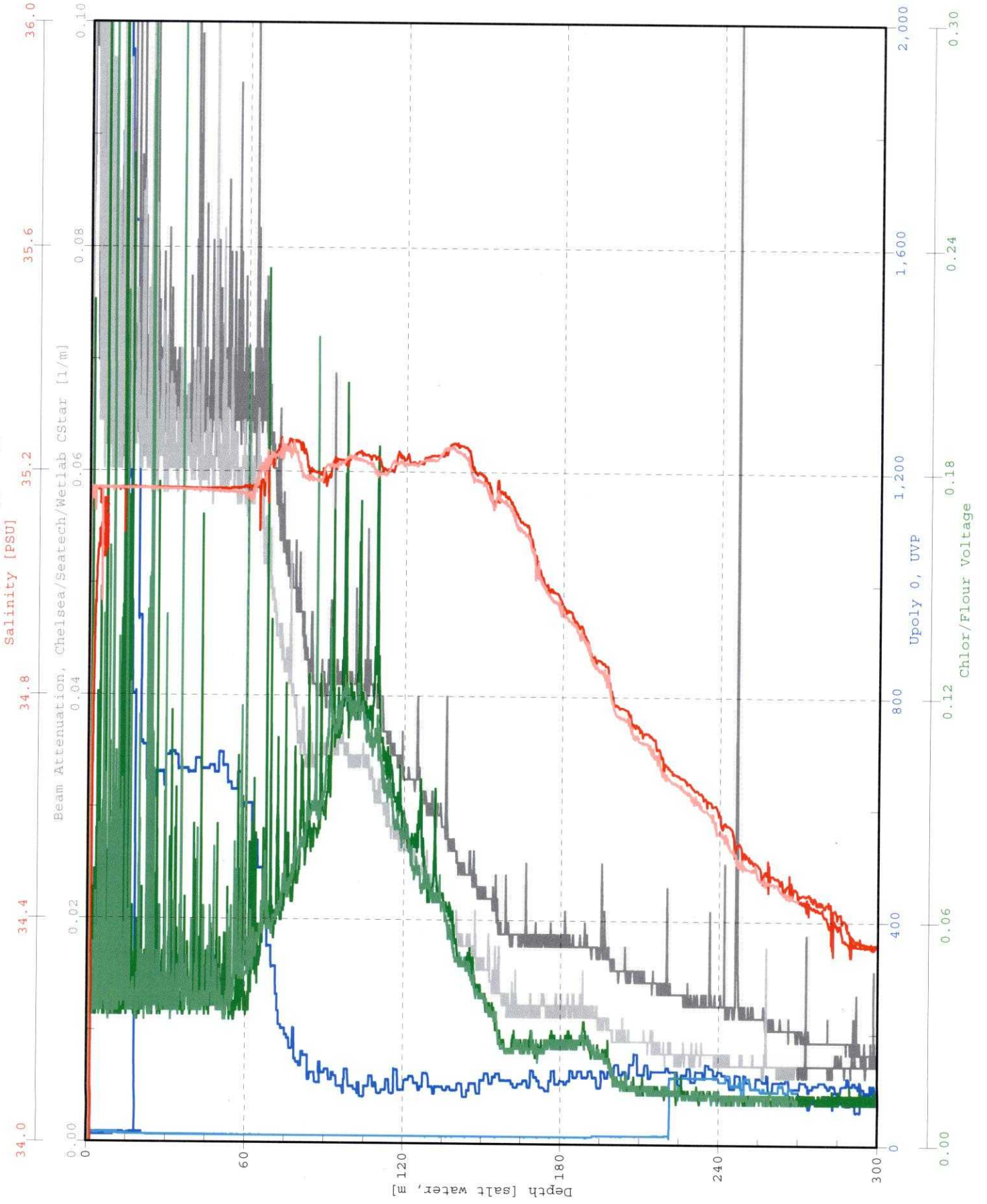


Pump Status	off
Scan Count	46009
Pressure, Digiquartz [db]	0.4279
Depth [salt water, m]	0.4255
PAR/Irradiance, Biospherical/Licor	4.604e+000
Temperature [ITS-90, deg C]	25.38443
Temperature Difference, 2 - 1 [ITS-90, deg C]	-0.85056
Salinity [PSU]	1.080
Conductivity Difference, 2 - 1 [S/m]	0.0483510
Oxygen, SBE 43 [ml/l]	5.880265
Oxygen, SBE 43, 2 [ml/l]	4.216422
OBS, Seatech LS6000	0.02418
Fluorescence, Seapoint	5.128e-002
Beam Transmission, Chelsea/Seatech/Wetlab CStar [%]	93.94882
Voltage 4	0.017
Voltage 5	0.00000

