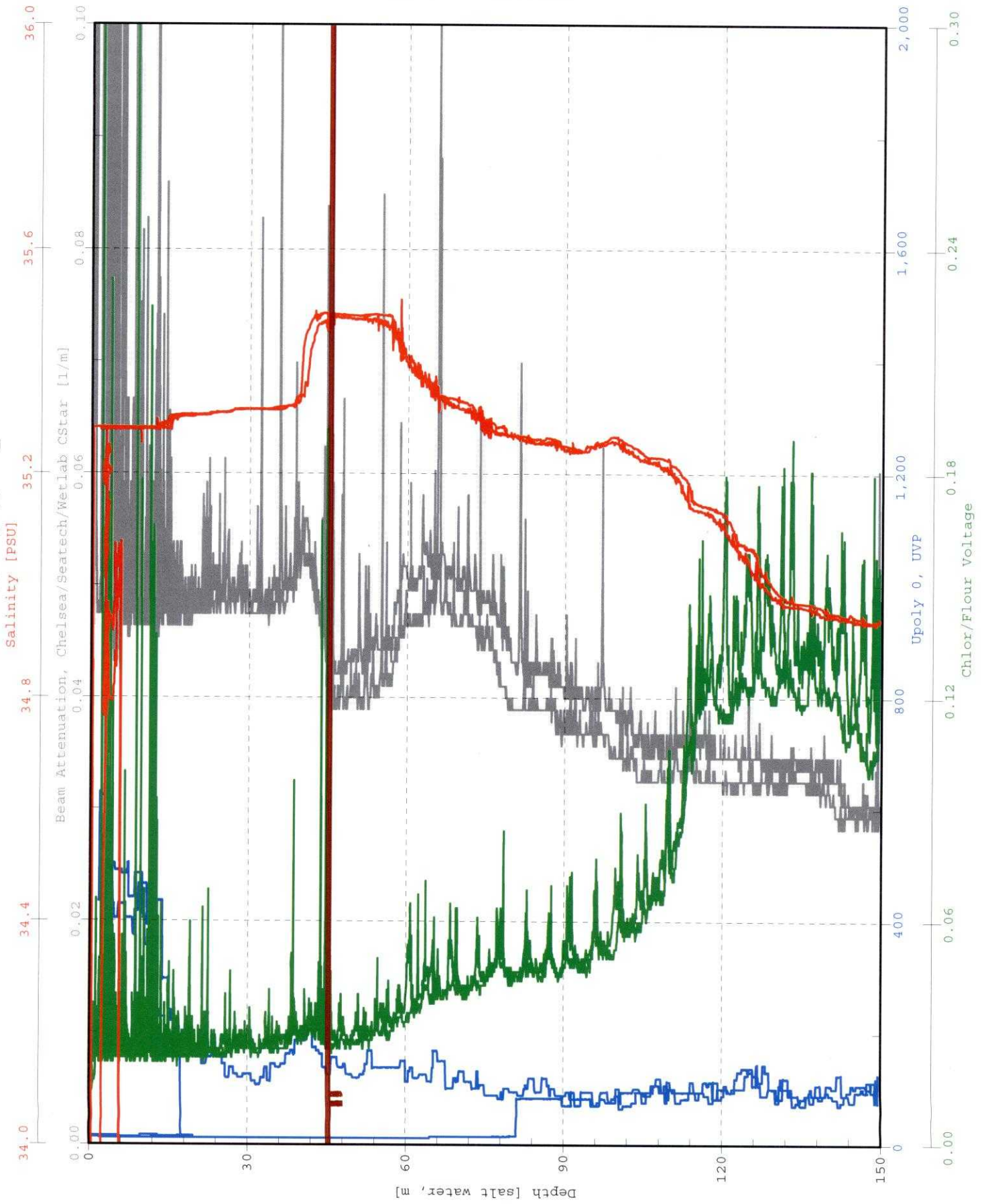
Cast Number: 2 Time: 10:40:05 (GMT)

Operators: AF, JB, LG, SD Position: 24 25.063'N, 157 29.708'W
Target Depth 200

Rosette Position	Desired Depth	KOLBER						
1	45	X						
2	45	X						
3	45	X						
4	45	X						
5	45	X						
6	45	X						
7	45	X						
8	45	X						
9	45	X						
10	45	X						
11	45	X						
12	45	X						
13	45	X						
14	45	X						
15	45	X						
16	45	X						
17	45	X						
18	45	X						
19	45	X						
20	45	X						
21	45	X						
22	45	X						
23	45	X						
24	45	X						

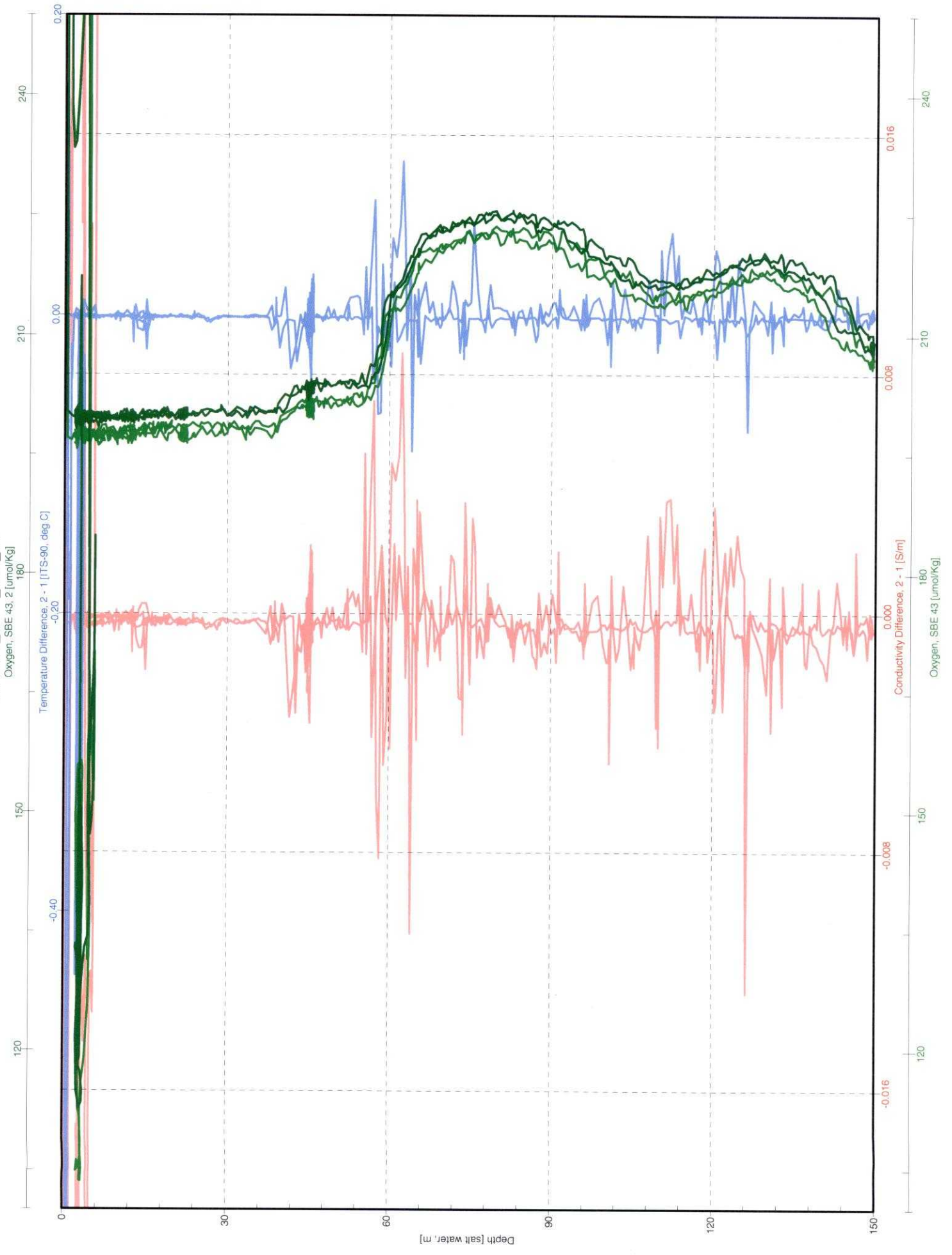
NOTES: KOLBER ENRICHMENT EXPERIMENT

KM0814_di_v1_S13_C2

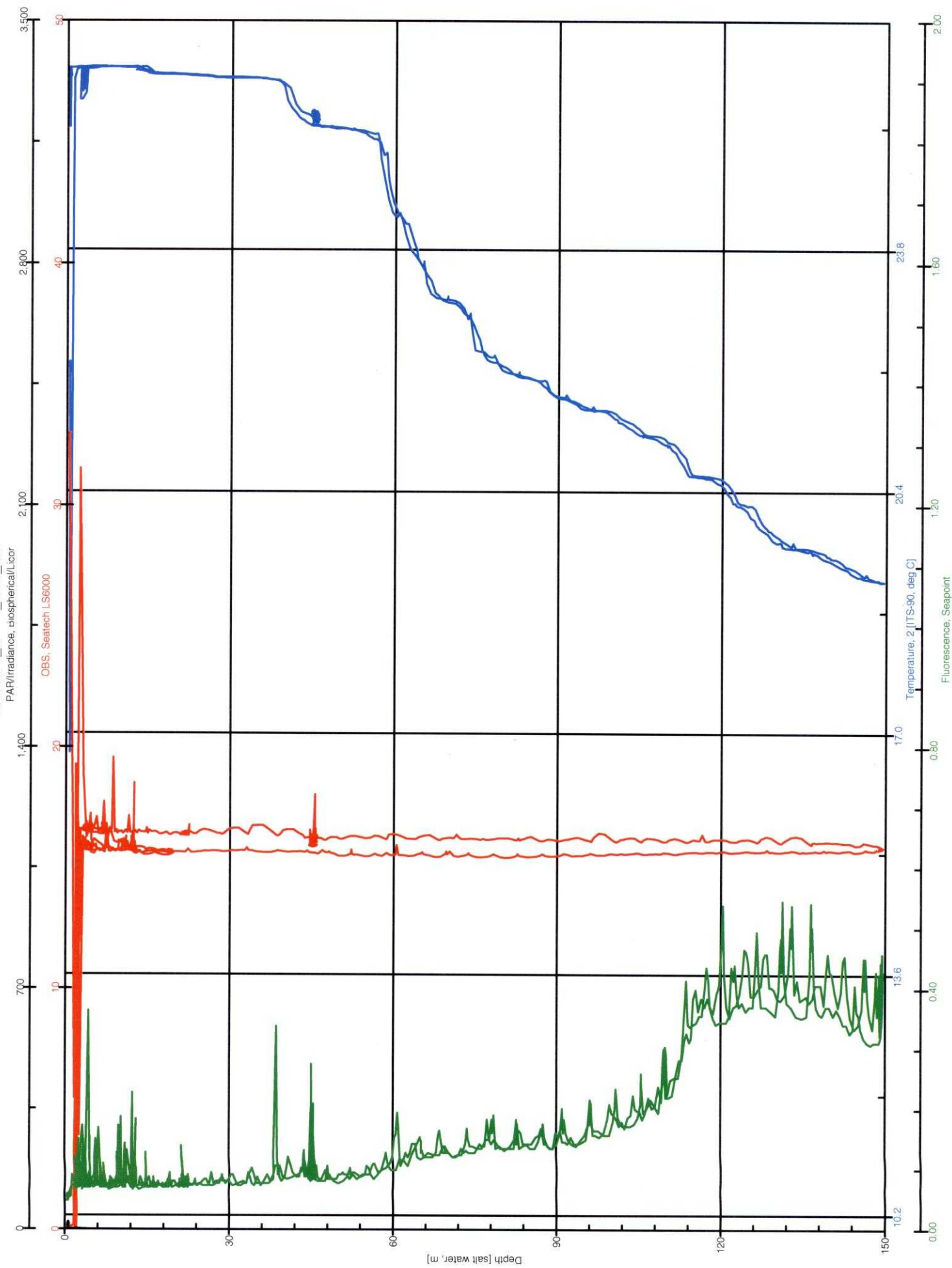


Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_c_S13_C2



KM0814_c_S13_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 13	Cast: 3
Latitude start: 24° 25.10'N	Longitude start: 157° 29.673W
end:	end:
Depth of water: 4547 meters	Date (GMT): 217 08/04/2008
Pressure on Deck	Time: 11:51:50Z
Begin: 0-87	Start Log: 11:55:01
End:	In Water: 11:56:59
Max cast pressure: 150 dbar	Out of Water: 12:29:39

Trip/Niskin	Time stopped	Confirm tripped	Pressure dbar	Target Depth	Comments
1	12:12:30	12:12:50	45	44.95	
2		13:10	45	45.19	
3		13:30	45	44.77	
4		13:50	45	44.58	
5		14:10	45	44.91	
6		14:30	45	44.91	
7		14:50	45	44.96	
8		15:10	45	45.29	
9		15:30	45	44.96	
10		15:50	45	44.92	
11		16:10	45	45.11	
12		16:30	45	44.98	
13		16:50	45	45.11	
14		17:10	45	44.78	
15		17:30	45	45.01	
16		17:50	45	44.88	
17		18:10	45	45.21	
18		18:30	45	44.92	
19		18:50	45	44.55	
20		19:10	45	45.02	
21		19:30	45	45.31	
22		19:50	45	45.07	
23		20:10	45	45.22	
24		20:30	45	45.41	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

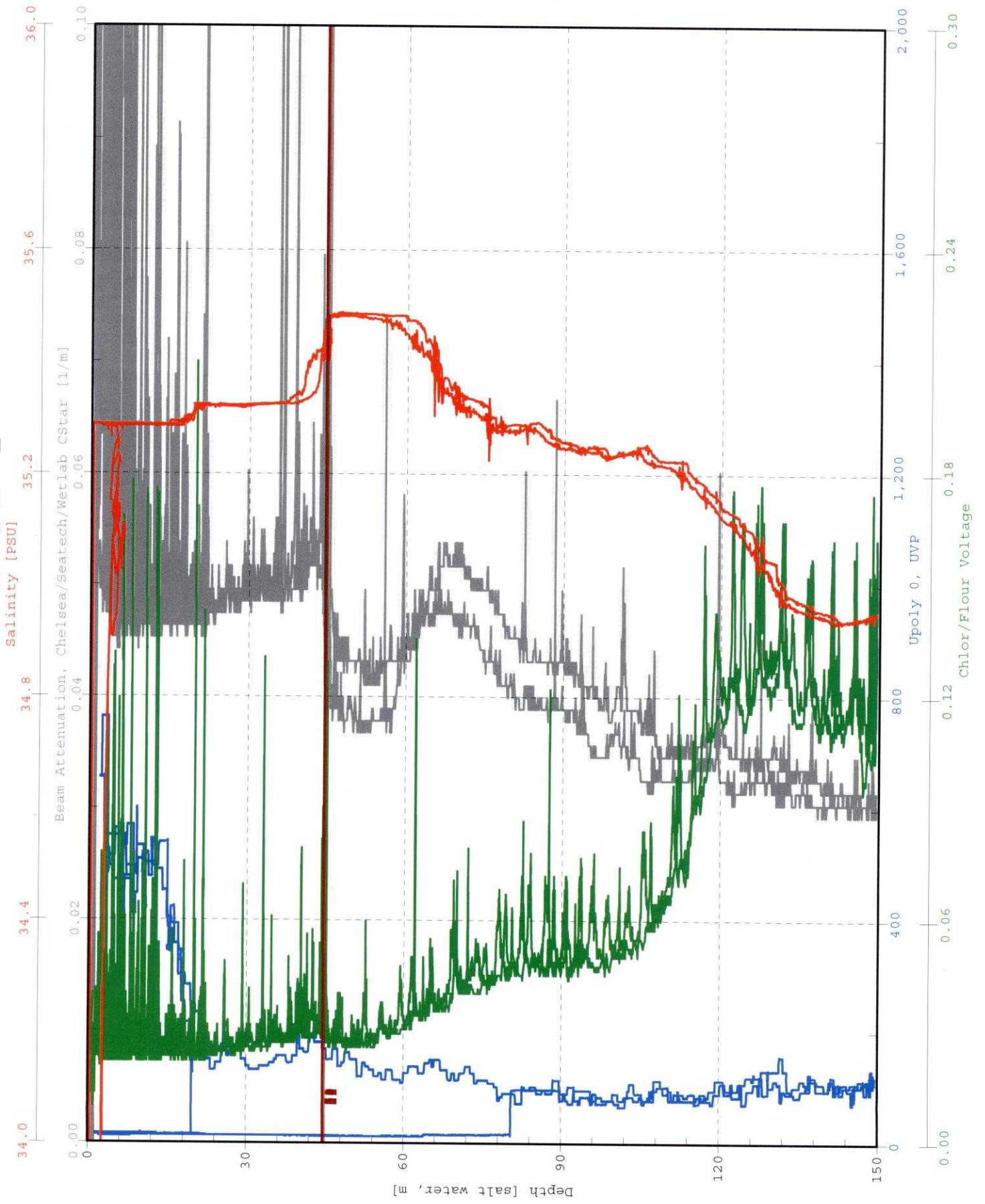
Station Number: 13
 Cast Number: 3
 Operators: _____

Date: 8/4/2008 (217) (GMT)
 Time: _____ (GMT)
 Position: _____

Rosette Position		Kolber	Becker	Bjorkman						
1	45	12								
2	45	12								
3	45	12								
4	45	12								
5	45	12								
6	45	12								
7	45	12								
8	45	12								
9	45	12								
10	45	12								
11	45	12								
12	45	12								
13	45	12								
14	45	12								
15	45	12								
16	45	12								
17	45	12								
18	45	12								
19	45	12								
20	45	12								
21	45	12								
22	45	12								
23	45	12								
24	45	12								

NOTES:
 Kolber Enrichment Experiment

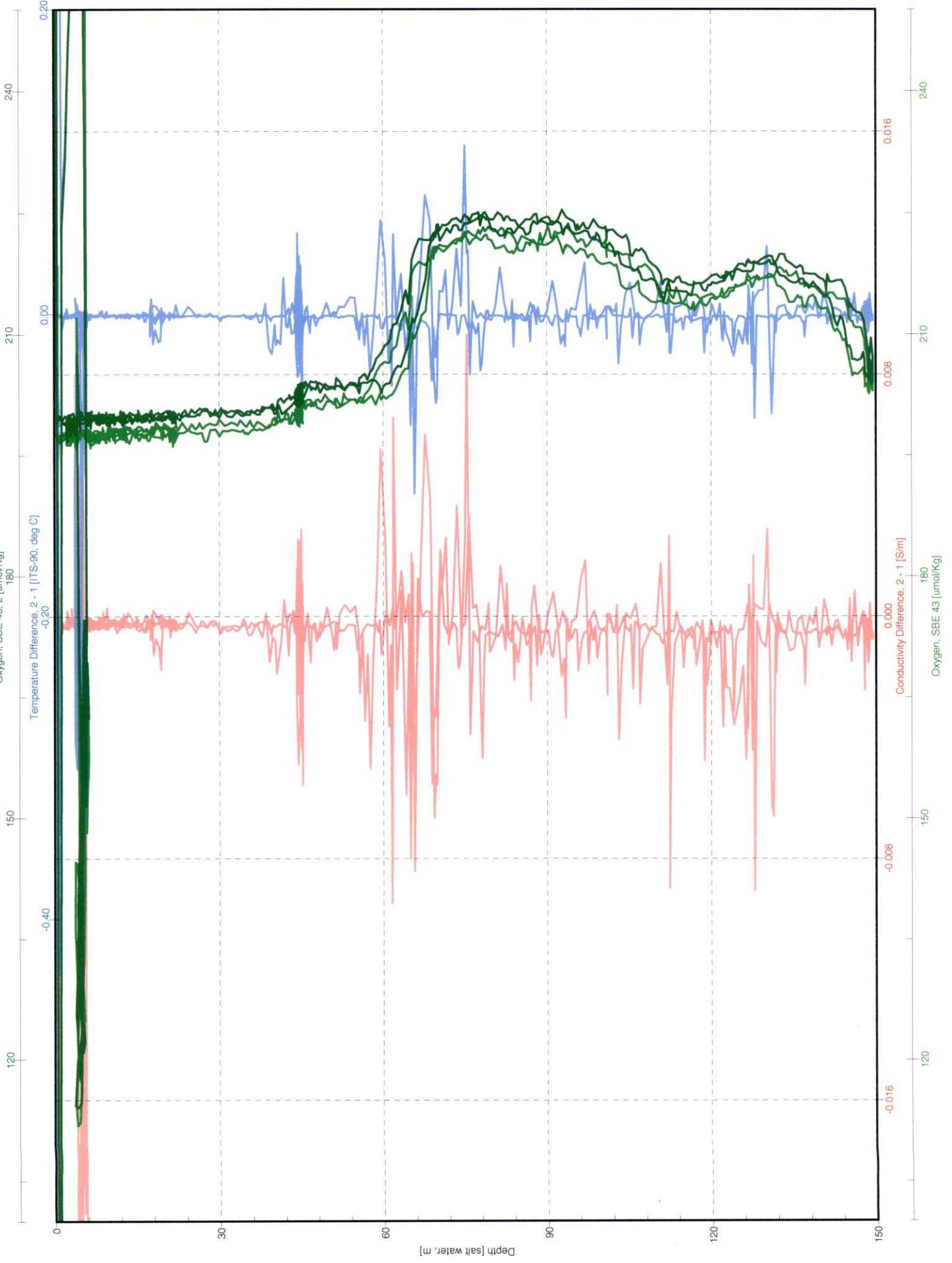
KM0814_displ_S13_C3



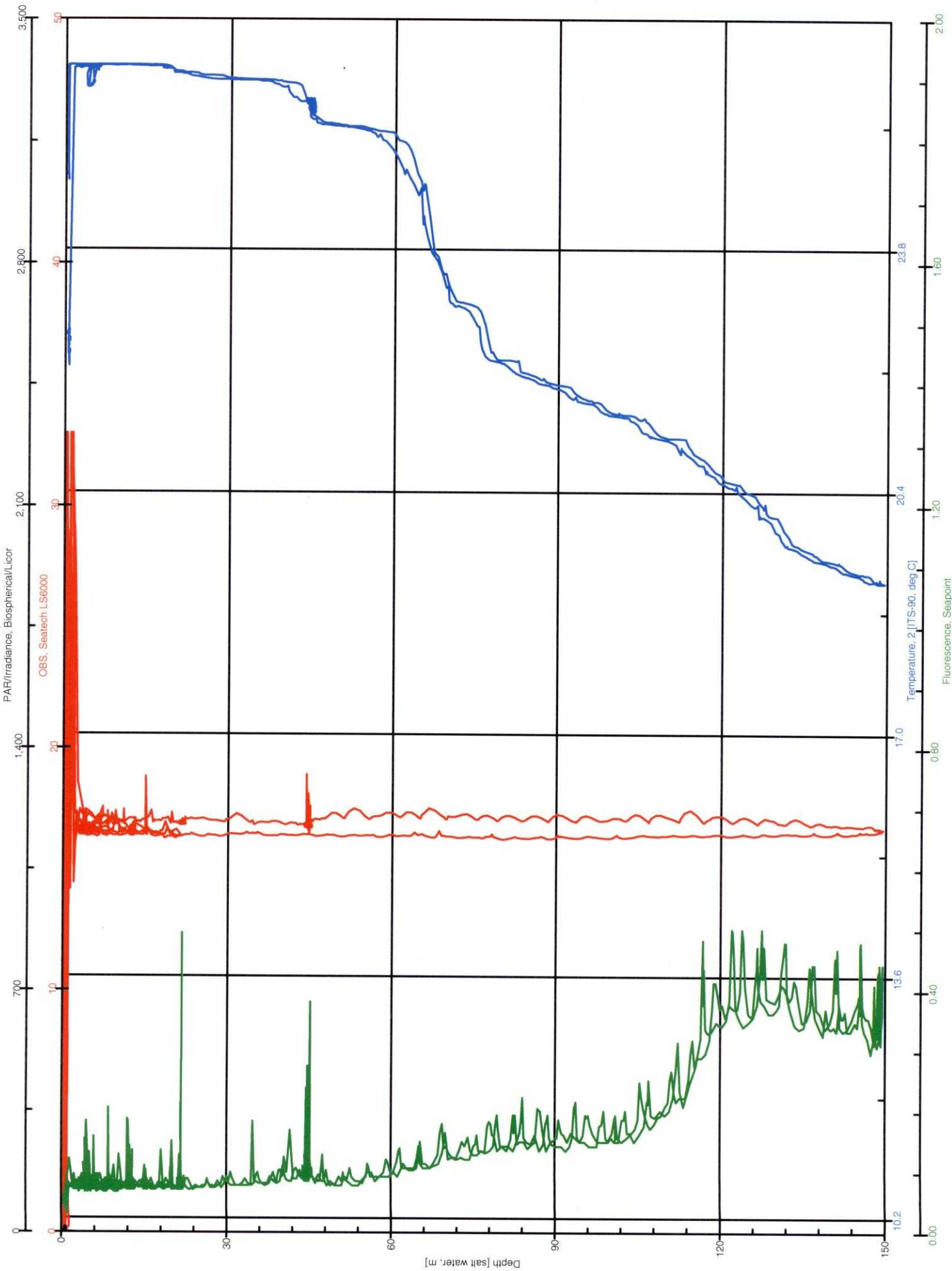
Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_dis_S13_C3

Oxygen, SBE 43, 2 [$\mu\text{mol/Kg}$]



KM0814_dis,_S13_C3



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator <i>Calil</i>
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: <i>13</i>	Cast: <i>4</i>
Latitude start:	Longitude start:
end:	end:
Depth of water: <i>4540</i> meters	Date (GMT): <i>217</i> <i>08/04/2008</i>
Pressure on Deck	Time: <i>12:57:31</i>
Begin: <i>0.69</i>	Start Log: <i>12:57:31</i>
End:	In Water: <i>12:59:58</i>
Max cast pressure: <i>1000</i> dbar	Out of Water:

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	<i>13:27:12</i>	<i>13:27:35</i>	<i>999.35</i>	<i>1000</i>	<i>DCM = 135</i>
2		<i>13:27:55</i>	<i>999.7</i>	<i>1000</i>	
3	<i>13:37:55</i>	<i>13:38:20</i>	<i>500.38</i>	<i>500</i>	
4		<i>13:38:40</i>	<i>499.79</i>	<i>500</i>	
5	<i>13:43:51</i>	<i>13:44:20</i>	<i>300.27</i>	<i>300</i>	
6		<i>13:44:40</i>	<i>300.58</i>	<i>300</i>	
7		<i>13:45:00</i>	<i>300.88</i>	<i>300</i>	
8		<i>13:45:20</i>	<i>300.43</i>	<i>300</i>	
9		<i>13:45:40</i>	<i>300.88</i>	<i>300</i>	
10	<i>13:48:52</i>	<i>13:49:20</i>	<i>200.34</i>	<i>200</i>	
11		<i>13:49:40</i>	<i>200.46</i>	<i>200</i>	
12	<i>13:51:54</i>	<i>13:52:20</i>	<i>136.21</i>	<i>DCM</i>	
13		<i>13:52:40</i>	<i>135.82</i>	<i>DCM</i>	
14	<i>13:55:55</i>	<i>13:56:20</i>	<i>44.72</i>	<i>45</i>	
15		<i>13:56:40</i>	<i>44.79</i>	<i>45</i>	
16		<i>13:57:00</i>	<i>45.06</i>	<i>45</i>	
17		<i>13:57:20</i>	<i>45.14</i>	<i>45</i>	
18		<i>13:57:40</i>	<i>45.50</i>	<i>45</i>	
19		<i>13:58:00</i>	<i>44.73</i>	<i>45</i>	
20		<i>13:58:20</i>	<i>44.96</i>	<i>45</i>	
21		<i>13:58:40</i>	<i>44.10</i>	<i>45</i>	
22		<i>13:59:00</i>	<i>44.89</i>	<i>45</i>	
23	<i>14:04:36</i>	<i>14:04:50</i>	<i>5.99</i>	<i>5</i>	} <i>3m of wire out</i>
24		<i>05:10</i>	<i>5.29</i>	<i>5</i>	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

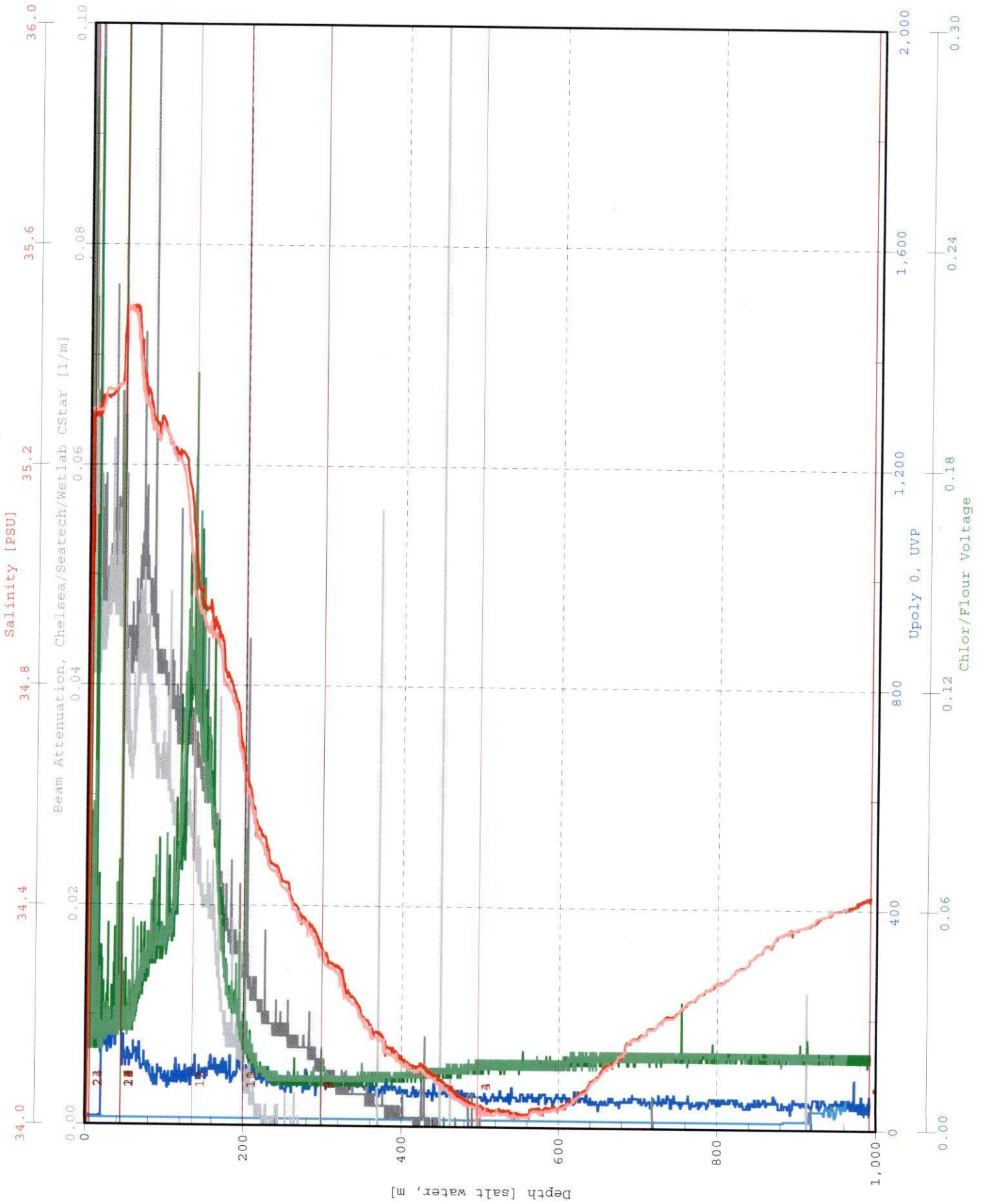
Station Number: 13
 Cast Number: 4
 Operators: SW, PC, JH, JB, MC

Date: 8/4/2008 (217) (GMT)
 Time: 14:0200 (GMT)
 Position: _____

Rosette Position		Kolber	Becker	Bjorkman						
1	1000		12							
2	1000		12							
3	500	12								
4	500	12								
5	300	12								
6	300	12								
7	300		12							
8	300		12							
9	300		12							
10	200	12								
11	200	12								
12	DCM	12	12							
13	DCM	12	12							
14	45			12						
15	45			12						
16	45			12						
17	45			12						
18	45			12						
19	45			12						
20	45			12						
21	45			12						
22	45	12								
23	5		12							
24	5		12							