KM0814_d1~p1_S29_c1

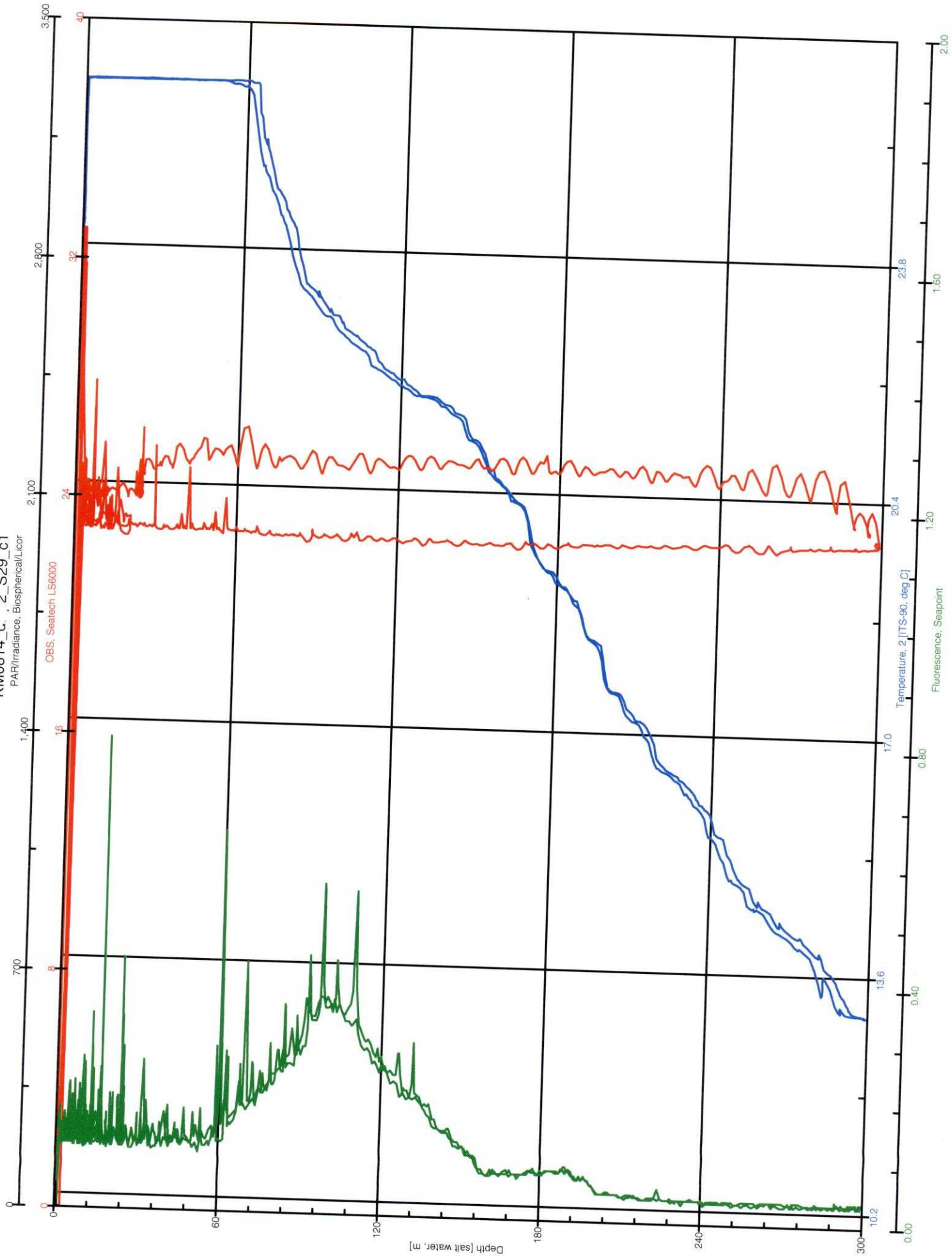


Bottle
Firing
Sequence

KM0814_c_2_S29_c1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



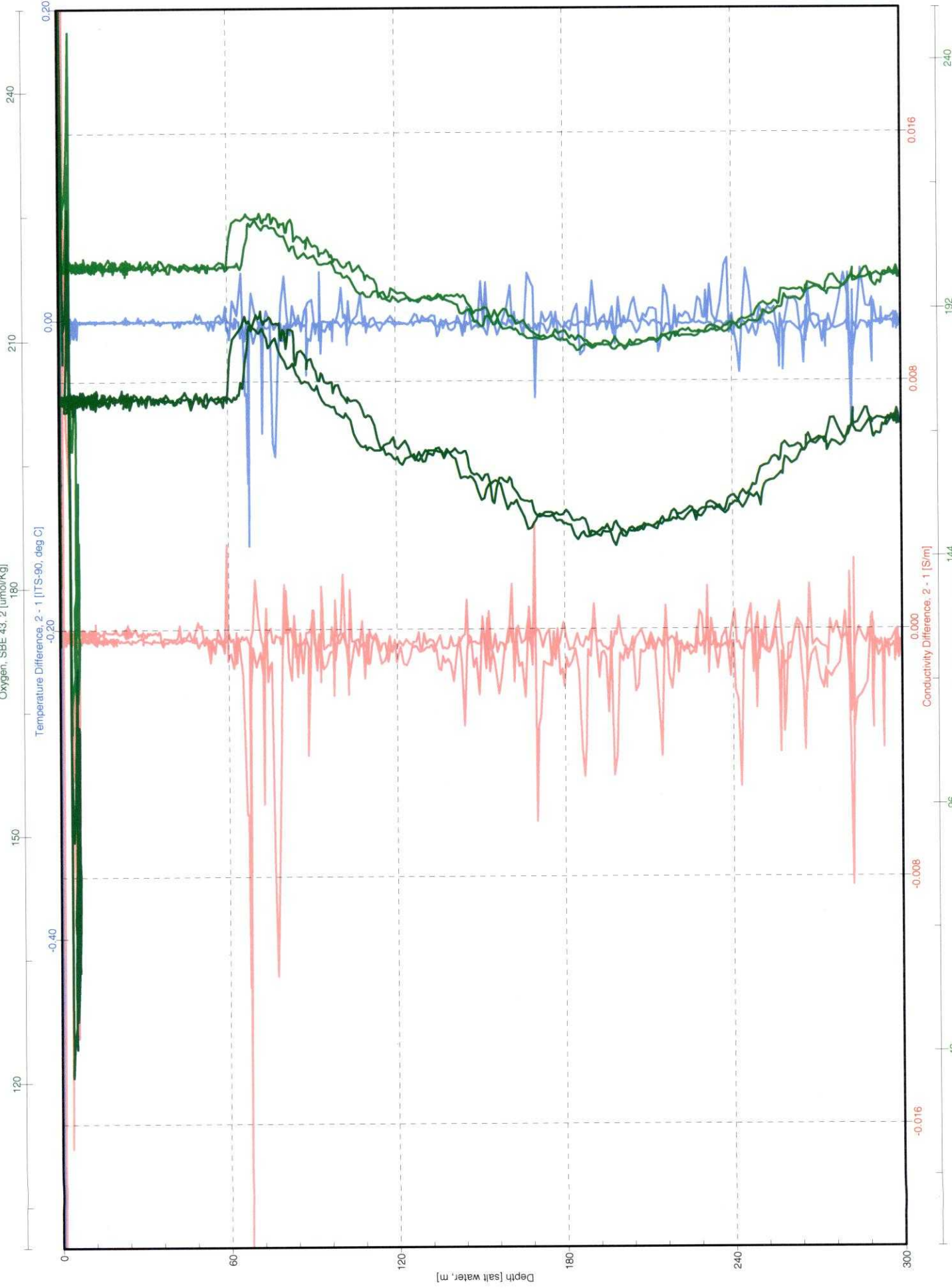
KM0814_c_3_S29_c1