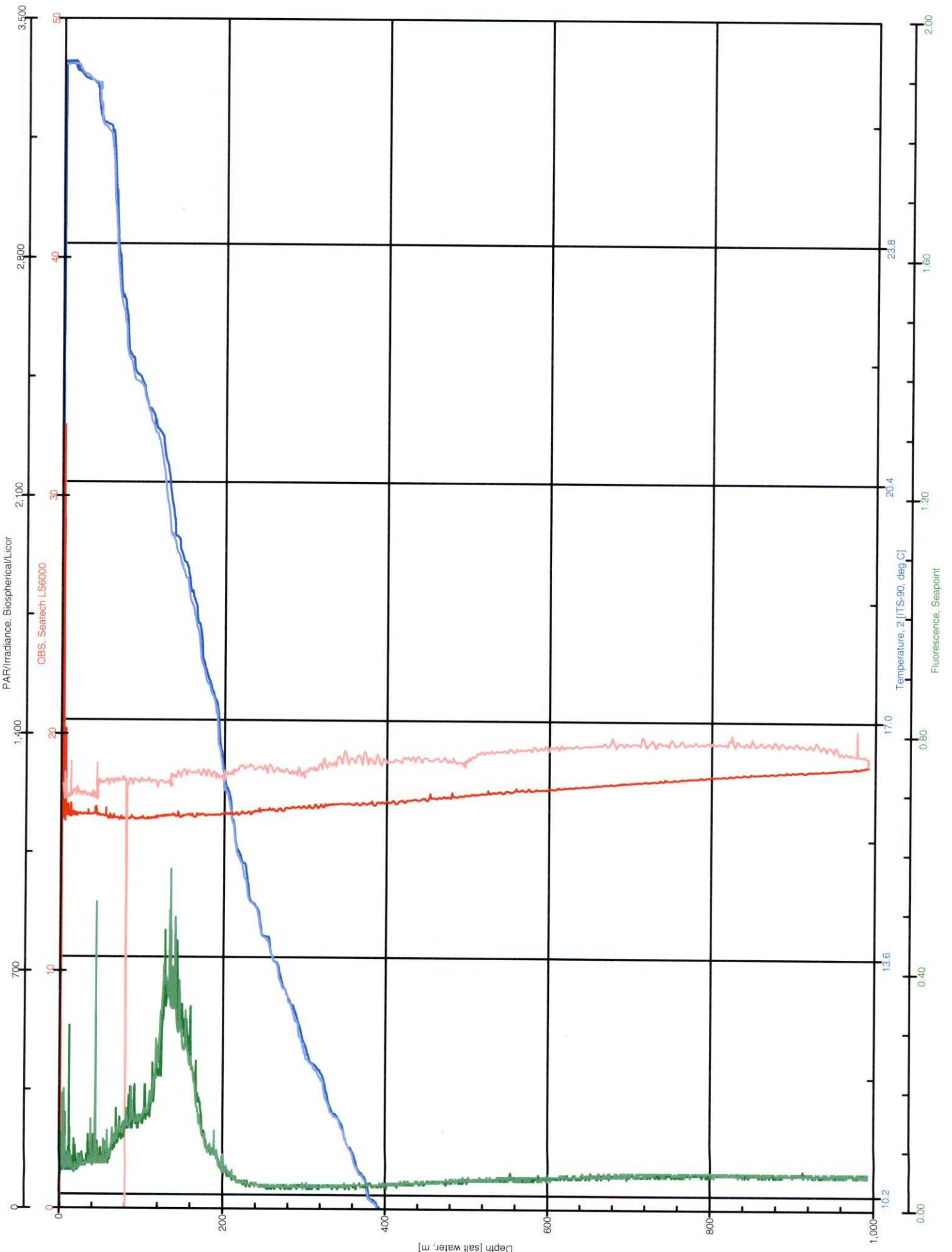
NOTES:
 Kolber Enrichment Experiment

KM0814_dis_1_S13_C4



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

KM0814_disr__S13_C4



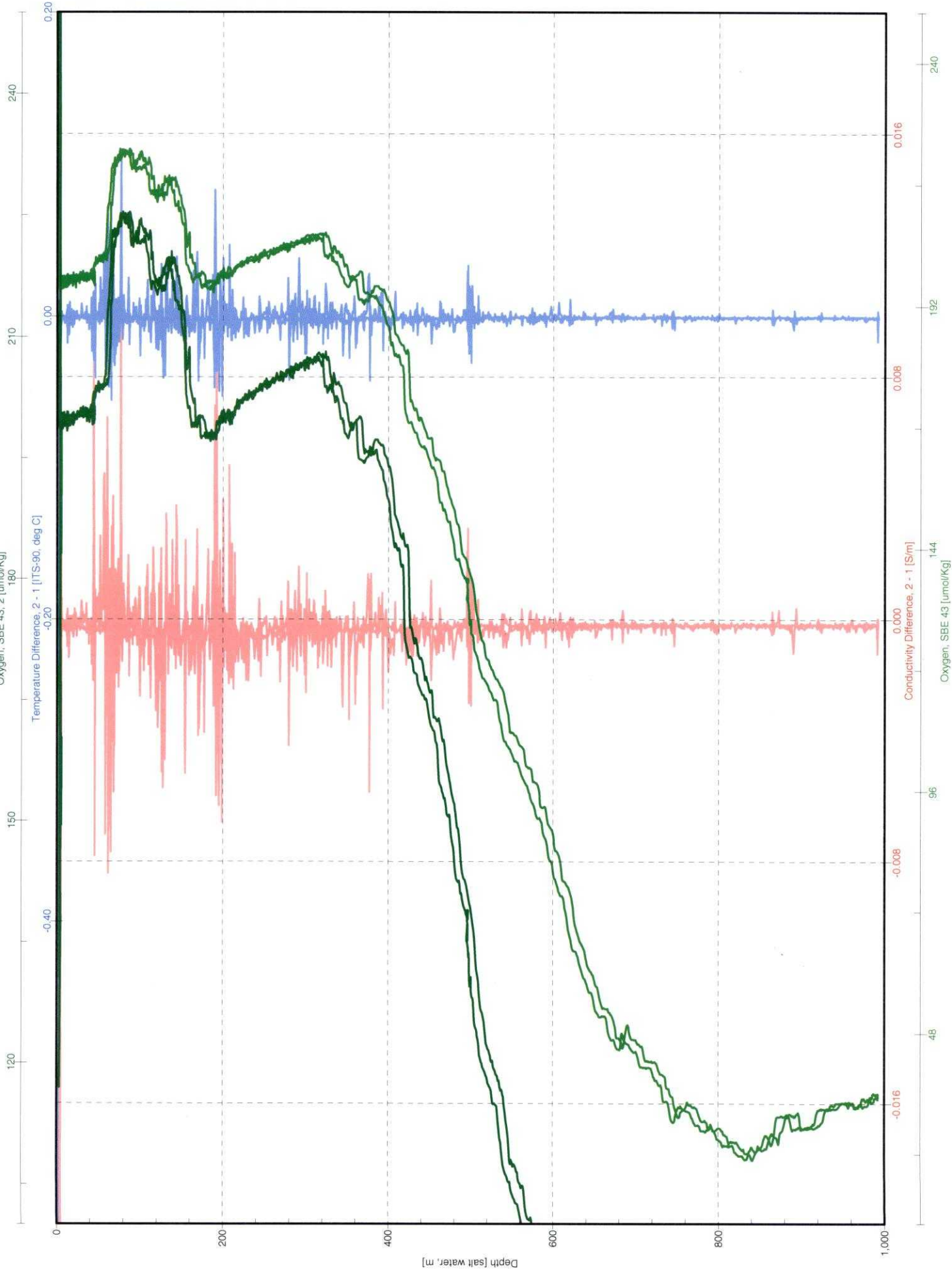
KM0814_dis_r_S13_C4

Oxygen, SBE 43, 2 [umol/Kg]

Temperature Difference, 2 - 1 [ITS-90, deg C]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]



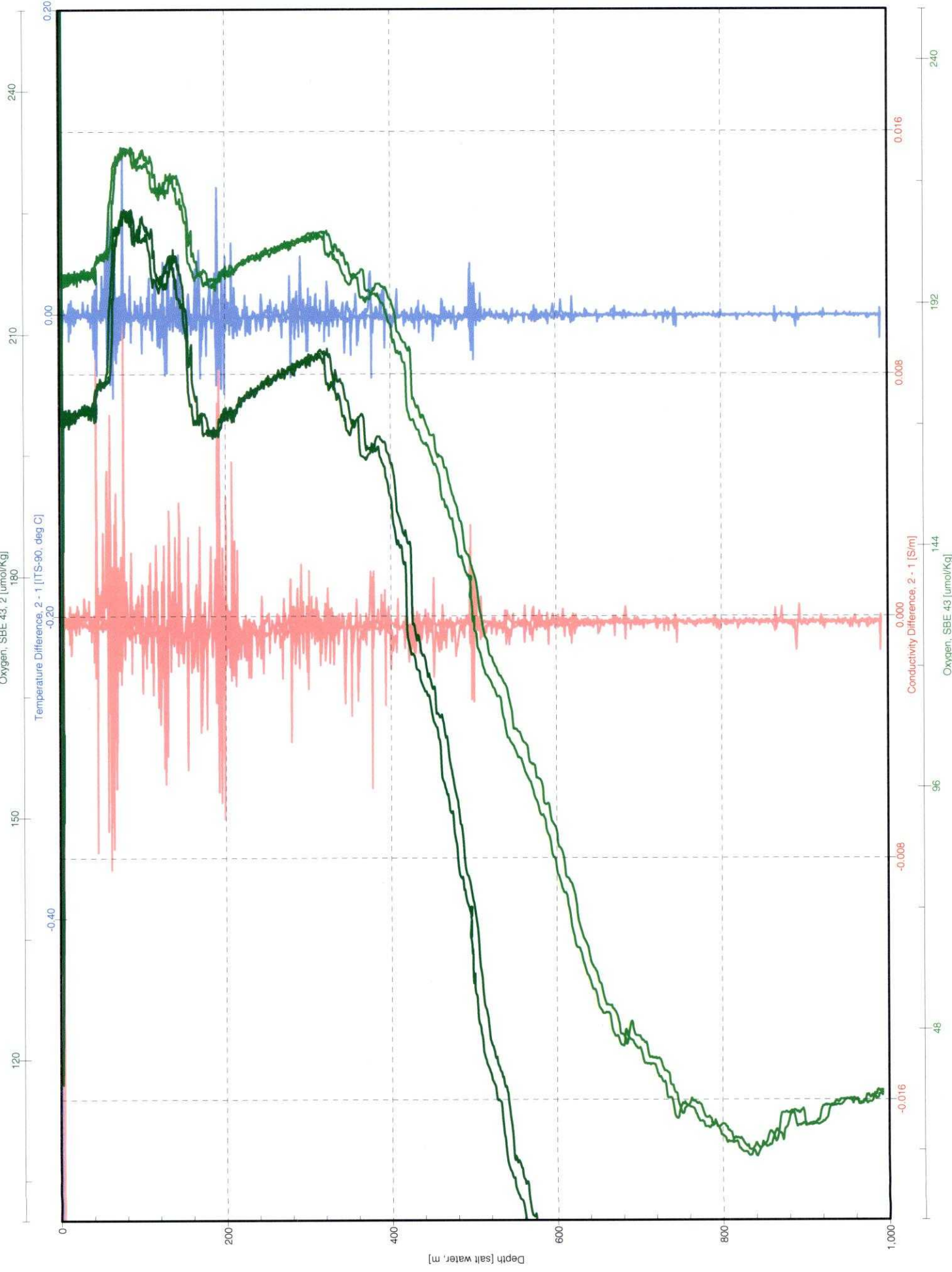
KM0814_dis_ S13_C4

Oxygen, SBE 43, 2 [umol/Kg]

Temperature Difference, 2 - 1 [ITS-90, deg C]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.5	Operator
-----------	-------------	-------------	----------

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 13	Cast: 5
Latitude start: 24d 25.020'N end: 24d 24.958'N	Longitude start: 157 29.732'W end: 157d 29.744'W
Depth of water: 4544 meters	Date (GMT): 217 08/10/2009
Pressure on Deck Begin: 0.64 End: 0.65	Time: 14:44:16 Start Log: 14:46:05 In Water: 14:48:54 Out of Water: 15:23:48
Max cast pressure: 150 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	15:04:31	15:04:55	99.92	100	
2		15:05:20	100.56	100	
3		15:05:40	100.27	100	
4		15:06:00	99.98	100	
5		15:06:20	99.91	100	
6		15:06:40	100.52	100	
7		15:07:00	100.34	100	
8		15:07:20	100.63	100	
9		15:07:40	100.43	100	
10		15:08:00	100.59	100	
11		15:08:20	100.55	100	
12		15:08:40	99.76	100	
13		15:09:00	99.90	100	
14	15:11:37	15:12:00	45.26	45	
15		15:12:20	45.78	45	
16	15:13:31	15:13:50	30.41	30	
17		15:14:10	29.94	30	
18	15:15:30	15:15:50	15.31	15	
19		15:16:10	15.86	15	
20	15:19:39	15:20:10	5.78	5	} 3 m of wire out
21		20:30	5.73	5	
22		20:50	5.60	5	
23		21:10	5.79	5	
24		21:30	5.61	5	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 13 Date: 8/4/2008 (217) (GMT)

Cast Number: 5 Time: 14:44:16 (GMT)

Operators: SW, PC, JH, JB, MC Position: 24 25.020'N, 157.29.732'W
Target Depth 200

Rosette Position	Desired Depth	PAERL							
1	100	X							
2	100	X							
3	100	X							
4	100	X							
5	100	X							
6	100	X							
7	100	X							
8	100	X							
9	100	X							
10	100	X							
11	100	X							
12	100	X							
13	100	X							
14	45	X							
15	45	X							
16	30	X							
17	30	X							
18	15	X							
19	15	X							
20	5	X							
21	5	X							
22	5	X							
23	5	X							
24	5	X							

NOTES:

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: _____
Cast Number: _____
Operators: _____

13
5

Date: 8/4/2008 (217)
Time: _____
Position: _____

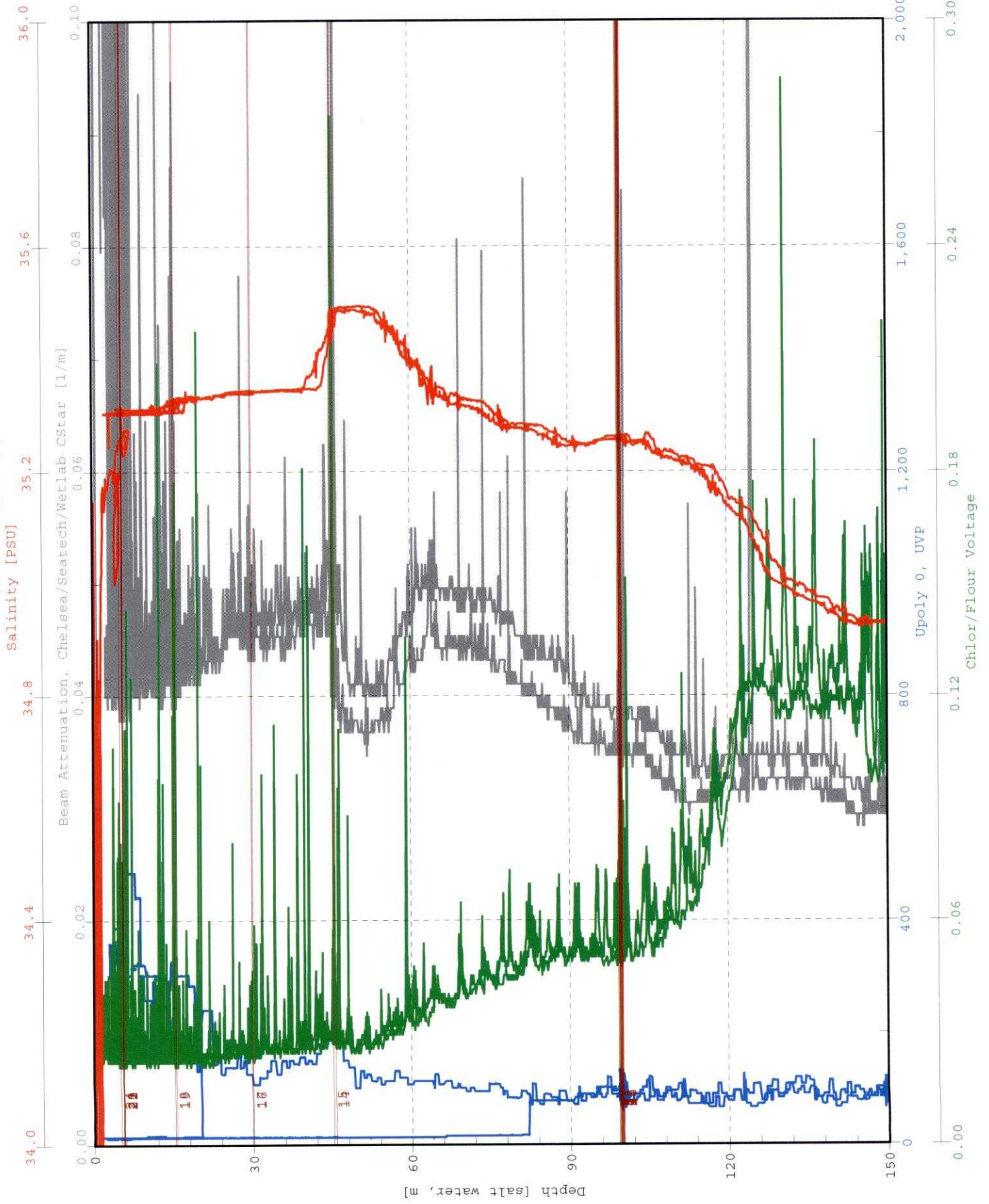
(GMT)
(GMT)

75
45
30
30
15
15
5
5

Rosette Position		Paerl	Becker	Bjorkman						
1	100	12								
2	100	12								
3	100	12								
4	100	12								
5	100	12								
6	100	12								
7	100	12								
8	100	12								
9	100	12								
10	100	12								
11	100	12								
12	100	12								
13	100	12								
14	100	12								
15	100	12								
16	100	12								
17	100	12								
18	100	12								
19	100	12								
20	100	12								
21	100	12								
22	5	12								
23	5	12								
24	5	12								

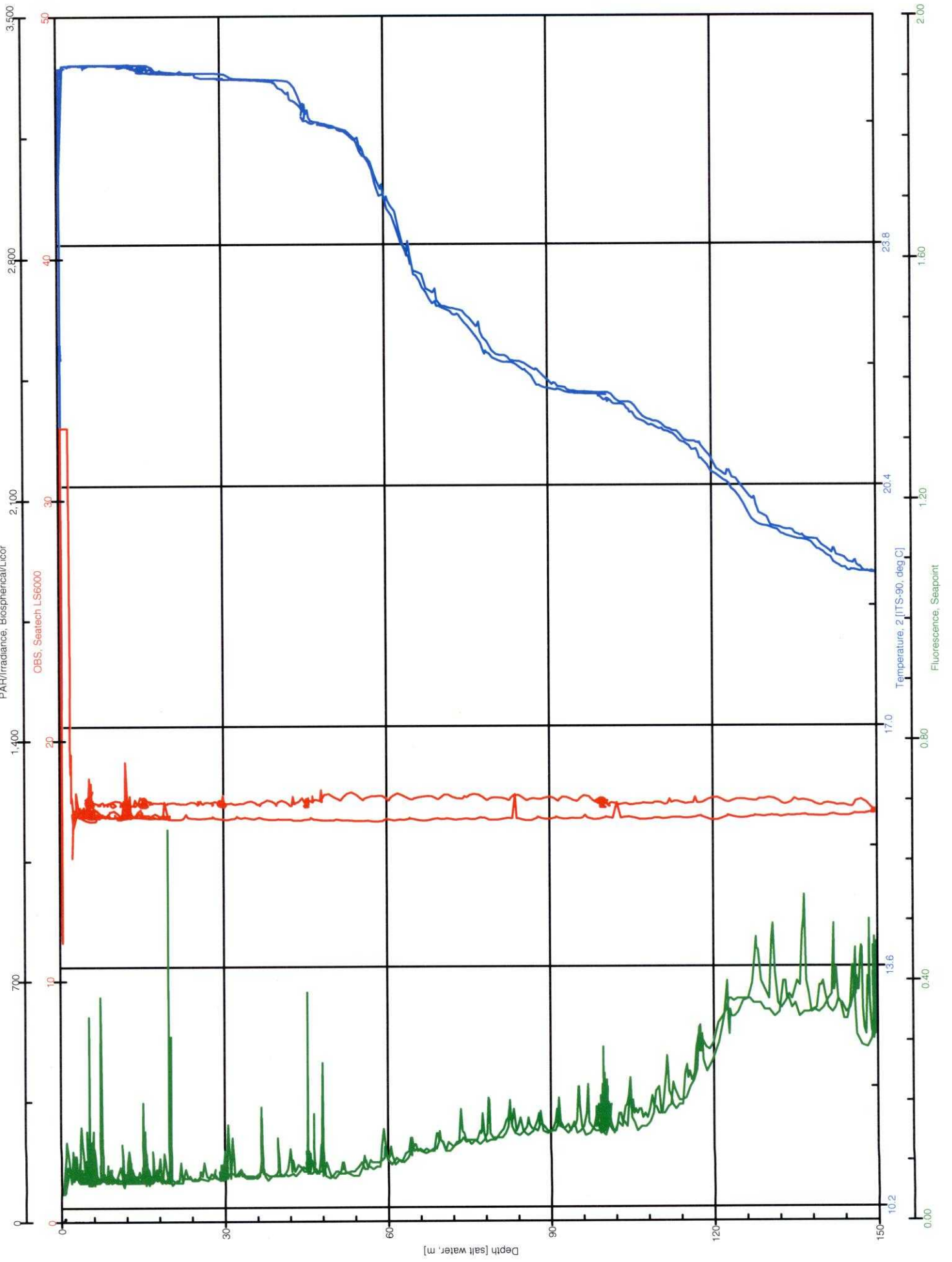
NOTES:
Paerl Experiment

KM0814_c_jp1_S13_C5



KM081_ p2_S13_C5

PAR/Irradiance, Biospherical/Licor



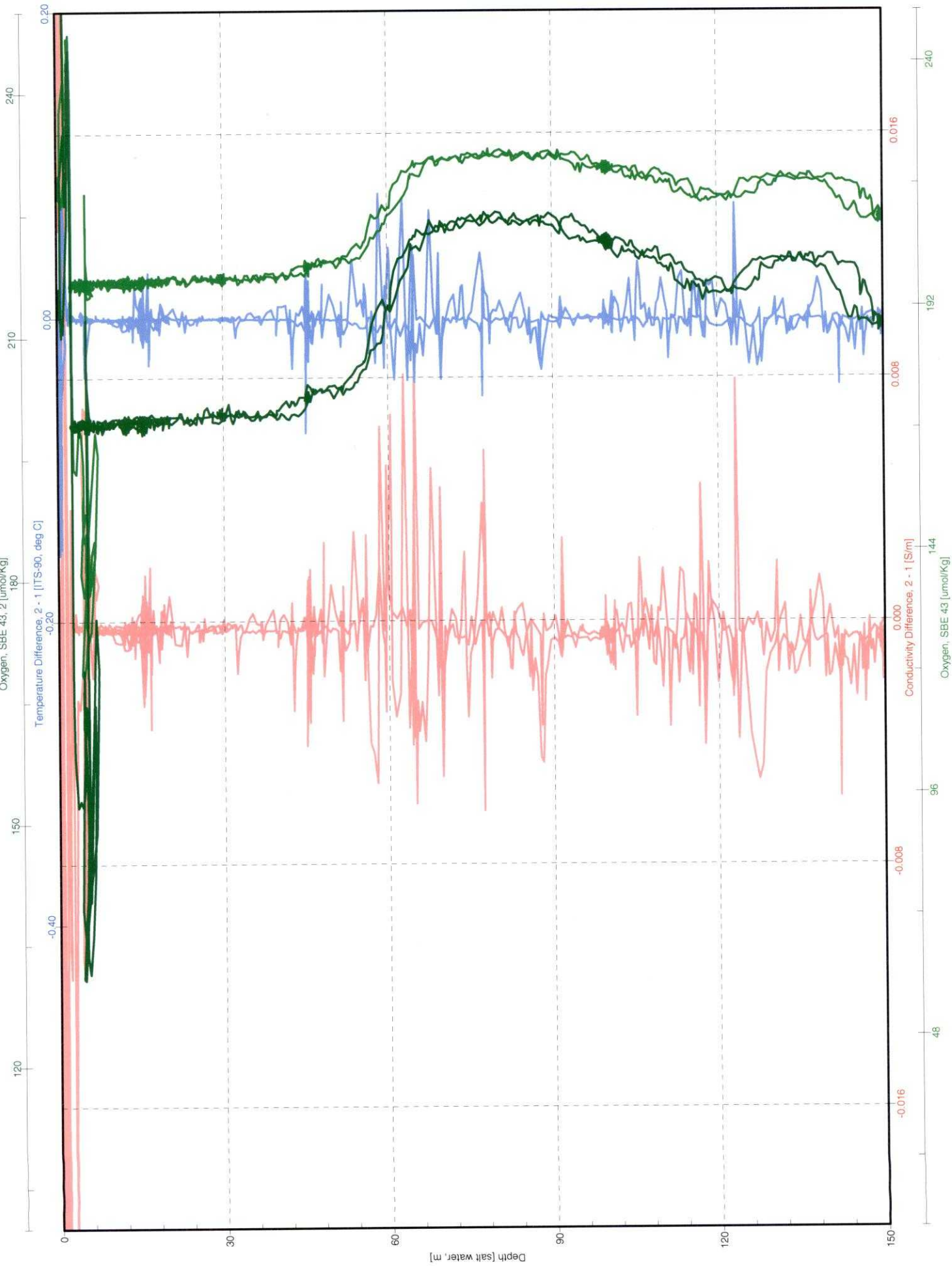
KM0814_p3_S13_C5

Oxygen, SBE 43.2 [$\mu\text{mol/Kg}$]

Temperature Difference, 2 - 1 [ITS-90, deg C]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [$\mu\text{mol/Kg}$]



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.1	Operator
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 14	Cast: 1
Latitude start: 24d 45.027'N end: 24d 45.027'N	Longitude start: 157d 30.004'W end: 157d 30.004'W
Depth of water: 4090 meters	Date (GMT): 217 0810412008
Pressure on Deck Begin: 0.63 End:	Time: 17:18:13 Start Log: 17:18:24 In Water: 17:24:00 Out of Water:
Max cast pressure: 500 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure TARGET DEPTH	Pressure Target Depth	Comments
1	17:52:19	17:52:40	200	200.41	DCM = 119
2		53:00	200	200.55	
3	17:56:40	17:57:00	150	150.46	
4		57:30	150	150.78	
5	17:59:15	17:59:35	DCM	119.63	
6		17:59:55	DCM	119.37	
7		18:00:15	DCM	119.83	
8	18:01:35	18:01:55	100	100.05	
9		18:02:15	100	100.35	
10	18:03:36	18:04:00	75	74.92	
11		18:04:20	75	74.89	
12	18:06:07	18:06:25	45	44.60	
13		18:06:45	45	45.16	
14		18:07:05	45	45.05	
15		18:07:25	45	45.00	
16		18:07:45	45	45.57	
17	18:08:48	18:09:10	25	26.03	
18		18:09:30	25	25.84	
19		18:09:50	25	25.78	
20		18:10:10	25	25.54	
21		18:10:30	25	26.00	
22	18:12:12	18:12:30	5	5.30	} 3 m of wire out
23		18:12:50	5	5.28	
24		13:10	5	5.67	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 14 Date: 8/5/2008 (218) (GMT)

Cast Number: 1 Time: (GMT)

Operators: SW, PC, JB, MC, JH Position:
Target Depth 200

Gonna happen

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts DOC	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	X ²²⁹ ₂₃₀	X	X	
2	200							12L
3	150	X	X	X	X ²³¹ ₂₃₂	X	X	
4	150							
5	DCM	X	X	X	X ²³³ ₂₃₄	X	X	
6	DCM							12L
7	DCM							
8	100	X	X	X	X ²³⁵ ₂₃₆	X	X	
9	100							
10	75	X	X	X	X ²³⁷ ₂₃₈	X	X	
11	75							
12	45	X	X	X	²¹⁹ ₂₂₀ X 219	X	X	
13	45							12L
14	45							
15	45							
16	45							
17	25	X	X	X	²²¹ ₂₂₂ X 221	X	X	
18	25							
19	25							
20	25							
21	25							
22	5	X	X	X	²²³ ₂₂₄ X 223	X	X	
23	5							12L
24	5							

FCM tubes
239, 240,
241, 242,
243, 244
were not
used due
to a
mistake
Sam W

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

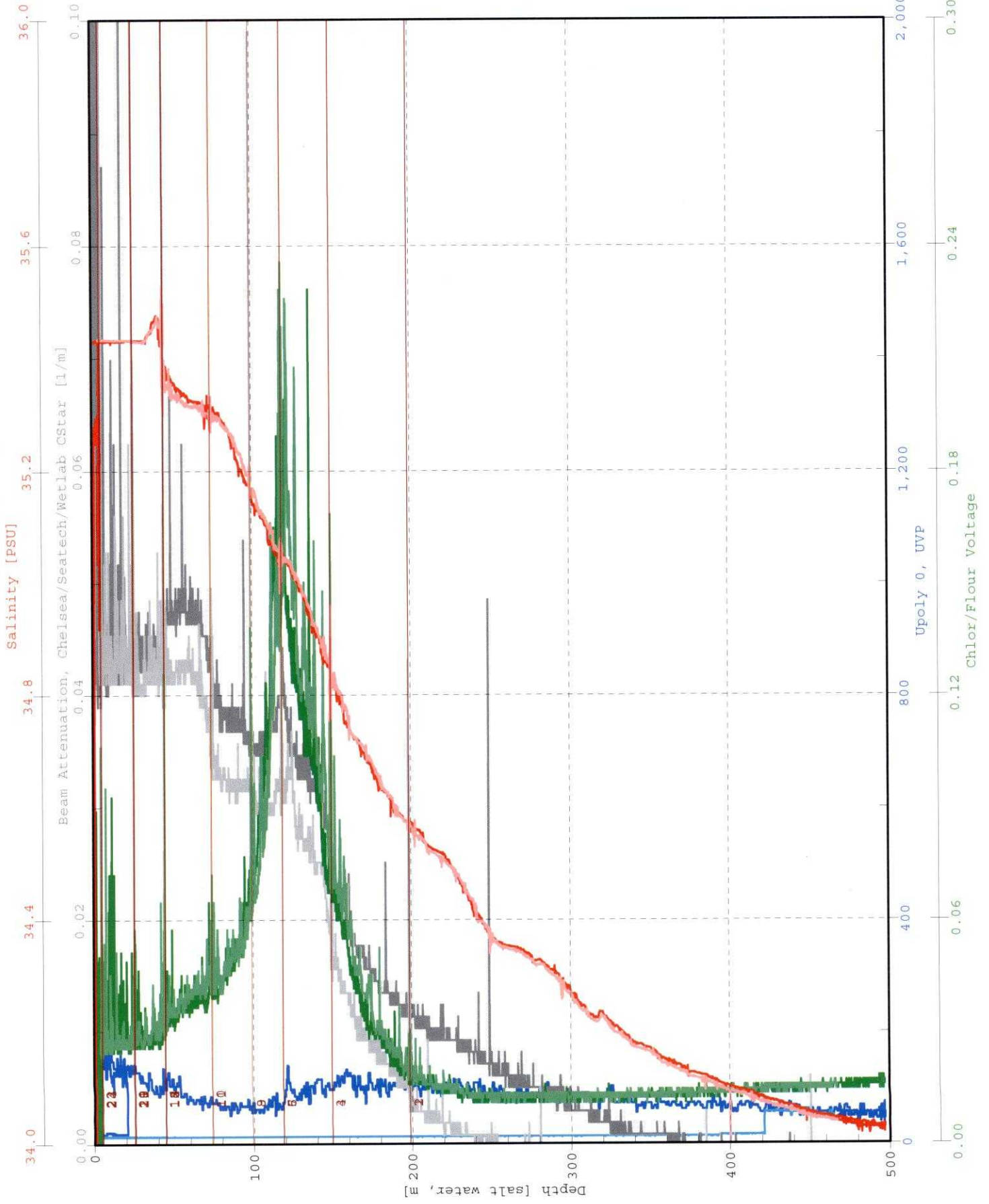
Station Number: 14 Date: 8/07/2008 (2138) (GMT)
 Cast Number: 1 Time: (GMT)

Operators: AF, PC, BU, KD, ZK Position:

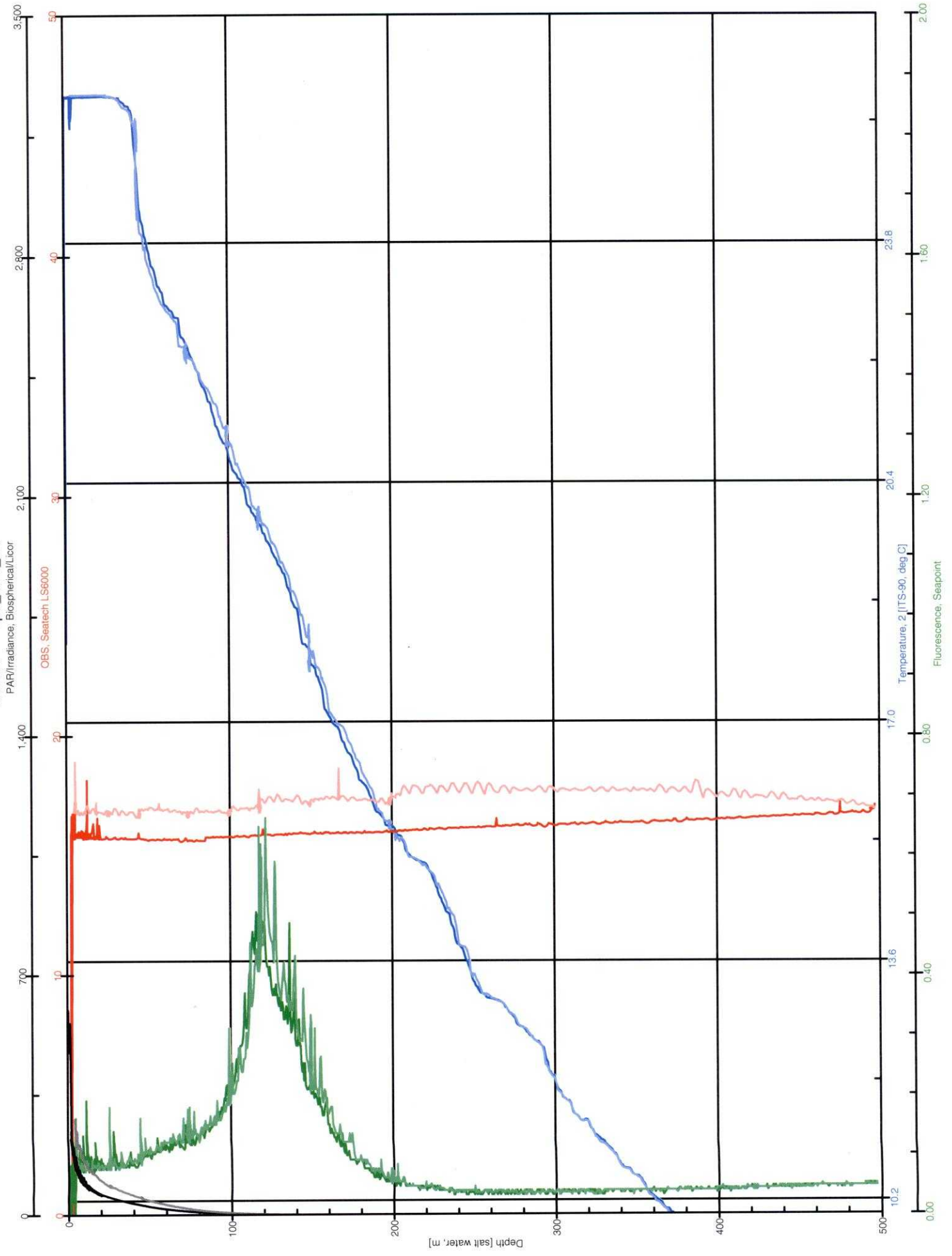
Check yo' box...if sampling

Target Depth	200																								
Rosette Position	Desired Depth	Alt. Brei	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel	Hilton	Li	Watkins	Caill	Kolber	Ventouras	TOTAL										
Rosette Position	Desired Depth	Toxins	BP	Virus	RNA	Gas	Phosphorus	Alk Phosphatase	Culture	Diatom DNA	N2 fixation	HPLC	FRRF	DNA/RNA	VOLUME										
1	200		20ML	10ML								2L	0.5L		2.8L										
2	200											2L		12L	12L										
3	150		20ML	10ML								2L	0.5L		2.8L										
4	150				2L					10L					12L										
5	DCM		20ML	10ML								2L	0.5L		2.8L										
6	DCM														12L										
7	DCM				2L					10L		2L			12L										
8	100		20ML	10ML								2L	0.5L		2.8L										
9	100								1L						1L										
10	75		20ML	10ML								2L	0.5L		2.8L										
11	75				2L					10L					12L										
12	45		20ML	10ML						10L			0.5L		10.8L										
13	45														12L										
14	45	3L			2L							2L			7L										
15	45										12L				12L										
16	45										12L				12L										
17	25		20ML	10ML						10L			0.5L		10.8L										
18	25	3L					6L					2L			11L										
19	25				2L	2L		2L	5L						11L										
20	25										12L				12L										
21	25										12L				12L										
22	5		20ML	10ML	2L				5L			2L	0.5L		9.8L										
23	5														12L										
24	5				2L					10L					12L										