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
		26.4	Calil

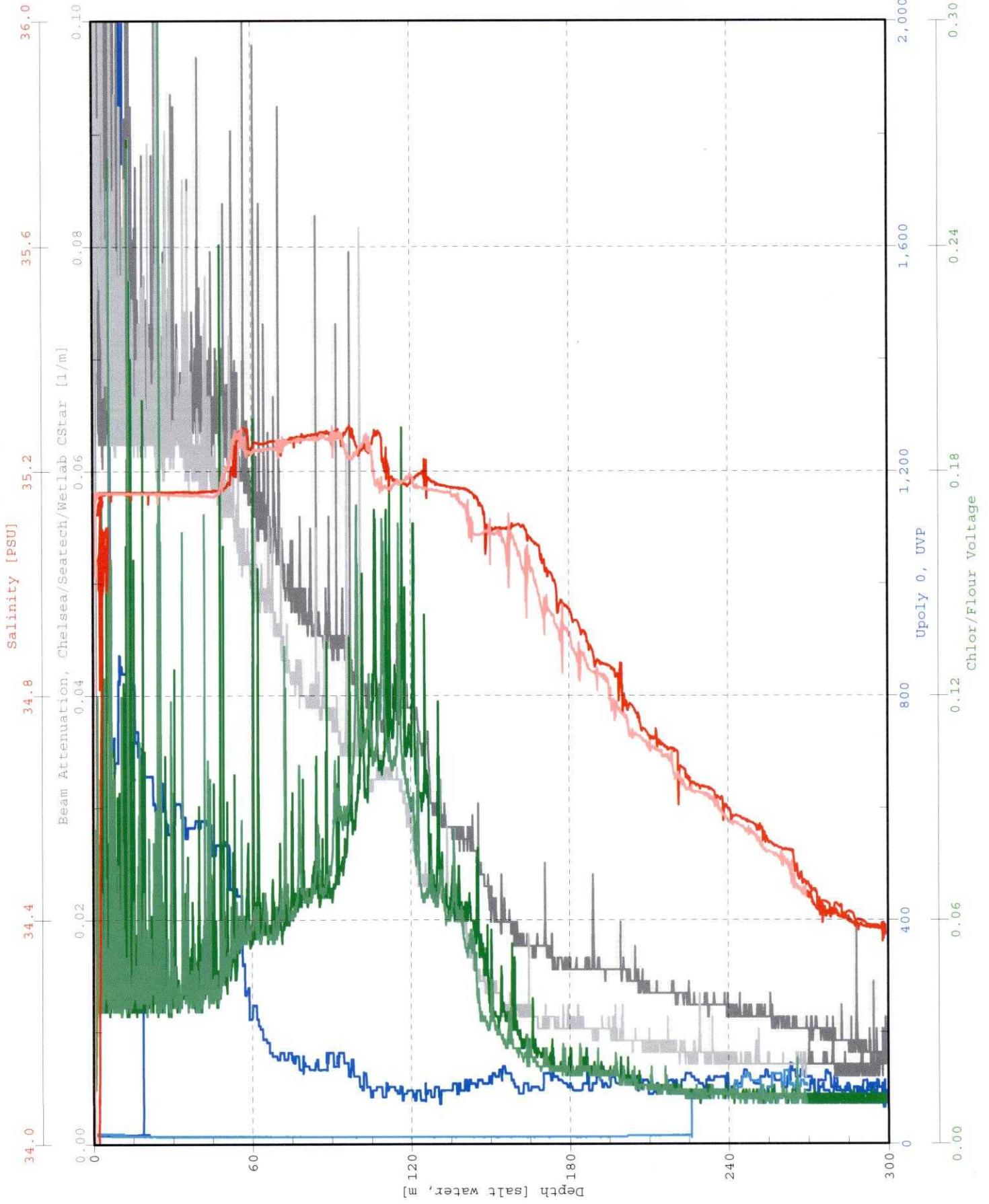
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

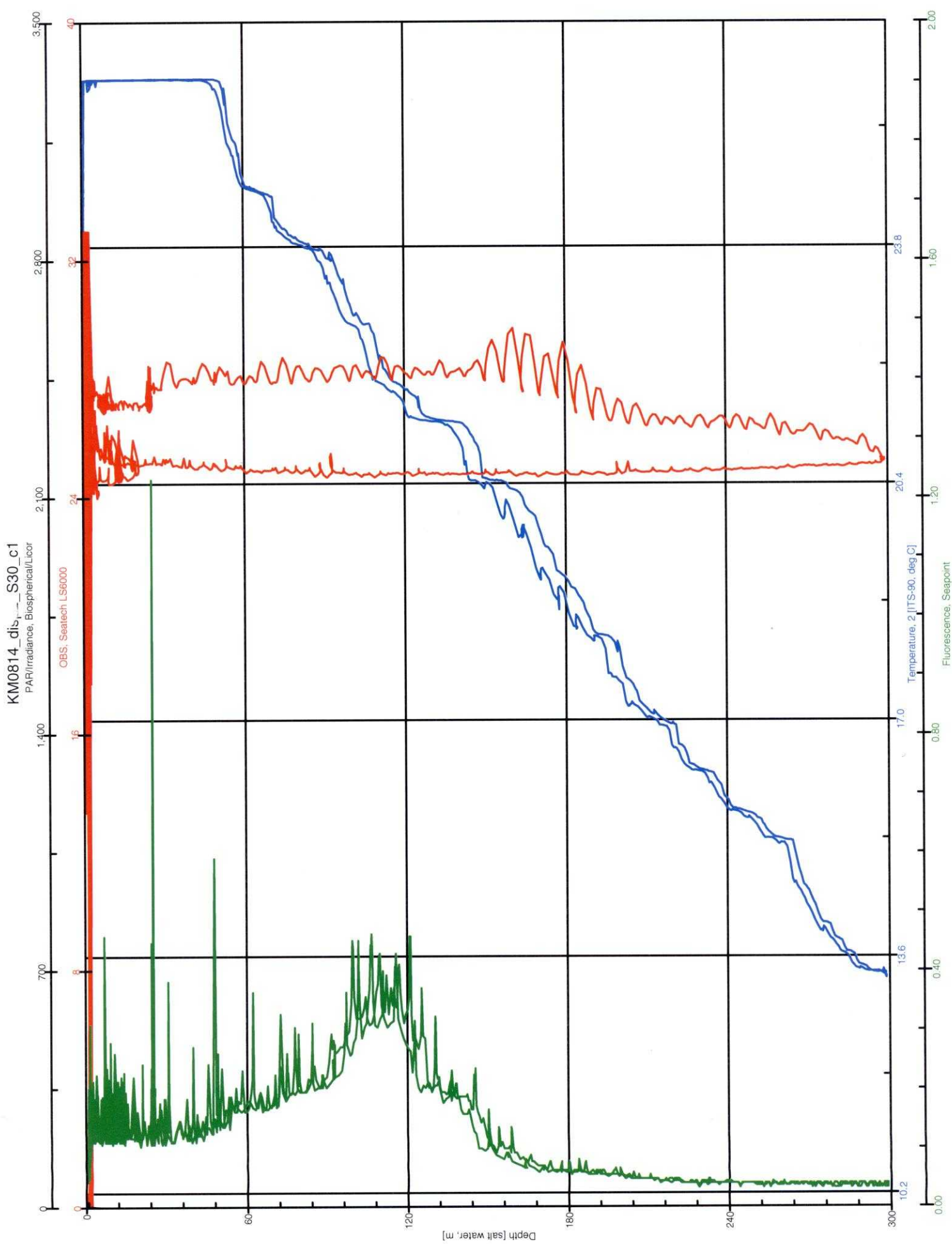
Time-GMT	Comments
	No bottles fired
	UVP missing