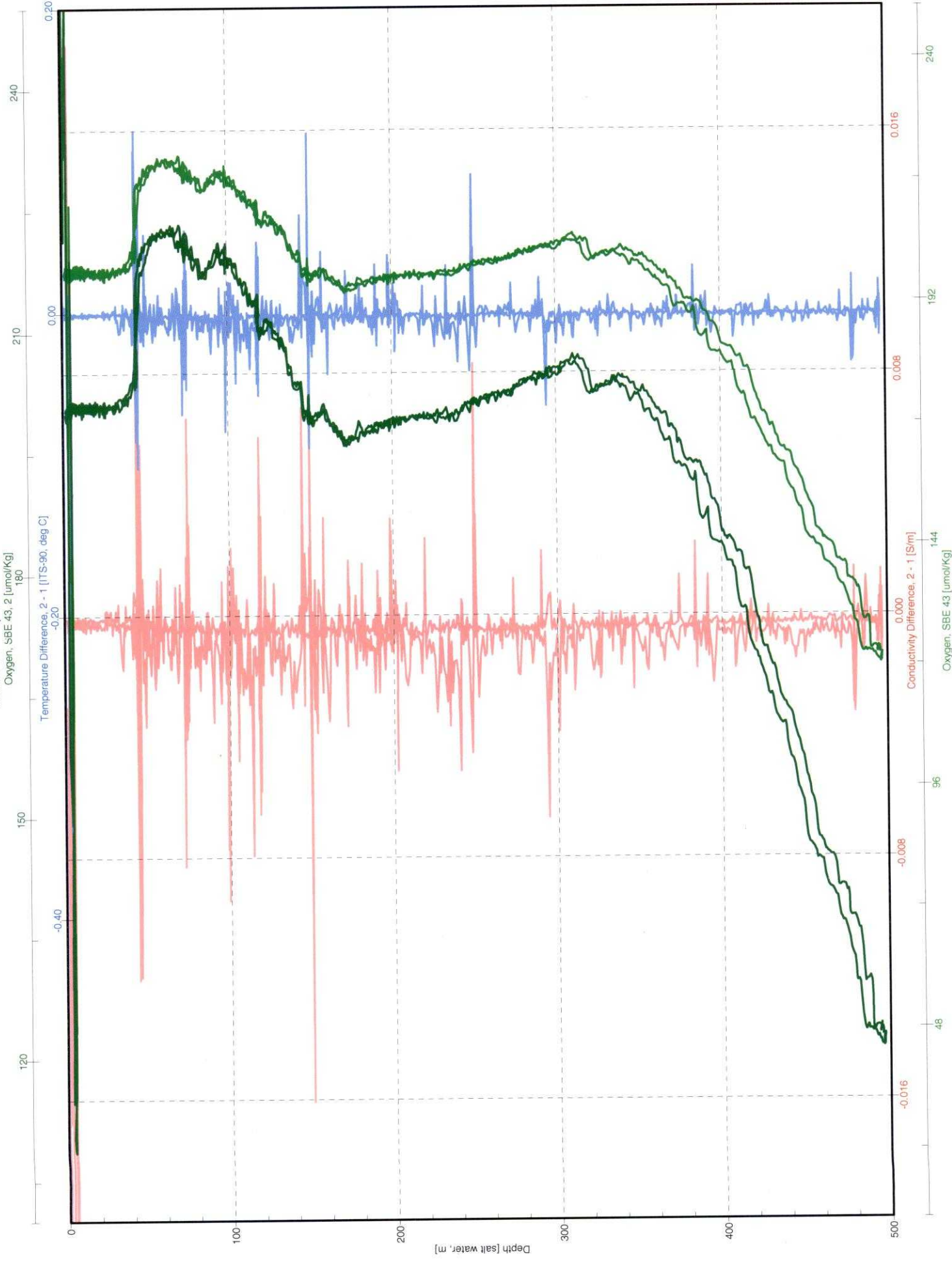
KM0814_sp1_S14_C1



KM081. _p2_S14_C1



KM081_ .p3_S14_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.0	Operator updyke
-----------	-------------	-------------	--------------------

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 15	Cast: 1
Latitude start: 25° 5.072' N	Longitude start: 157° 30.048' W
end:	end:
Depth of water: 4775 meters	Date (GMT): (217) 08/10/2008
Pressure on Deck	Time: 20:15:00
Begin: 0.60 0.55	Start Log: 20:15:00
End: 0.35	In Water: 20:17:20
Max cast pressure: 500 dbar	Out of Water: 21:03:30

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	20:42:15	20:42:30	199.9	200	
2		20:42:45	199.8	200	
3		20:43:00	200.3	200	
4		20:43:15	199.6	200	
5	20:45:00	20:45:15	150.0	150	
6		20:45:30	150.5	150	
7		20:45:45	150.1	150	
8	20:47:15	20:47:30	119.3	DCM	119 dbar
9		20:47:45	119.6	DCM	↓
10		20:48:00	119.3	DCM	↓
11	20:49:00	20:49:30	100.2	100	
12		20:49:45	99.8	100	
13		20:50:00	99.9	100	
14	20:51:15	20:51:30	74.6	75	
15		20:51:45	74.4	75	
16		20:52:00	75.1	75	
17	20:53:30	20:53:45	44.9	45	
18		20:54:00	45.2	45	
19	20:55:15	20:55:30	25.0	25	
20		20:55:45	25.9	25	
21		20:56:00	25.8	25	
22	20:58:15	20:58:30	5.1	5	
23		20:58:45	5.9	5	
24		20:59:00	5.3	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Maximum

Station Number: 15 Date: 8/5/2008 (GMT)
 Cast Number: 1 Time: _____ (GMT)
 Operators: SW, MNC, JB, PC Position: _____

Rosette Position	Desired Depth	Oxygen	Temp	pH	DIC	Nuts	DOC	LLNuts	Chl a	FCM
1	200	21	16.5	1	X	X	X	X	X	X
2	200									
3	200									
4	200									
5	150	22	18.7	2	X	X	X	X	X	X
6	150									
7	150									
8	DCM	23	20.3	3	X	X	X	X	X	X
9	DCM									
10	DCM									
11	100	24, 38, 39	21.2	4	X	X	X	X	X	X
12	100									
13	100									
14	75	40	22.0	5	X	X	X	X	X	X
15	75									
16	75									
17	45	41	24.7	6	X	X	X	X	X	X
18	45									
19	25	42	25.2	7	X	X	X	X	X	X
20	25									
21	25									
22	5	43	25.5	8	X	X	X	X	X	X
23	5									
24	5									

NOTES:

8/14/08 10:00 AM

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Maximum

Station Number: 15 Date: 8/5/2008 (GMT)
 Cast Number: 1 Time: _____ (GMT)
 Operators: SW, MNC, JB, PC Position: _____

Rosette Position	Desired Depth	FRRF	HPLC	Psi	PC/PN	PPO4				
1	200	x								
2	200		2L	4						
3	200			2 (10)L						
4	200			3 (10L)						
5	150	x								
6	150		2L	5						
7	150				7	7				
8	DCM	x								
9	DCM		2L	6						
10	DCM				8	8				
11	100	x								
12	100		2L	7						
13	100				9	9				
14	75	x								
15	75		2L	4						
16	75				10	10				
17	45	x		5						
18	45		2L		11	11				
19	25	x								
20	25		2L	6						
21	25				12	12				
22	5	x								
23	5		2L	8						
24	5				13	13				

NOTES: # PSI - 15 (4) dumped before sampled

C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Maximum

Station Number: 15 Date: 8/4/2004 (GMT)
 Cast Number: 1 Time: 2017 (GMT)
 Operators: SW, MNC, JB, PC Position: 25 05.072N 157 30.048W

Rosette Position	Desired Depth	Oxygen	Temp	pH	DIC	Nuts	DOC	LLNuts	Chl a	FCM
1	200	21	16.3	1	X	X	X	X	X	245,246
2	200									
3	200									
4	200									
5	150	22	18.7	2	X	X	X	X	X	247,248
6	150									
7	150									
8	DCM	23	20.3	3	X	X	X	X	X	249,250
9	DCM									
10	DCM									
11	100	4, 38, 3	21.2	4	X	X	X	X	X	251,252
12	100									
13	100									
14	75	40	22	5	X	X	X	X	X	253,254
15	75									
16	75									
17	45	41	24.7	6	X	X	X	X	X	255,256
18	45									
19	25	42	25.2	7	X	X	X	X	X	257,258
20	25									
21	25									
22	5	43	25.5	8	X	X	X	X	X	259,260
23	5									
24	5									

NOTES:

C-MORE CRUISE LOG
 OPEREX
 Station Data Sheet: Core Maximum

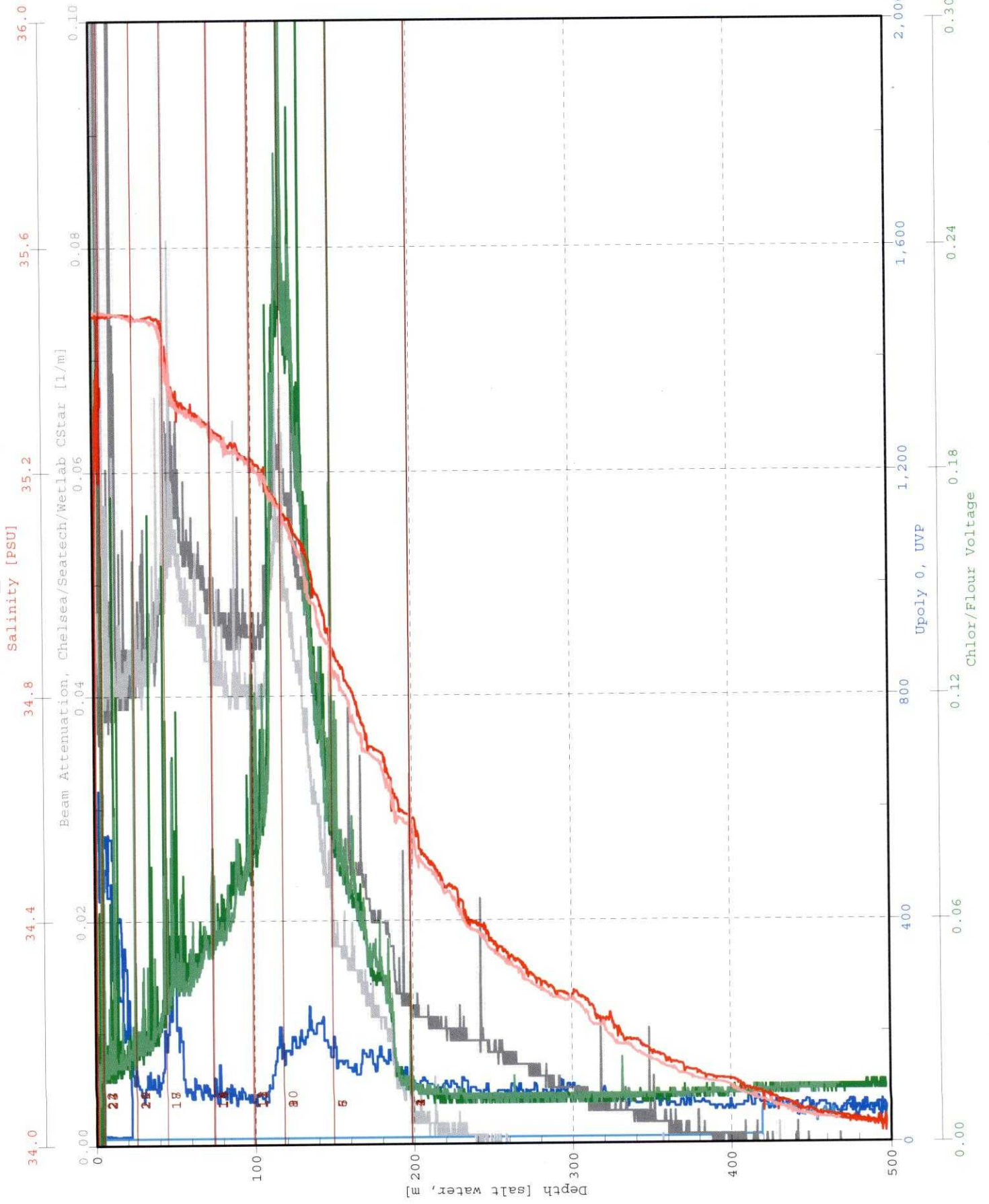
Station Number: 15
 Cast Number: 1
 Operators: SW, MNC, JB, PC

Date: 8/4/2004 (GMT)
 Time: 2017 (GMT)
 Position: 25 05.072N 157 30.048W

Rosette Position	Desired Depth	FRRF	HPLC	Psi	PC/PN	PPO4		
1	200	x						
2	200		2L	4				
3	200			2 (10)L				
4	200					3 (10L)		
5	150	x						
6	150		2L	5				
7	150				7	7		
8	DCM	x						
9	DCM		2L	6				
10	DCM				8	8		
11	100	x						
12	100		2L	7				
13	100				9	9		
14	75	x						
15	75		2L	8				
16	75				10	10		
17	45	x		9				
18	45		2L		11	11		
19	25	x						
20	25		2L	10				
21	25				12	12		
22	5	x						
23	5		2L	12				
24	5				13	13		

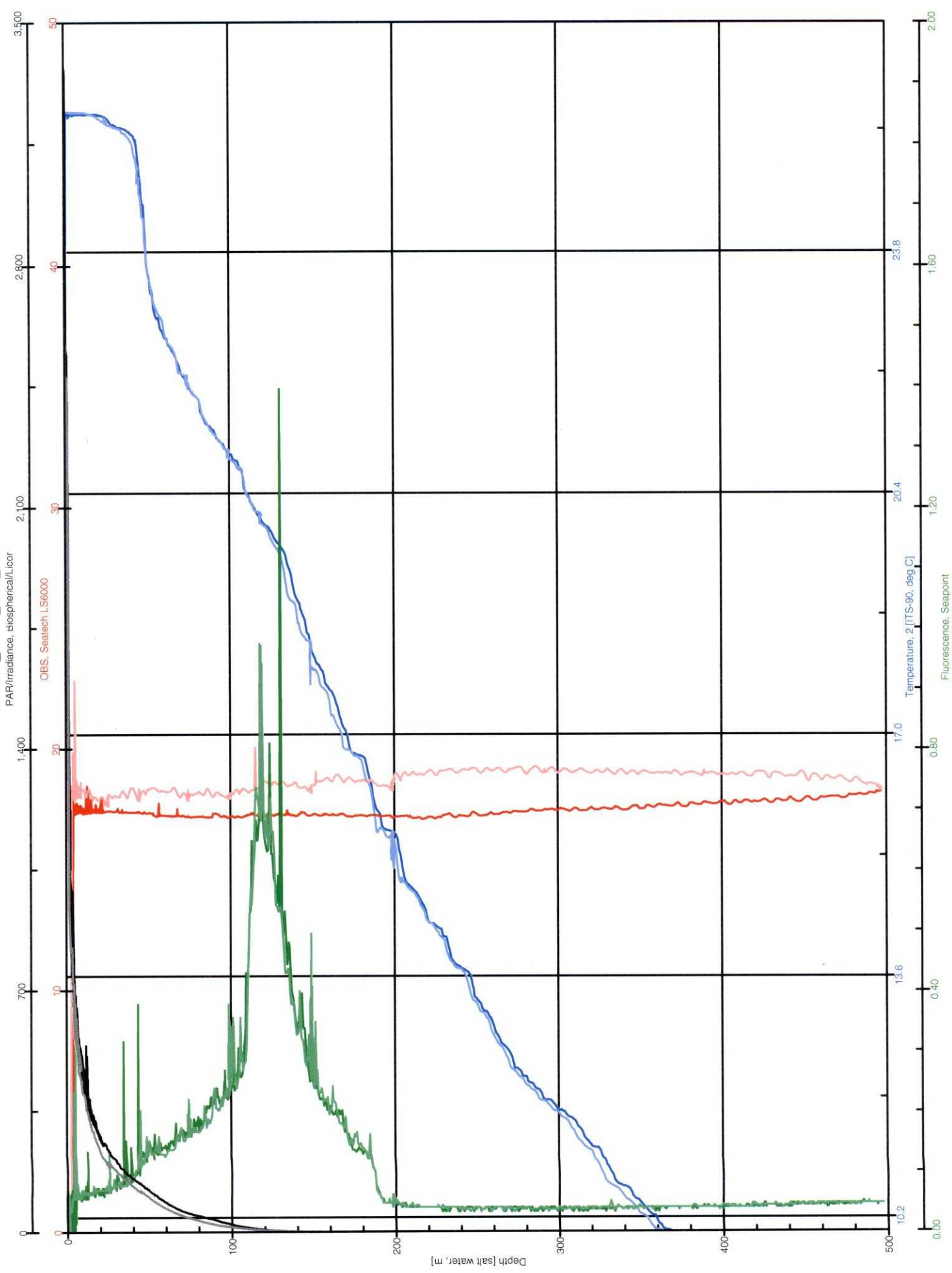
NOTES: Psi 15 dumped before samples

KM0814 di_1_S15_C1

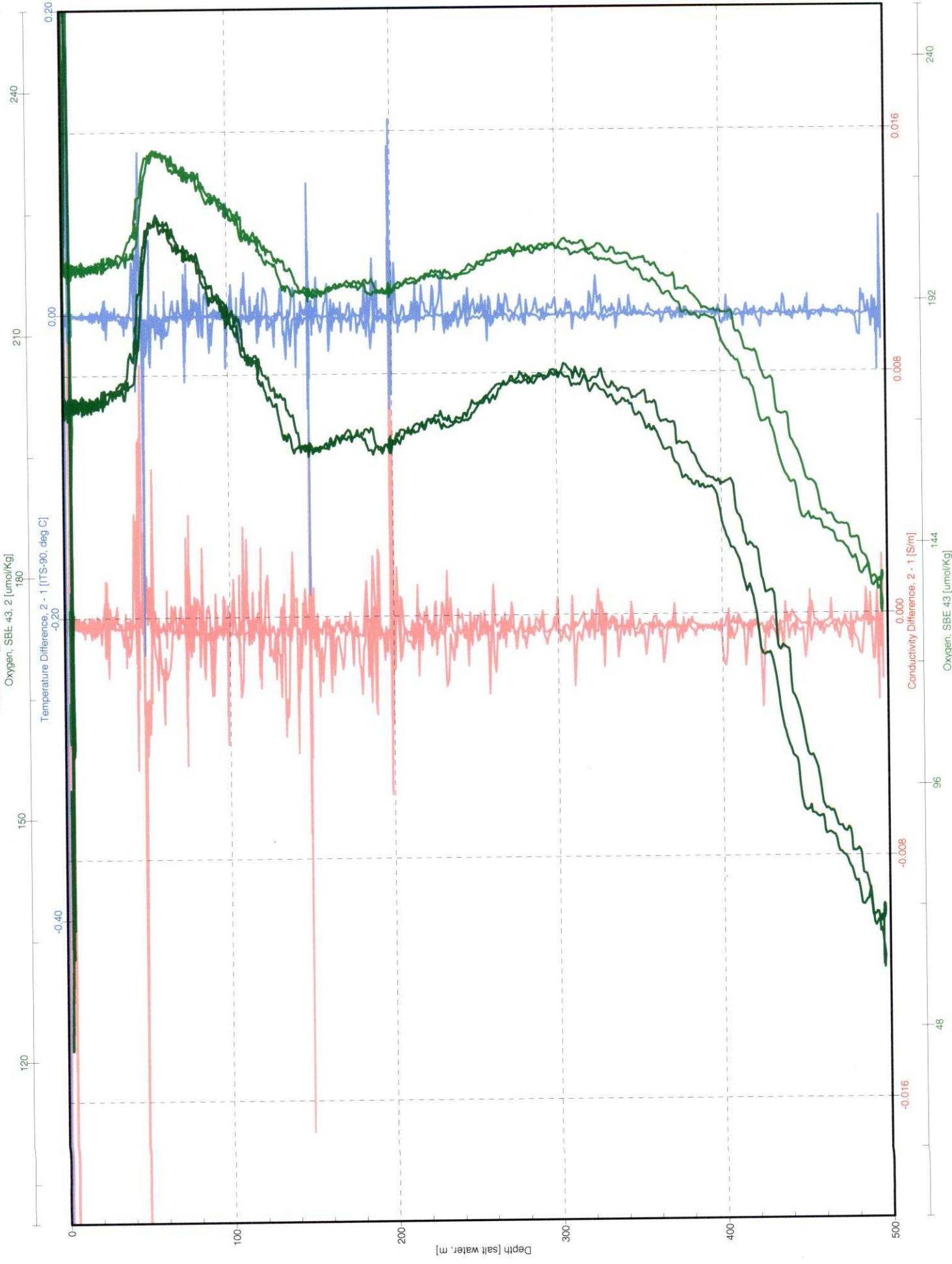


KM0814_c _S15_C1

PAR/Irradiance, Biospherical/Licor



KM0814_c_S15_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.0	Operator updyke
-----------	-------------	-------------	--------------------

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 15	Cast: 2
Latitude start: 25° 5.071' N end: 25° 5.068' N	Longitude start: 157° 30.050' W end: 157° 30.052' W
Depth of water: 4767 meters	Date (GMT): (217) 08/04/2008
Pressure on Deck	Time: 22:26:00
Begin: 0.75 dbar	Start Log: 22:31:30
End: 0.35 dbar	In Water: 22:33:30
Max cast pressure: 500 dbar	Out of Water: 23:25:30

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	23:03:53	23:04:15	199.2	200	
2		23:04:30	199.9	200	
3	23:06:27	23:06:45	199.8	150	
4		23:07:00	199.7	150	
5	23:08:11	23:08:30	124.5	DCM	125 dbar
6		23:08:45	124.7	DCM	↓
7		23:09:00	124.7	DCM	
8	23:10:32	23:10:45	99.3	100	
9		23:11:00	99.8	100	
10	23:12:28	23:12:45	74.6	75	
11		23:13:00	74.9	75	
12	23:14:25	23:14:45	45.2	45	
13		23:15:00	46.1	45	
14		23:15:15	45.2	45	
15		23:15:30	45.4	45	
16		23:15:45	45.5	45	
17	23:17:58	23:17:15	26.0	25	
18		23:17:30	25.0	25	
19		23:17:45	25.6	25	
20		23:18:00	25.3	25	
21		23:18:15	25.4	25	
22	23:20:33	23:21:00	5.6	5	
23		23:21:15	5.3	5	
24		23:21:30	5.2	5	

C-MORE CRUISE LOG

OPREX

Station Data Sheet: Core Minimum

Station Number: 15 Date: 8/04/2008 (217) (GMT)
 Cast Number: 2 Time: 22:30 (GMT)

Operators: DV, KB, BU, KD, KB

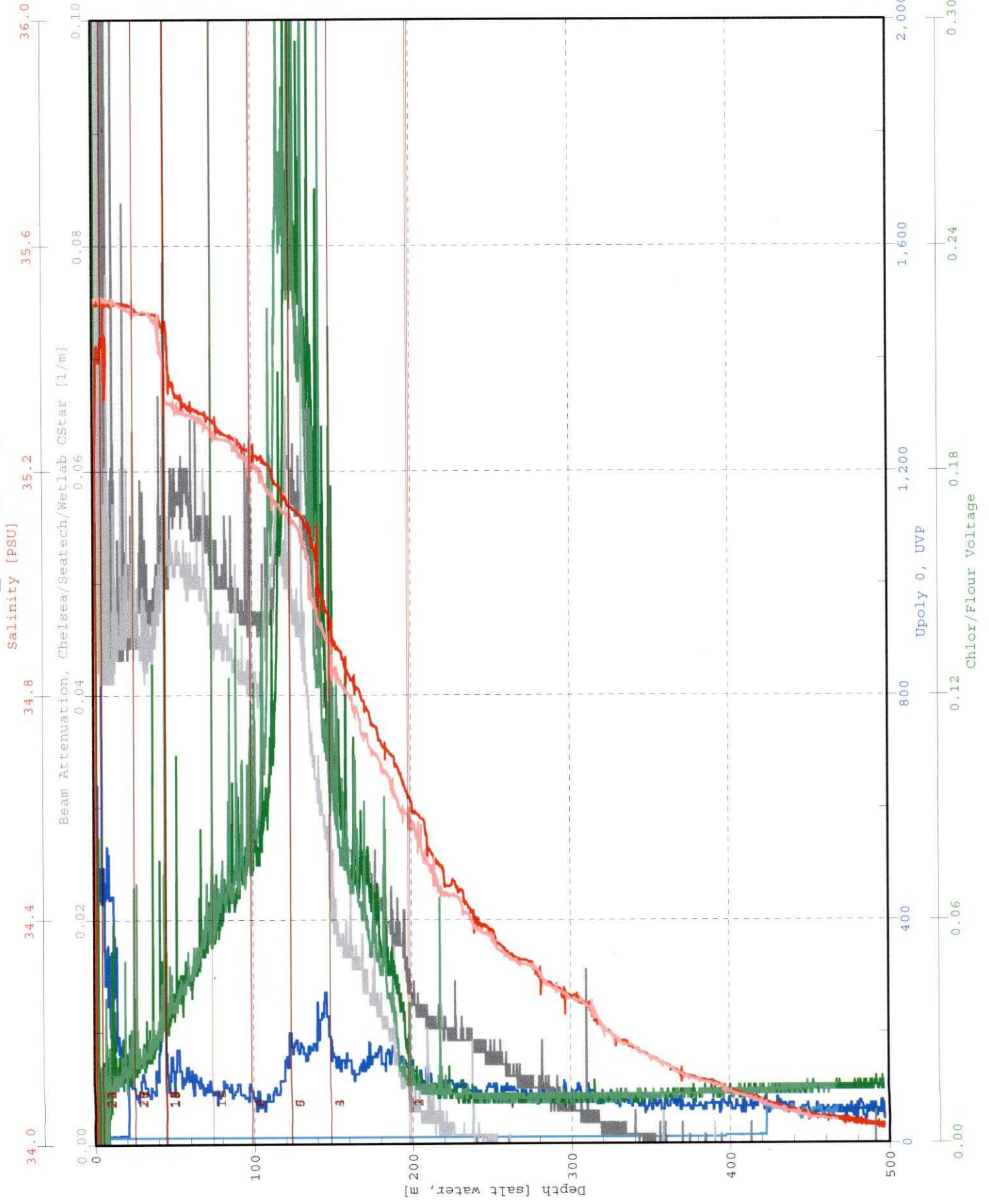
Check yo' box...if sampling

Target Depth 200

Rosette Position	Desired Depth	Alt. Breitlow	Viviani BP	Brum Virus	Fong RNA	Wilson Gas	Bjorkman Phosphorus	Duhamel Alk Phosphatase	Hilton Culture	Li Diatom DNA	Watkins N2 fixation	Calli HPLC	Kolber FRRF	Ventouras DNA/RNA	TOTAL VOLUME
1	200	X	20ML	10ML	X	2L	X	X	✓	X	X	X	X	X	2.8L
2	200														12L
3	150		20ML	10ML		2L						2L	0.5L	12L	2.8L
4	150				2L					10L		2L	0.5L	12L	12L
5	DCM	2L	20ML	10ML		2L			5L			2L	0.5L	12L	2.8L
6	DCM														12L
7	DCM				2L					10L					12L
8	100		20ML	10ML		2L			1L			2L	0.5L		2.8L
9	100														1L
10	75		20ML	10ML		2L						2L ✓	0.5L		2.8L
11	75				2L					10L					12L
12	45		20ML	10ML						10L			0.5L	10.8L	10.8L
13	45														12L
14	45	3L			2L	2L						2L		7L	7L
15	45										12L	2L			12L
16	45								12L		12L				12L
17	25		20ML	10ML						10L		X	0.5L	10.8L	10.8L
18	25	3L					6L					X		11L	11L
19	25				2L	2L		2L	5L						11L
20	25										12L				12L
21	25										12L				12L
22	5		20ML	10ML		2L			5L			2L	0.5L	9.8L	9.8L
23	5														12L
24	5				2L					10L					12L