Station: 30	Cast: 1
Latitude start: 24d 13.975'W	Longitude start: 157d 59.979'W
end:	end:
Depth of water: 4208 meters	Date (GMT): 220 08 10 7108
Pressure on Deck	Time: 10:00:17
Begin: 0.85	Start Log: 10:00:58
End: 0.49	In Water: 10:02:57
Max cast pressure: 300 dbar	Out of Water: 10:30:37

Trip/ Niskin	Time (GMT)	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
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_displ_S30_c1





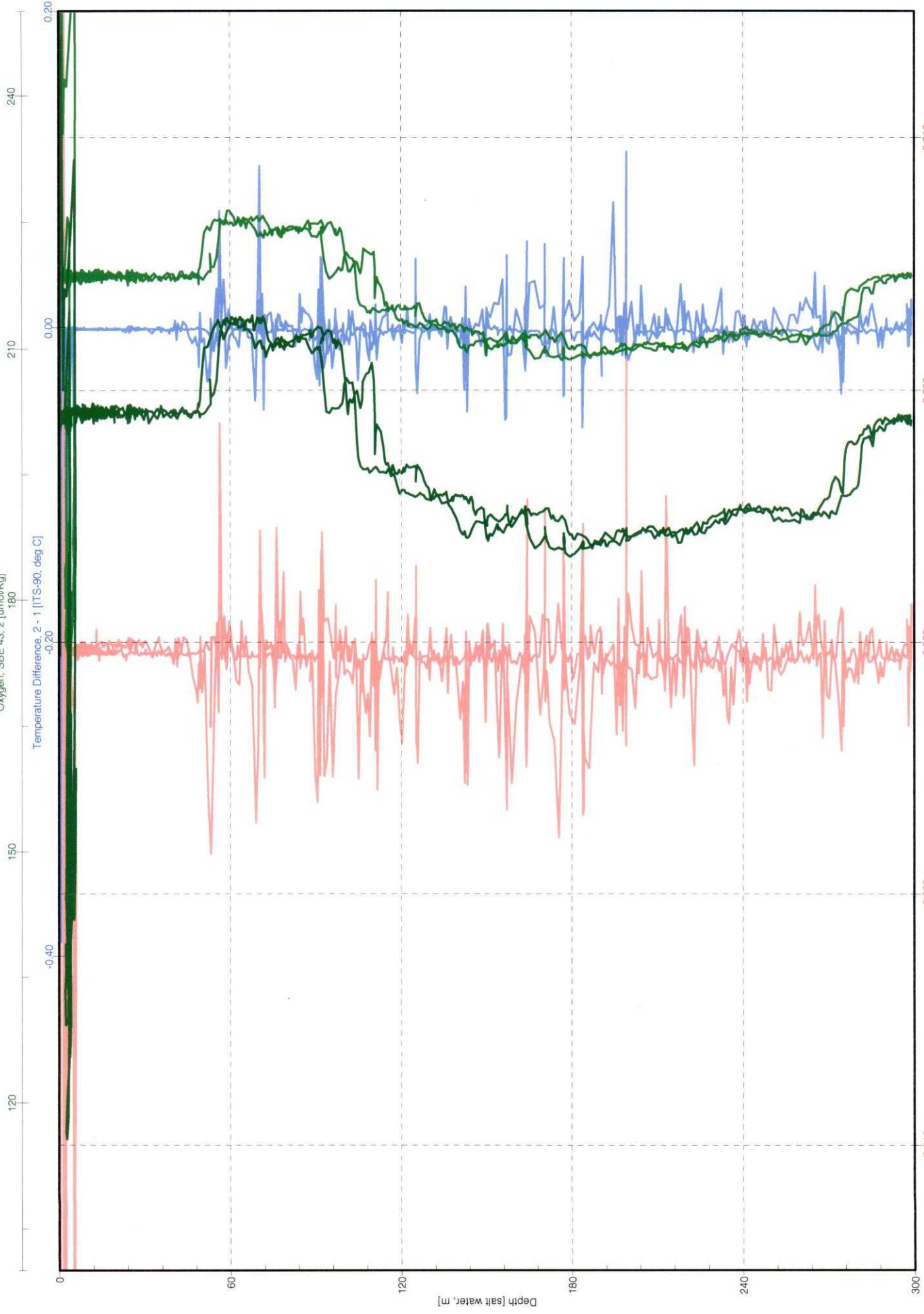
KM0814_dis_T_S30_c1

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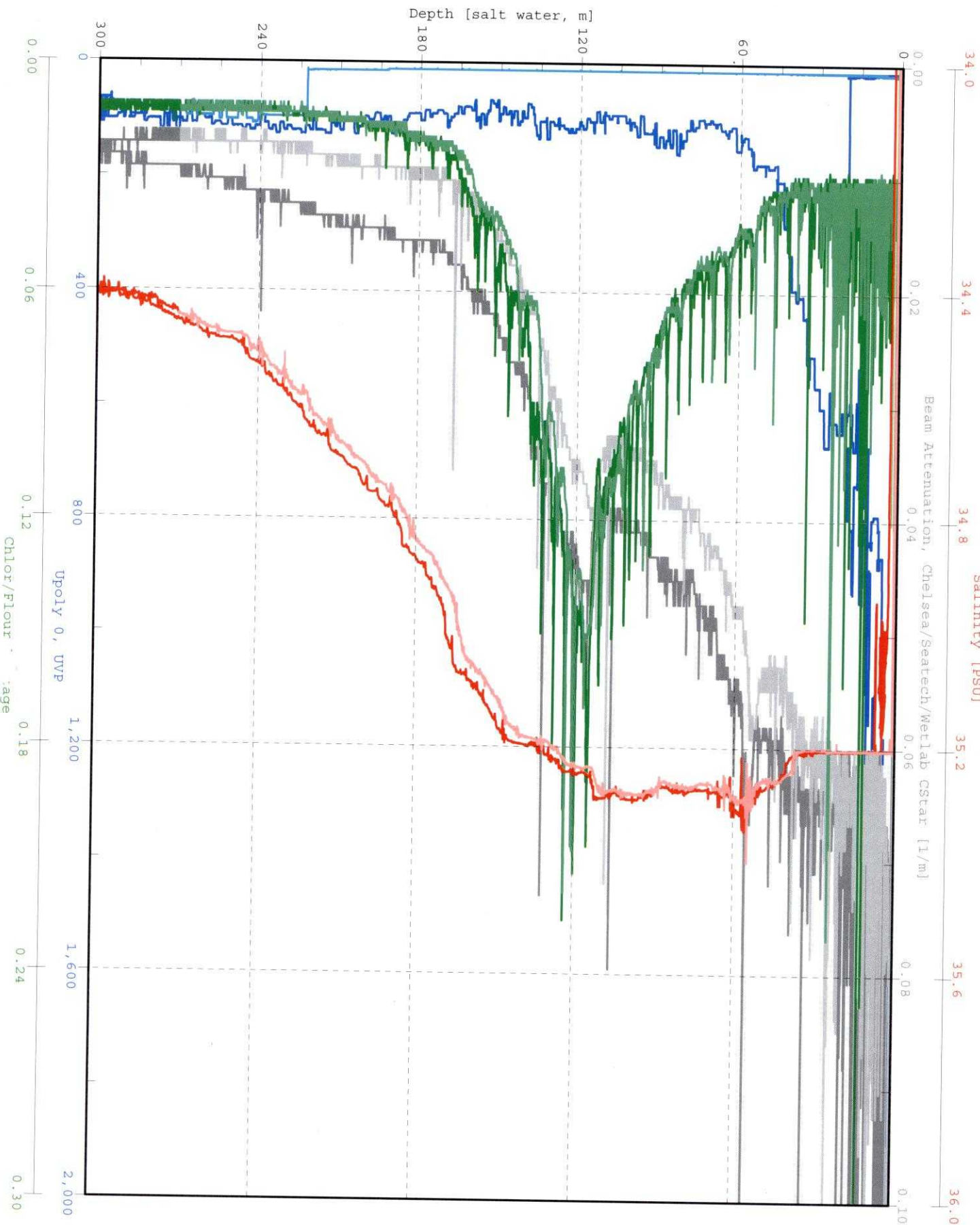
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 ___
- Biospherical PAR
- Transmis.. CST-1043DR