HPLC 25m comp. of 17:18
 45m Bottle from 15

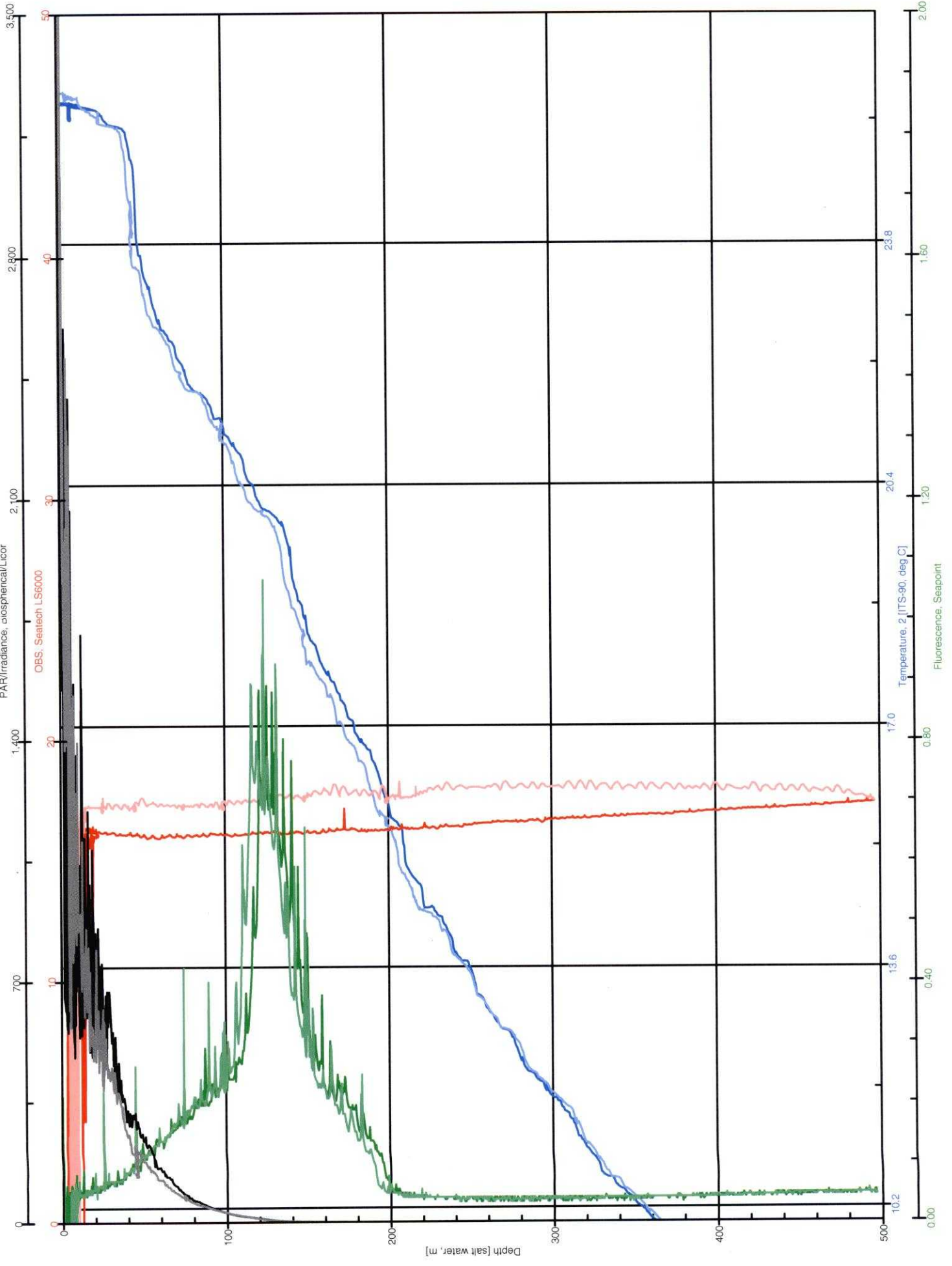
KM0814_d: 1_S15_C2



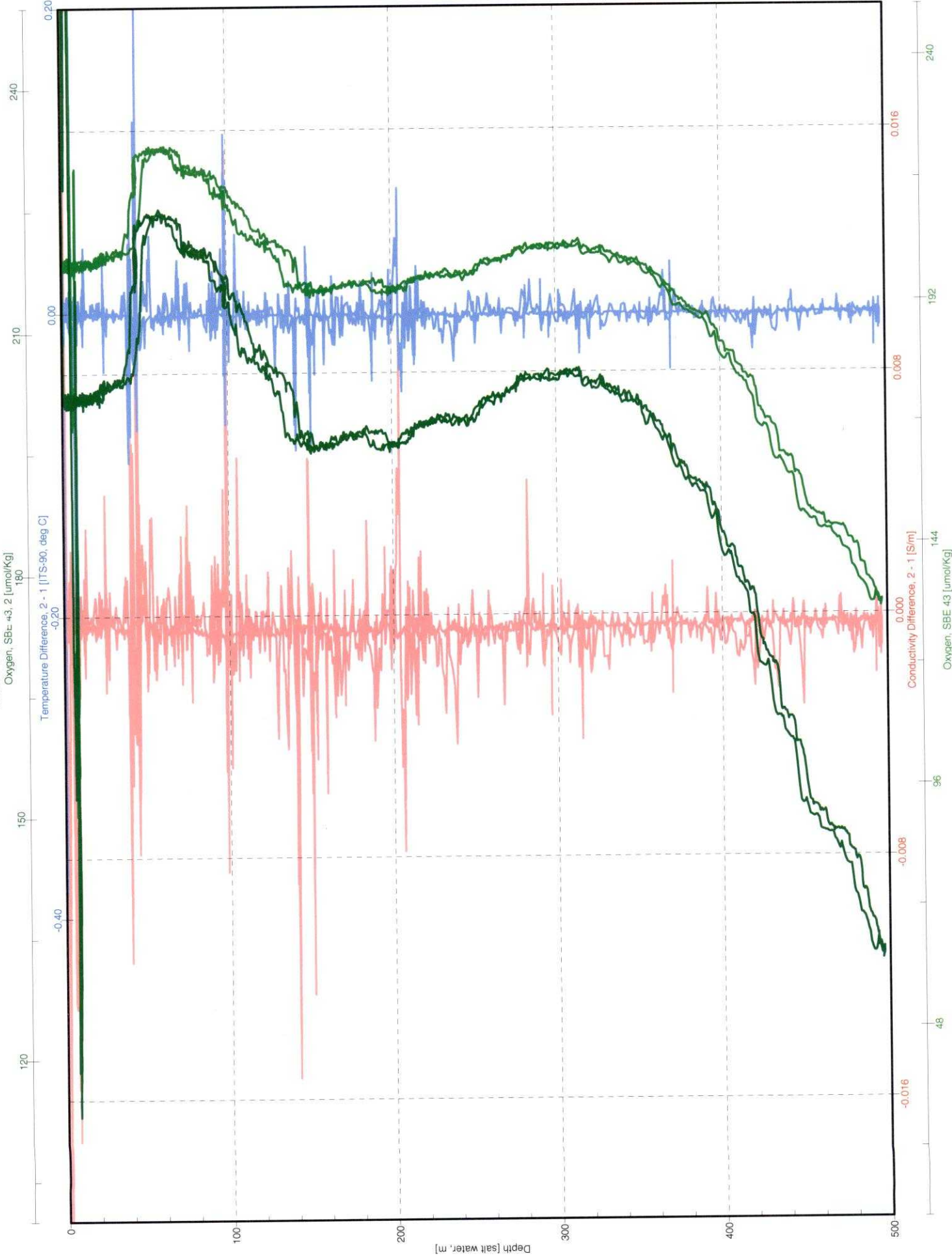
KM0814_1_S15_C2

PAR/Irradiance, $\sigma_{\text{spherical}}/L_{\text{cor}}$

OBS, Seatech LS6000



KM0814_1_S15_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
	12 L	26.4	SP

- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	Large DCM max

Station: 16	Cast: 1
Latitude start: 25° 25.055' N end: 25 25.054' N	Longitude start: 157° 29.990' W end: 157° 29.991' W
Depth of water: 4879 meters	Date (GMT): (218) 08 1051 2008
Pressure on Deck	Time: 01:20:00
Begin: 0.52 dbar	Start Log: 01:22:00
End: 0.341 "	In Water: 01:24:30
Max cast pressure: 500 dbar	Out of Water: 02:05:58

Trip/ Niskin	GMT	GMT	Pressure	Target Depth	Comments	
	Time stopped	Confirm tripped				
1 (218)	01:47:51	01:48:10	199.4	200		
2		01:48:30	200.0	200		Wind about 8-9 kts
3 (218)	01:50:07	01:50:30	150.1	150		
4		01:50:50	149.5	150		
5 (218)	01:52:20	01:52:30	100.75	100 DCM		
6		01:52:50	100.3	100 DCM		
7 (218)	01:53:30	01:53:50	97.5	DCM	98 dbar	large ~.9 max
8		01:54:10	97.8	DCM	98	"
9		01:54:30	97.0	DCM	98	"
10	01:55:30	01:55:50	75.0	75		
11		01:56:10	74.6	75		
12 (218)	01:57:19	01:57:30	45.0	45		
13		01:57:50	45.6	45		
14		01:58:10	45.4	45		
15		01:58:30	45.4	45		
16		01:58:50	45.1	45		
17 (218)	01:59:52	02:00:10	24.3	25		
18		02:00:30	24.8	25		
19		02:00:50	24.7	25		
20		02:01:10	24.2	25		
21		02:01:30	24.3	25		
22 (218)	02:02:56	02:03:10	6.4	5	3m wire	
23		02:03:10 - 02:03:30	5.4	5	3m wire	
24		02:03:50	5.9	5	3m wire	02:07:48

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: Core Minimum

Station Number: 16 Date: 8/6/2008 ²¹⁸ ~~(210)~~ (GMT)

Cast Number: 1 Time: (GMT)

Operators: kd, kb, bu, af, dv, kb Position:
Target Depth 200

Gonna happen

Rosette Position	Desired Depth	Core					Kolber	Ventouras
Rosette Position	Desired Depth	Nuts DOC	LLNut	Chl a	FCM	HPLC	FRRF	DNA/RNA
1	200	X	X	X	X	X	X	
2	200							12L
3	150	X	X	X	X	X	X	
4	150							
5	100 DCM	X	X	X	X	X	X	
6	100 DCM							12L
(98) 7	DCM							12L
(98) 8	100 DCM	X	X	X	X	X	X	
(98) 9	100 DCM							
10	75	X	X	X	X	X	X	
11	75							
12	45	X	X	X	X	X	X	
13	45							12L
14	45							
15	45							
16	45							
17	25	X	X	X	X	X	X	
18	25							
19	25							
20	25							
21	25							
22	5	X	X	X	X	X	X	
23	5							12L
24	5							

bot water these bottles

✓

✓

✓

(98)
(98)
(98)

C-MORE CRUISE LOG

OPREX

Station Data Sheet: Core Minimum (2/8)

Station Number: 16 Date: 8/4/2004 (GMT)
 Cast Number: 1 Time: 22:30 (GMT)
 Operators: DV, KB, BU, KD, KB Position:

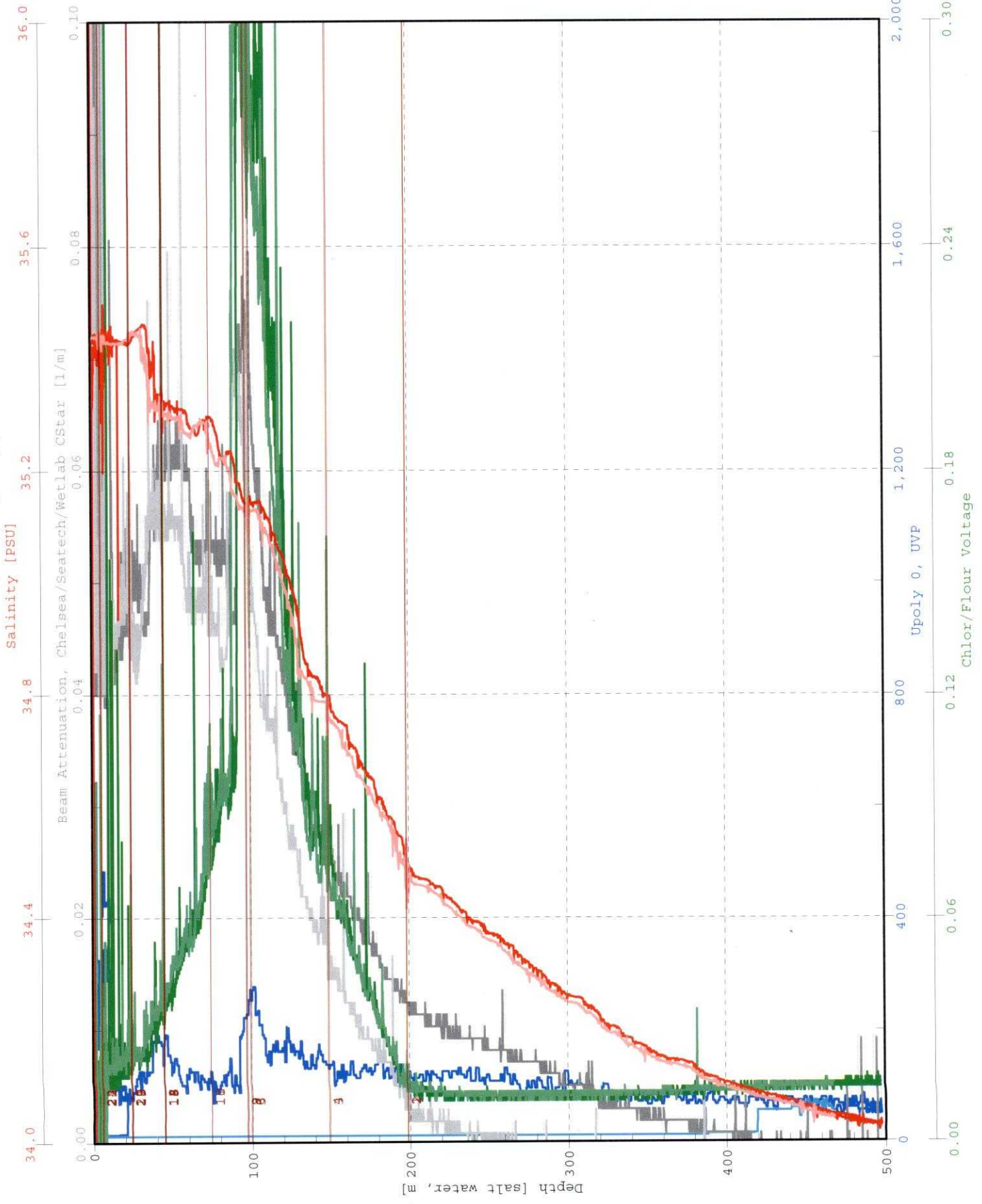
Target Depth 200

Check yo' box...if sampling

Rosette Position	Desired Depth	Alt. Breitlow	Viviani	Brum	Fong	Wilson	Bjorkman	Duhamel	Hilton	Li	Watkins	Calli	Kolber	Ventours	TOTAL
Rosette Position	Desired Depth	Toxins	BP	Virus	RNA	Gas	Phosphorus	Phosphate	Culture	Diatom DNA	N2 fixation	HPLC	FRRF	DNA/RNA	VOLUME
1	200		20ML	10ML	2L	2L						2L	0.5L	12L	2.8L
2	200											2L	0.5L	12L	2.8L
3	150		20ML	10ML	2L	2L				10L					12L
4	150				2L	2L						2L	0.5L		2.8L
5	DCM	2L	20ML	10ML	2L	2L			5L			2L	0.5L	12L	2.8L
6	DCM														1L
7	DCM				2L	2L				10L		2L	0.5L		2.8L
8	100		20ML	10ML					5L			2L	0.5L		1L
9	100								1L						2.8L
10	75		20ML	10ML	2L	2L						2L	0.5L		2.8L
11	75				2L					10L					12L
12	45		20ML	10ML						10L			0.5L		10.8L
13	45													12L	12L
14	45	3L			2L	2L						2L			7L
15	45										12L				12L
16	45										12L				12L
17	25		20ML	10ML						10L			0.5L		10.8L
18	25	3L					6L					2L			11L
19	25				2L	2L		2L	5L						11L
20	25										12L				12L
21	25										12L				12L
22	5		20ML	10ML	2L			5L				2L	0.5L		9.8L
23	5													12L	12L
24	5				2L					10L					12L

100
100
(98) DCM
(98) DCM

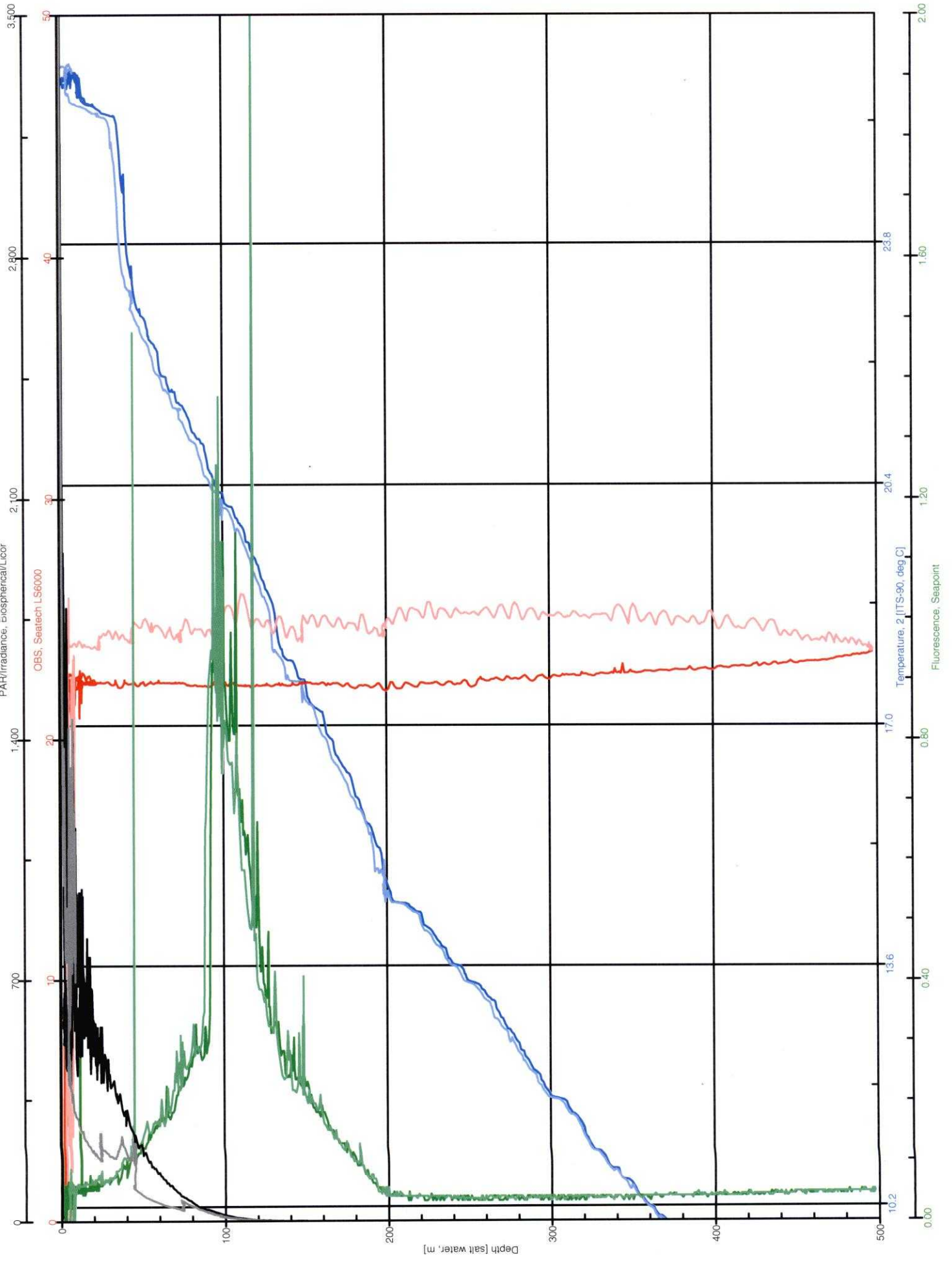
KM0814_d1_1_S16_C1



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

KM0814_C_S16_C1

PAR/Irradiance, Biospherical/Licor



KM0814_3_S16_C1

Oxygen, SBE 43, 2 [umol/Kg]

180

Temperature Difference, 2 - 1 [ITS-90, deg C]

-0.20

120

150

210

240

0.20

0

100

200

300

400

500

Depth [salt water, m]

0.016

0.008

0.000

-0.008

-0.016

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

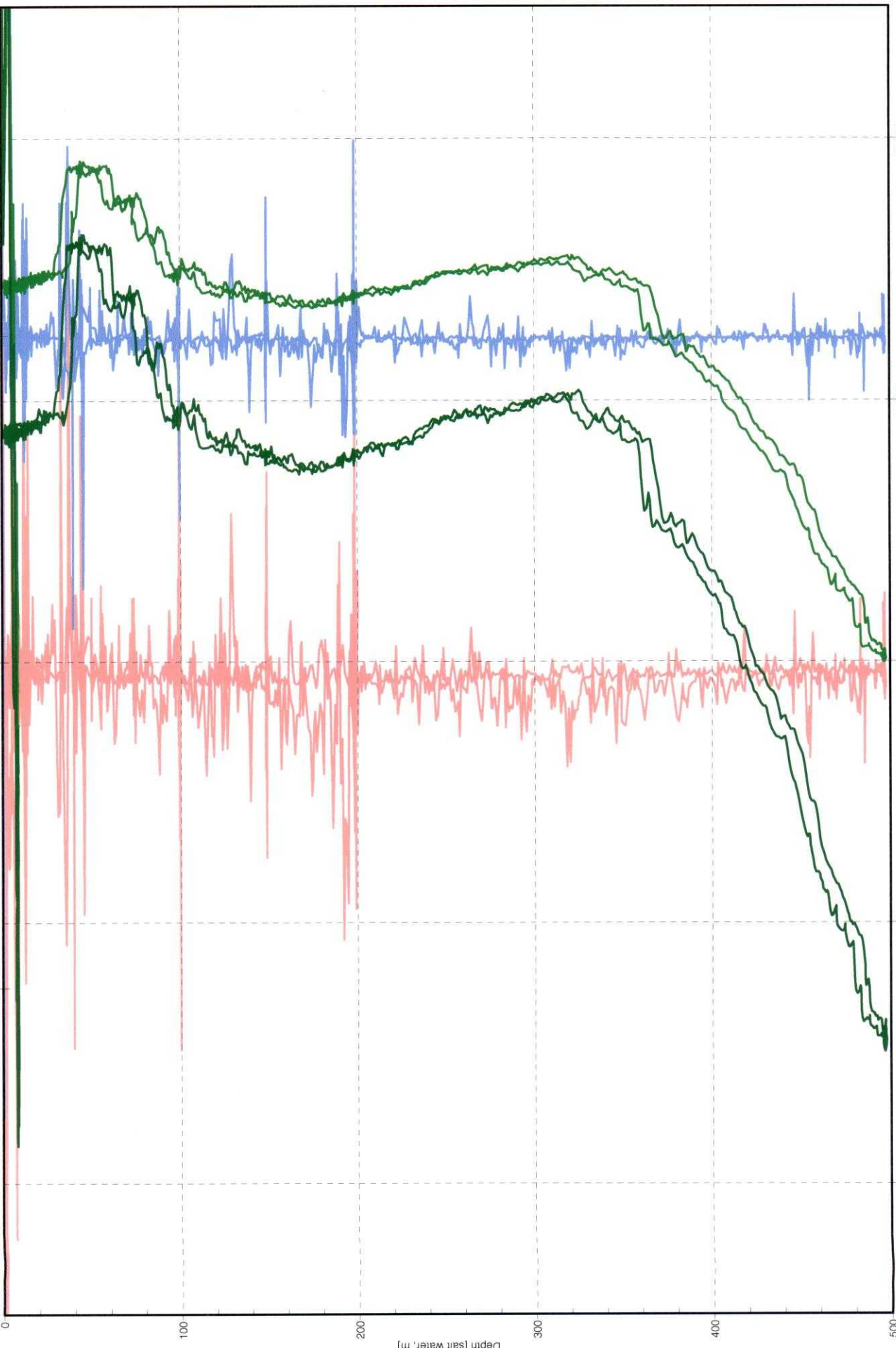
144

96

210

240

0



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator SP
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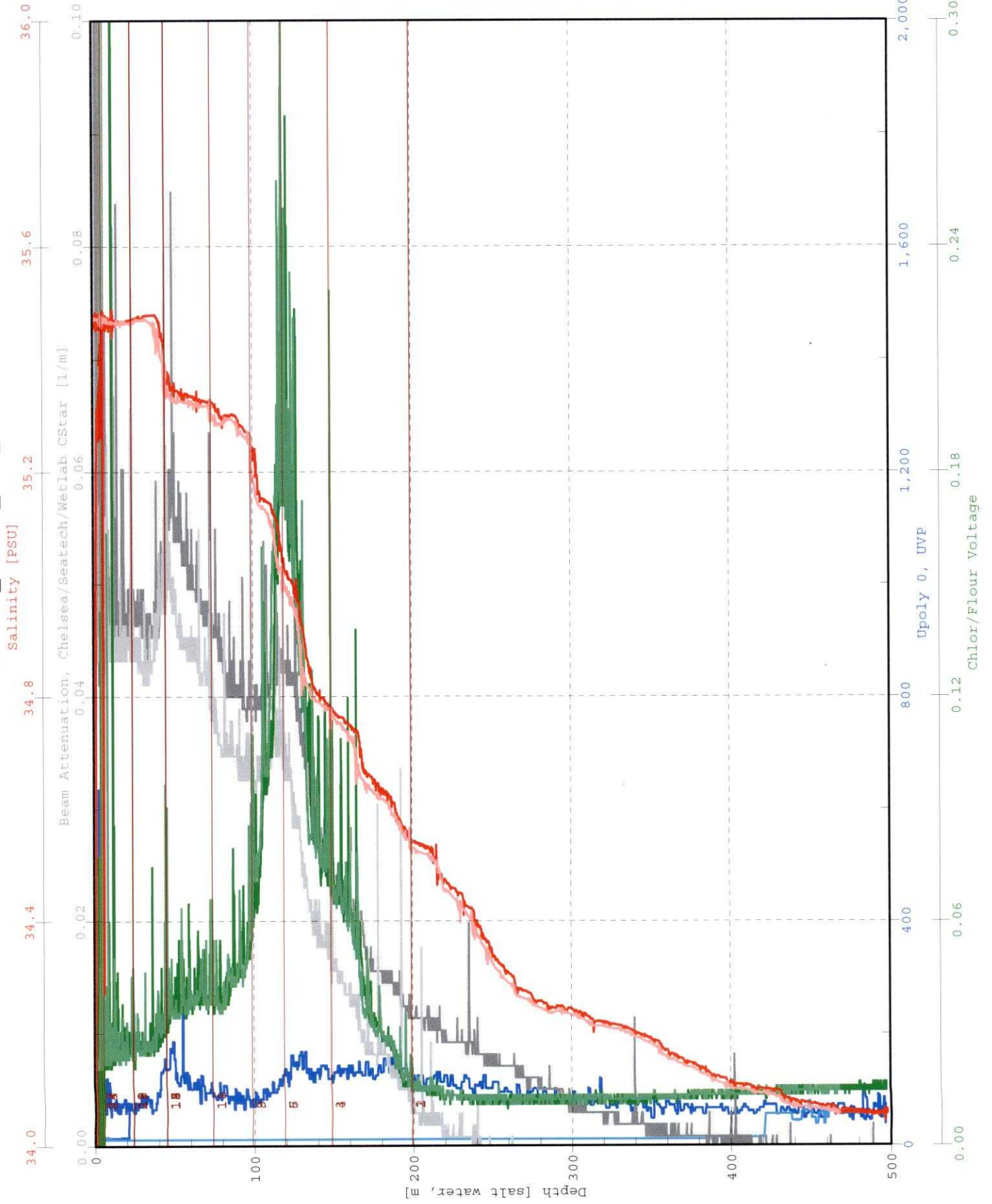
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

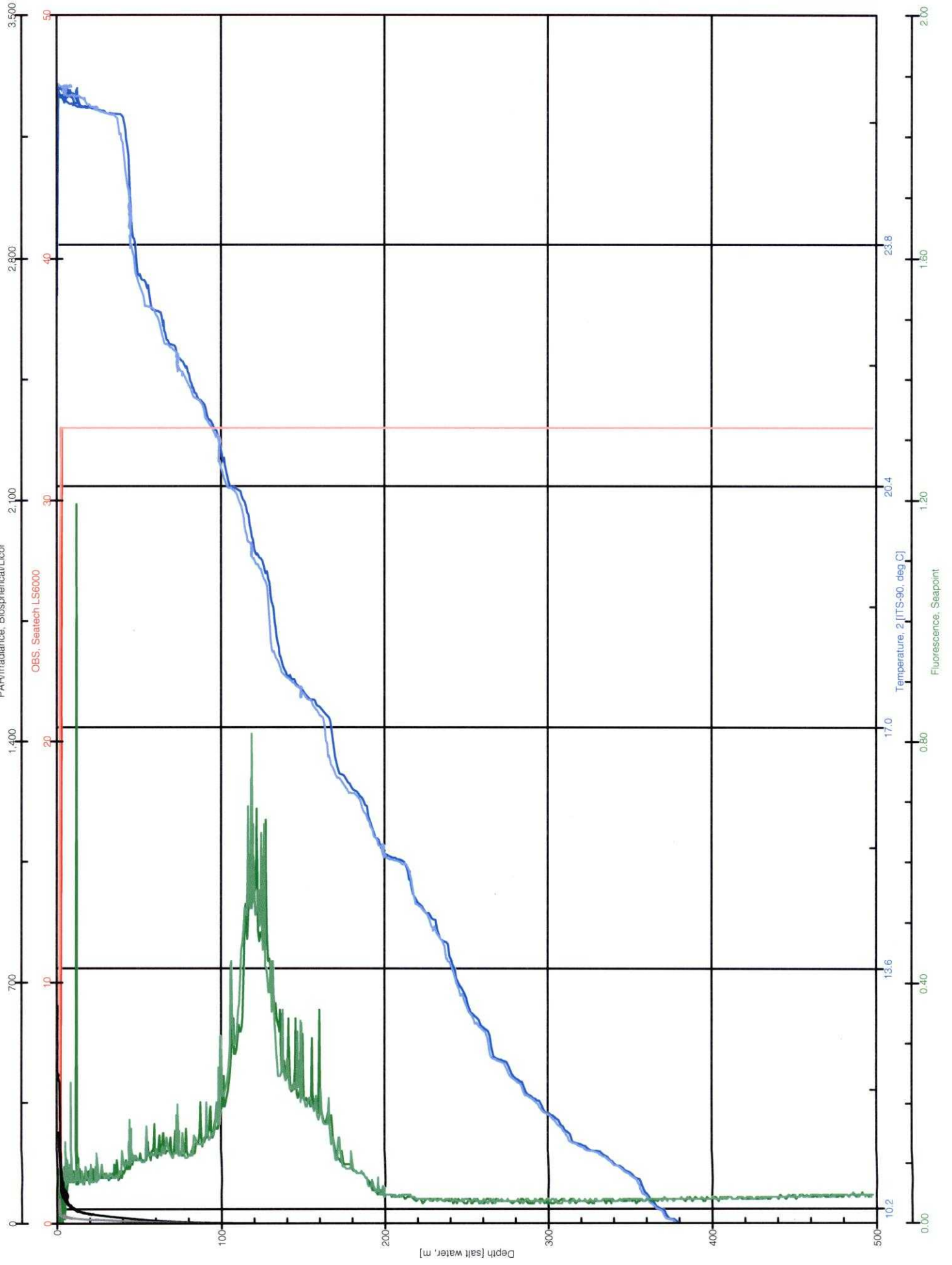
Station: 17	Cast: 1
Latitude start: 25° 44.937' N end: 25° 45.00' N	Longitude start: 157° 30.032' W end: 157° 30.007' W
Depth of water: 4128 meters	Date (GMT): (218) 08/05/2008
Pressure on Deck	Time: 03:58:57
Begin: 563	Start Log: (218) 04:02:20
End: 33-349	In Water: (218) 04:08:54
Max cast pressure: 500 dbar	Out of Water: 04:52:00

Trip/ Niskin	GMT	GMT	Pressure	Target Depth	Comments
	Time stopped	Confirm tripped			
1	(218) 04:33:20	04:33:50	200.9	200 db	04:12:50
2		04:34:10	200.2	200 db	True Wind 9.0 kts - light
3	(218) 04:35:53	04:36:10	149.5	150 db	
4		04:36:30	149.9	150	
5	(218) 04:37:45	04:38:10	119.8	DCM	120 .18
6		04:38:30	119.7	DCM	120
7		04:38:50	119.8	DCM	120
8	(218) 04:39:55	04:40:10	99.5	100	
9		04:40:30	99.4	100	
10	(218) 04:41:35	04:41:50	74.6	75	
11		04:42:10	74.5	75	
12	(218) 04:43:15	04:43:30	45.2	45	
13		04:43:50	45.2	45	
14		04:44:10	44.8	45	
15		04:44:30	45.2	45	
16		04:44:50	45.5	45	
17	(218) 04:45:47	04:46:10	24.6	25	
18		04:46:30	24.3	25	
19		04:46:50	24.6	25	
20		04:47:10	24.2	25	
21		04:47:30	24.9	25	
22	(218) 04:48:50	04:49:10	4.3	5	
23		04:49:30	5.4	5	
24		04:49:50	5.0	5	04:53:46

KM0814_d1_p1_S17_C1



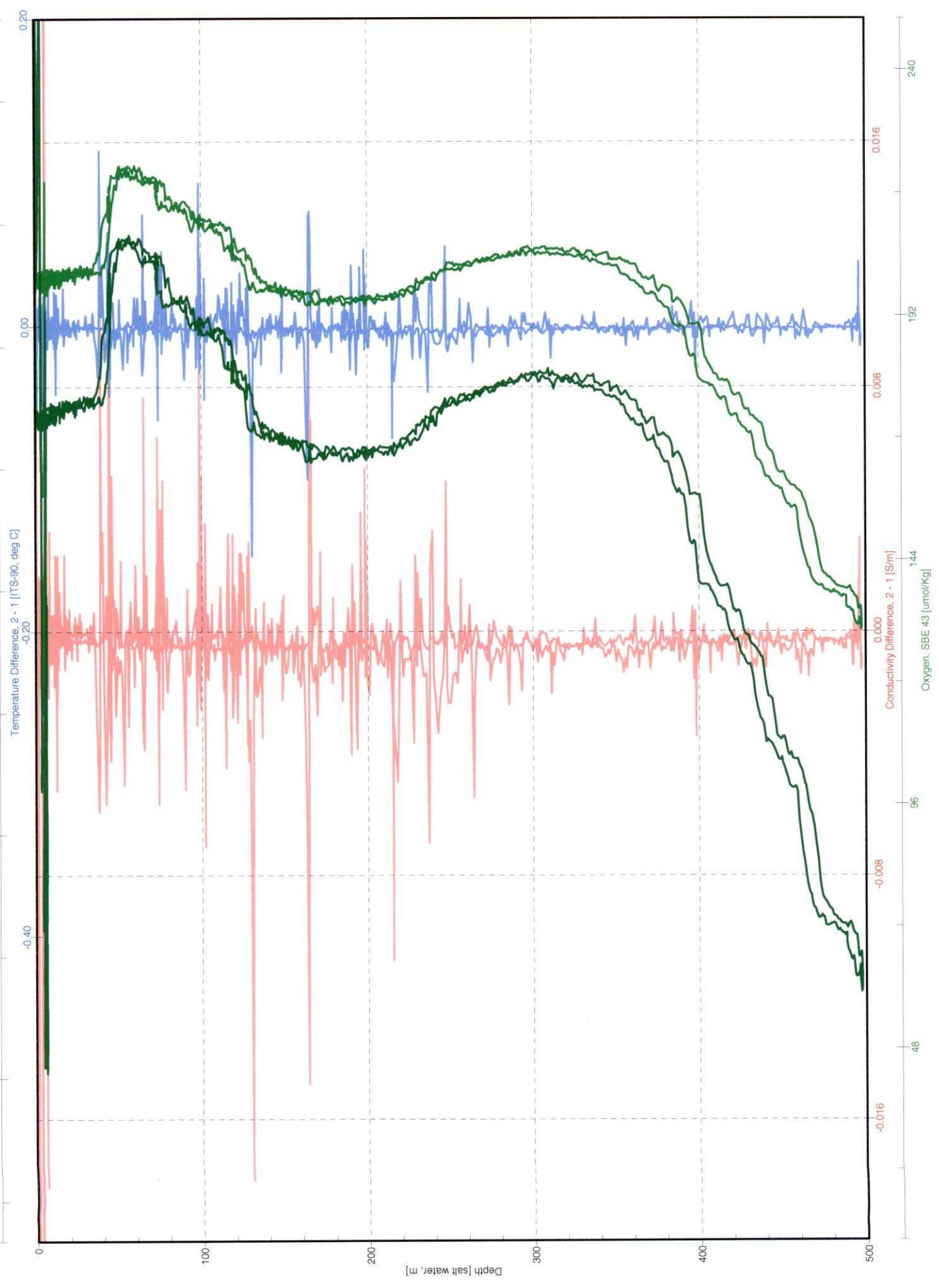
KM0814_c_2_S17_C1
PAR/Irradiance, Biospherical/Licor



KM0814_c_3_S17_C1

Oxygen, SBE 43, 2 [umol/Kg]

180



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.1	Operator
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments
	Begin Survey around str 16
	range of LSS ϕ - 33.000

Station: 18	Cast: 1
Latitude start: 25° 24.996' N end:	Longitude start: 157 40.037' W end:
Depth of water: 4812 meters	Date (GMT): (218) 08/05/2008
Pressure on Deck	Time: 09:53:00Z
Begin: ϕ .523-.492	Start Log: (218) 10:00:00Z
End: 0.33	In Water: 10:02:35Z
Max cast pressure: 300 dbar	Out of Water:

Trip/ Niskin	Time (GMT)	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	10:27:25	10:27:37	130.38	130	10:05:35Z @ 10m stopped
2	10:28:26	10:29:40	104.44	DCM	1095
3	10:30:31	10:30:50	94.75	DCM-10	95
4	10:31:45	10:32:00	84.18	DCM-20	85
5	10:32:51	10:33:10	75.09	DCM-30	75
6	10:34:05	10:34:20	64.59	DCM-40	65
7					
8					
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