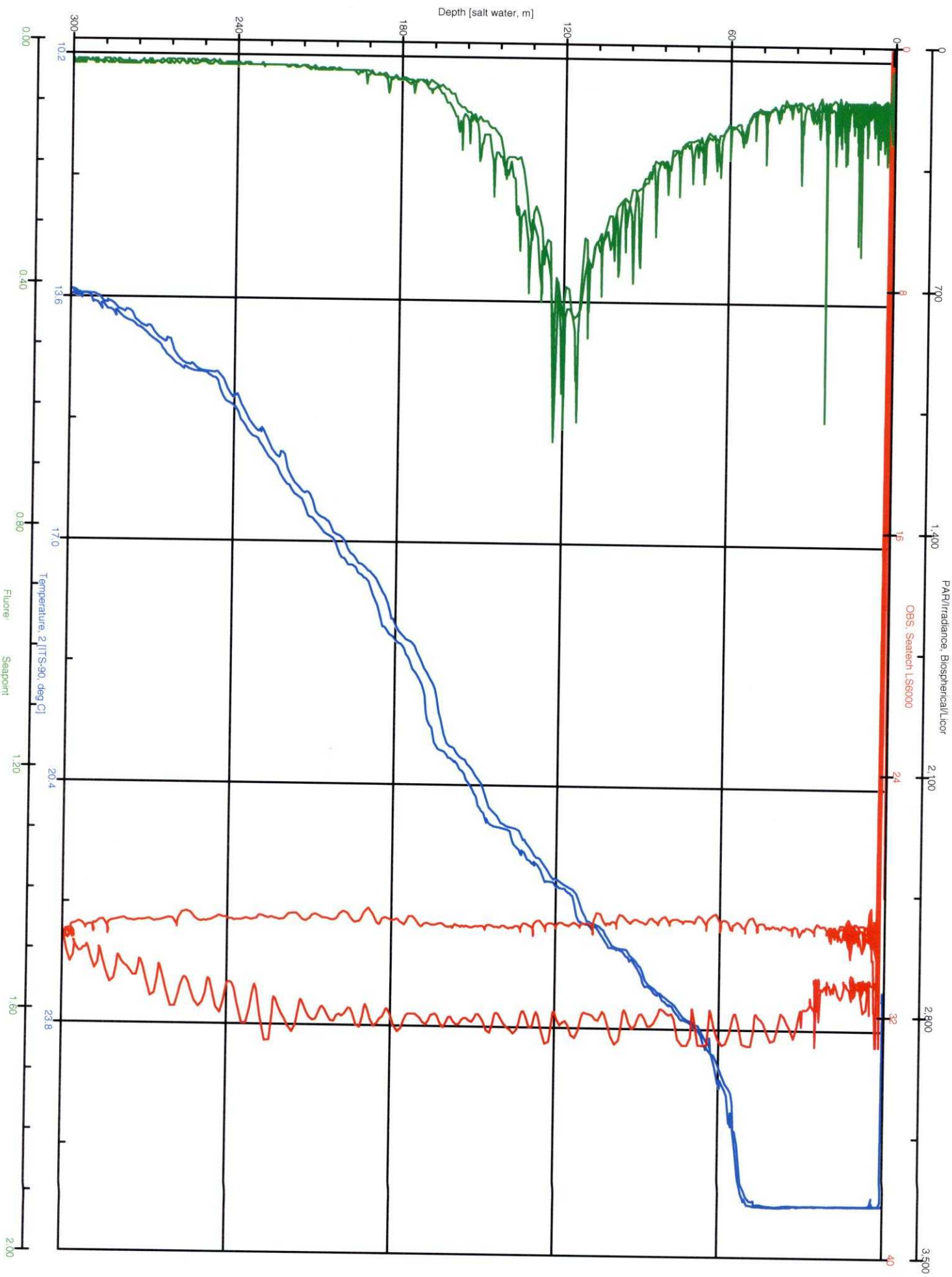
Time-GMT	Comments
	No bottles fired
	OVP murky

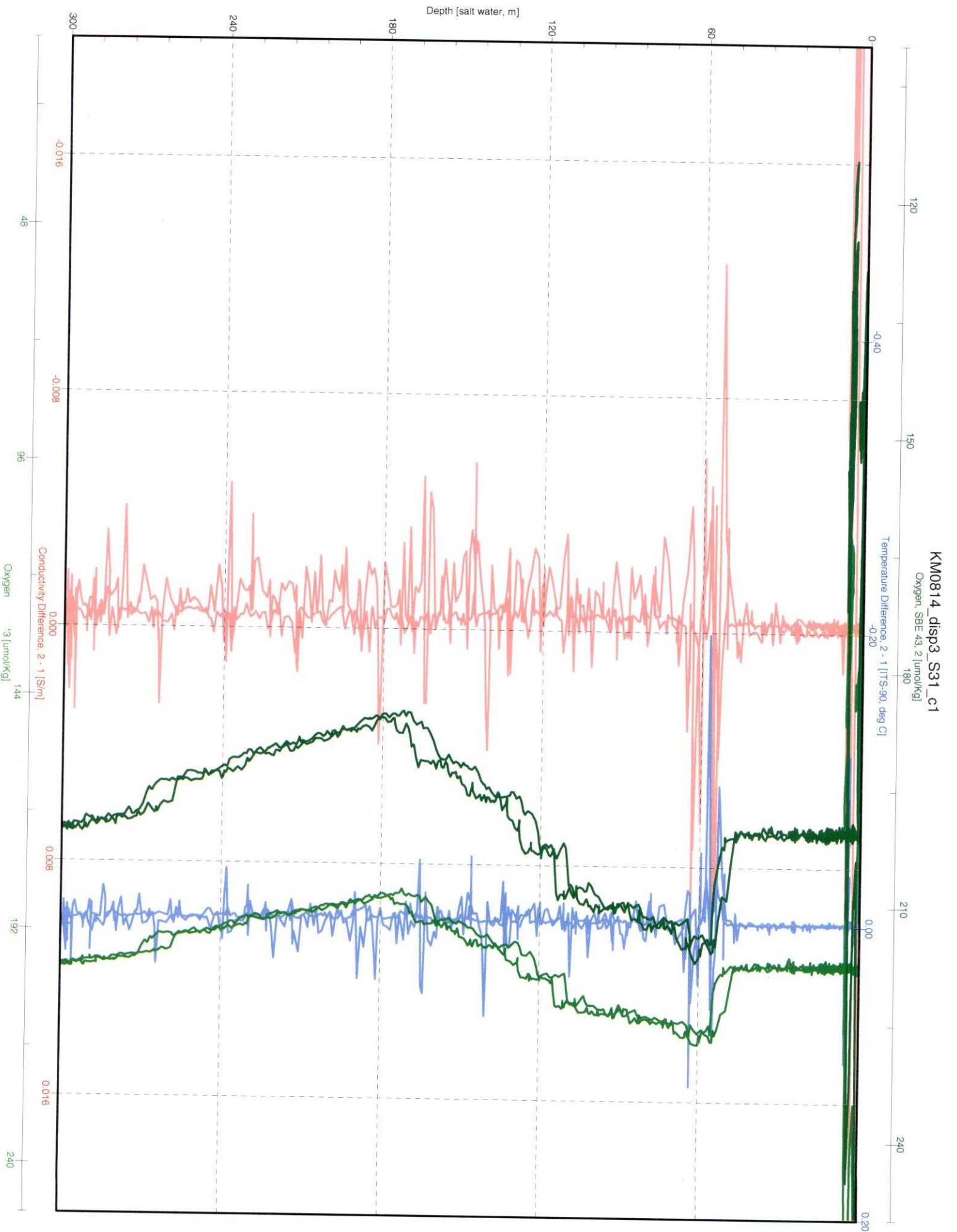
Station: 31	Cast: 1
Latitude start: 24d 20.9781W end:	Longitude start: 157d 59.9631 W end:
Depth of water: 4581 meters	Date (GMT): 220 08 1071 08
Pressure on Deck Begin: 0.85 End: 0.39	Time: 11:31:05 Start Log: 11:31:42 In Water: 11:33:16 Out of Water:
Max cast pressure: 300 dbar	11:58:15

Trip/ Niskin	Time (GMT)	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
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_disp1_S31_c1







km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.3	Calil

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

Time-GMT	Comments

Station: 32	Cast: C1
Latitude start: 24d 0.947'N end: 24d 0.949'N	Longitude start: 157d 53.88'W end: 157d 53.884'W
Depth of water: 4324 meters	Date (GMT): 220 08/07/2008
Pressure on Deck	Time: 16:54:26
Begin: 0.79	Start Log: 16:54:26
End: 0.22	In Water: 16:55:54
Max cast pressure: 1000 dbar	Out of Water: 18:06:00

Trip/ Niskin	Time (GMT) stopped	Confirm tripped	Pressure	Target Depth	Comments
1	17:47:00	17:47:20	199.41	200	DCM = 105 dbar
2		17:47:40	200.41	200	
3		17:48:00	200.64	200	
4	17:49:40	17:50:00	150.33	150	
5		17:50:20	149.98	150	
6		17:50:40	150.81	150	
7	17:52:03	17:52:20	104.19	DCM	
8		17:52:40	104.41	DCM	
9		17:53:00	105.10	DCM	
10	17:53:44	17:54:00	100.04	100	
11		17:54:20	100.12	100	
12		17:54:40	100.29	100	
13	17:55:41	17:56:00	73.83	75	
14		17:56:20	74.64	75	
15		17:56:40	76.04	75	
16	17:57:51	17:58:10	46.82	45	
17		17:58:30	45.87	45	
18		17:58:50	44.91	45	
19	17:59:58	18:00:20	25.85	25	
20		18:00:40	25.37	25	
21		18:01:00	24.75	25	
22	18:03:26	18:03:45	5.58	5	
23		18:04:05	5.31	5	
24		18:04:25	4.80	5	

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

Station Number: 32 Date: 8/7/2008 (220) (GMT)

Cast Number: 1 Time: (GMT)

Operators: AF, PC, LS, JB, MNC, JH

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	x	x	1L		
2	200								12L	
3	200									
4	150	x	x	x	x	x	x	1L		
5	150									
6	150									
7	DCM	x	x	x	x	x	x	1L		
8	DCM								12L	
9	DCM									
10	100	x	x	x	x	x	x	1L		
11	100									
12	100									
13	75	x	x	x	x	x	x	1L		
14	75									
15	75									
16	45	x	x	x	x	x	x	1L		
17	45								12L	
18	45									
19	25	x	x	x	x	x	x	1L		
20	25									
21	25									
22	5	x	x	x	x	x	x	1L		
23	5								12L	
24	5									

NOTES:

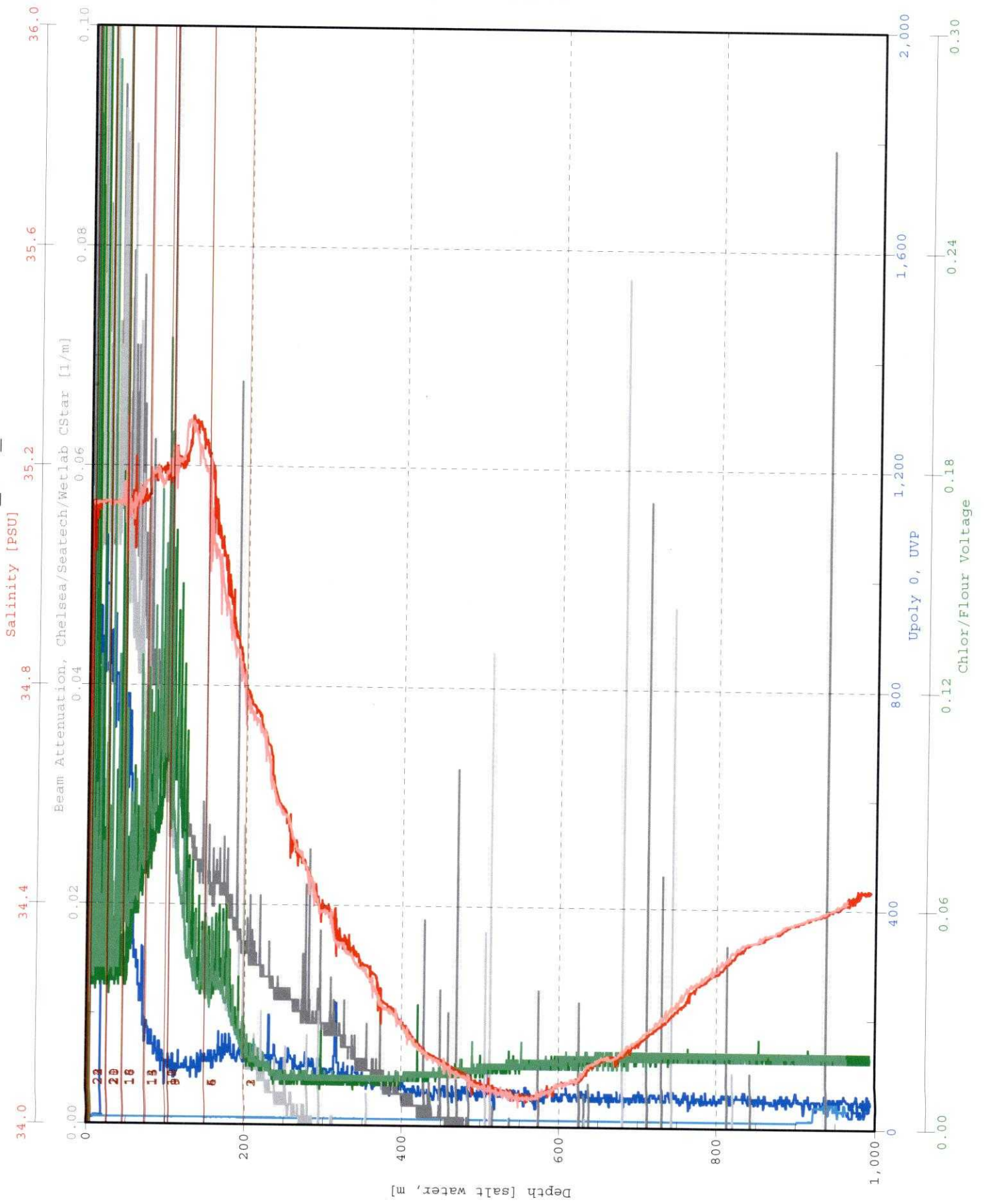
C-MORE CRUISE LOG
OPEREX
Station Data Sheet: Core Minimum

Station Number: 32 Date: (GMT)
 Cast Number: 1 Time: (GMT)
 Operators: AF, PC, JB, MNC, JH, LS Position:

Rosette Position	Desired Depth	Duhamel	Fong	NO * Wilson	KREY *					
1	200			1.5L						
2	200									
3	200				1L					
4	150			1.5L						
5	150									
6	150				1L					
7	DCM			1.5L						
8	DCM									
9	DCM		10L		1L					
10	100			1.5L						
11	100									
12	100				1L					
13	75			1.5L						
14	75									
15	75				1L					
16	45			1.5L						
17	45									
18	45		10L		1L					
19	25			1.5L						
20	25		10L		1L					
21	25	12L								
22	5			1.5L						
23	5									
24	5		10L		1L					

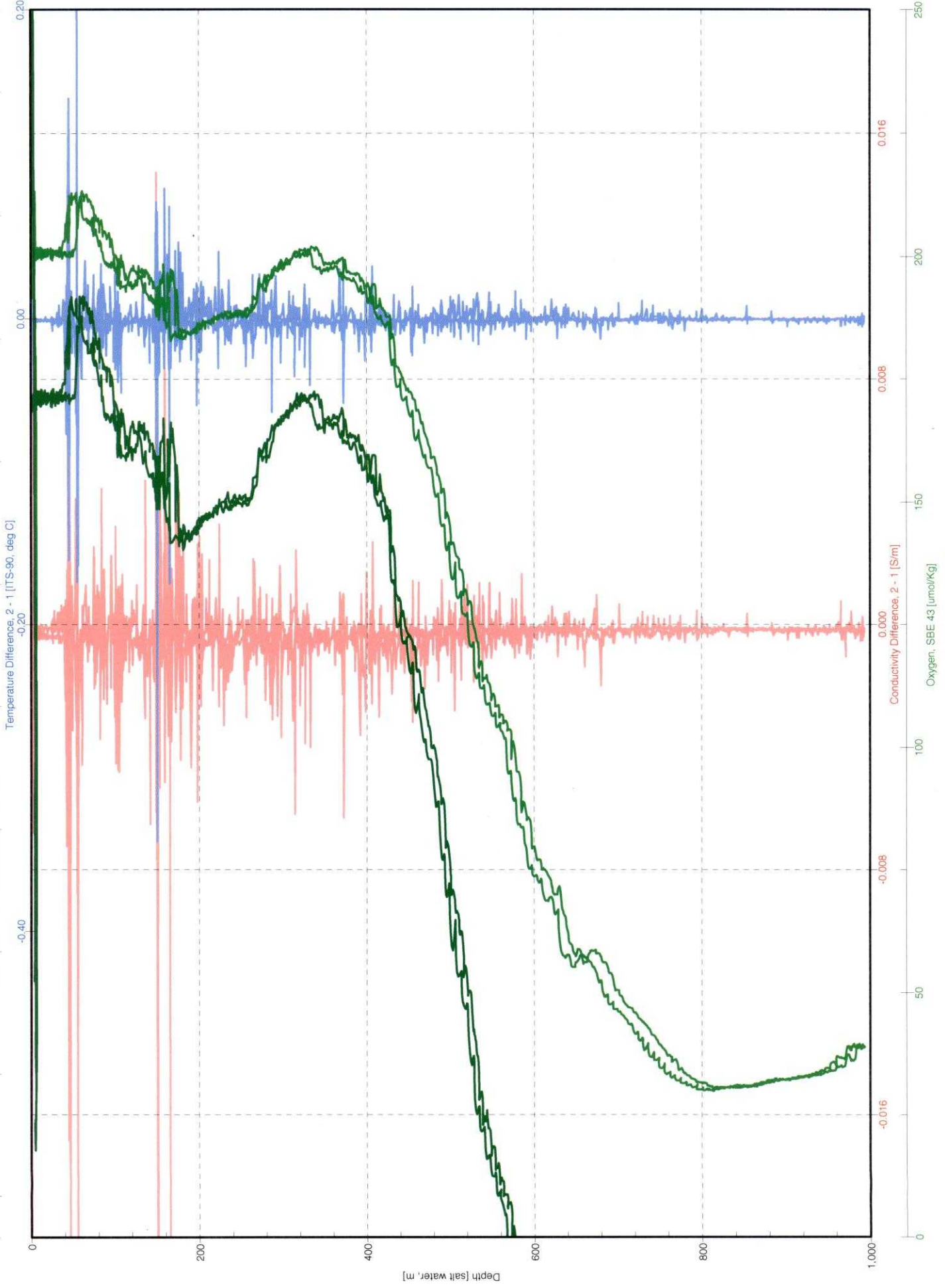
NOTES: * MUST SAMPLE FIRST!

KM0814_disp1_S32_c1



KM0814_dis_~_S32_c1

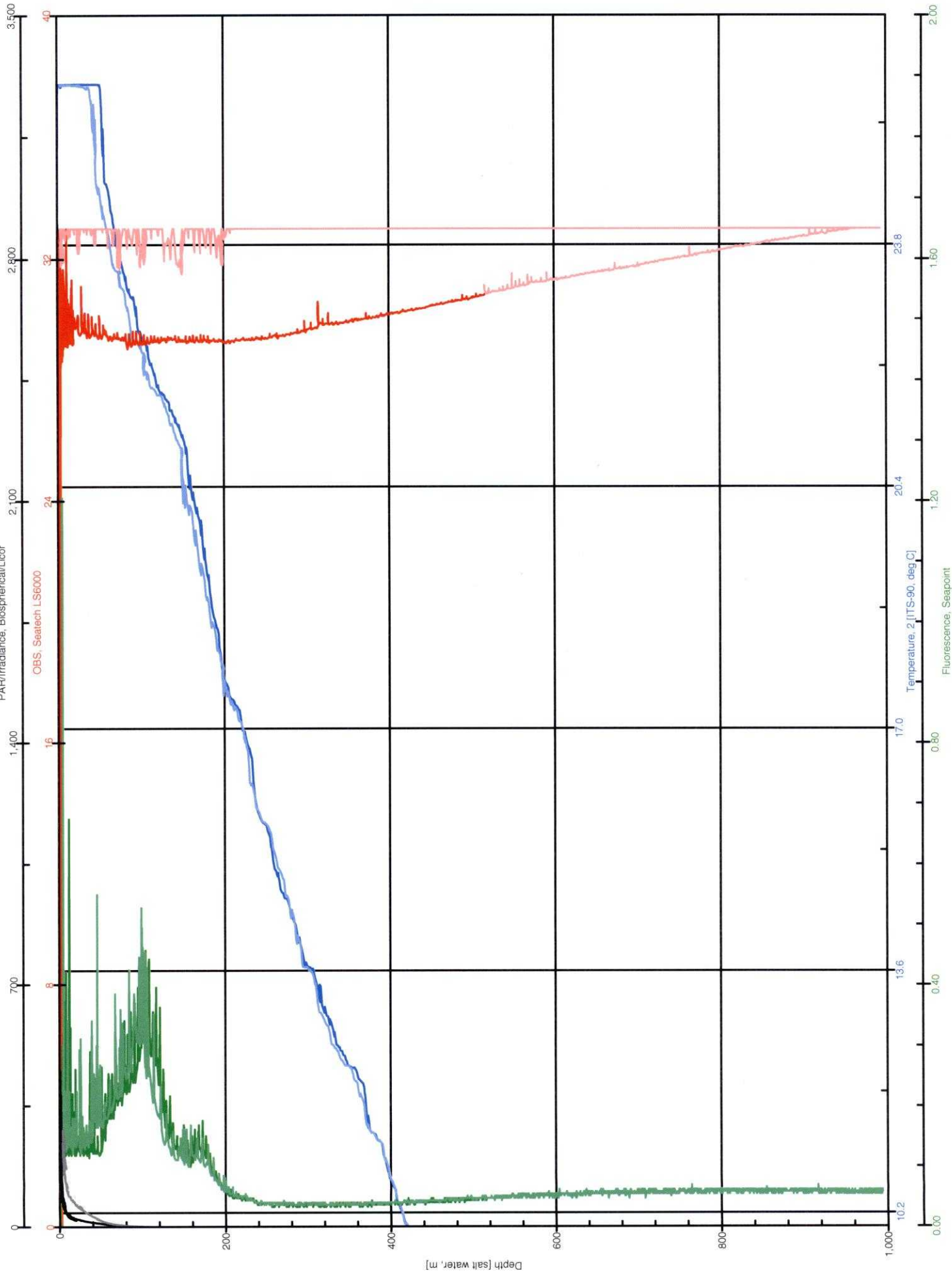
Oxygen, SBE 43 2 [umol/Kg]



KM0814_dis_v__S32_c1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



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: 32	Cast: 2
Latitude start: 24 d ϕ . 973' N end: 24° ϕ . 972' N	Longitude start: 157° 53.937' W end: 157° 53.933' W
Depth of water: 4321 meters	Date (GMT): (220) 08 / 07 / 2008
Pressure on Deck	Time: 19:27:40
Begin: ϕ . 556 - 589	Start Log: 19:28:00z
End: ϕ . 445 - 537	In Water: 19:30:43z
Max cast pressure: 300 dbar	Out of Water: (220) 20:06:07z

Trip/ Niskin	Time (GMT)	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1 (220)	19:44:34	19:44:50z	300.7	300	19:33:30
2 (220)	19:48:11	19:48:30z	149.7	150	
3		19:48:50z	149.3	150	
4		19:49:10	149.9	150	
5 (220)	19:50:40	19:51:10	108.1	DCM	108 dbar
6		19:51:30	106.9	DCM	108 dbar
7 (220)	19:52:17	19:52:30	100.8	100	
8		19:52:50	100.7	100	
9 (220)	19:53:50z	19:54:10	73.9	75	
10		19:54:30	74.6	75	
11 (220)	19:55:45	19:55:50	44.0	45	
12	19:56:40z	19:56:50	30.3	30	
13		19:57:10z	31.2	30	
14 (220)	19:57:52	19:58:10	25.1	25	
15 (220)	20:01:05	20:01:30	5.0	5	(3m wire)
16		20:01:50	5.7	5	(3m wire)
17		20:02:10	5.3	5	(3m ")
18		20:02:30	6.1	5	
19		20:02:50	5.2	5	
20		20:03:10	5.7	5	
21		20:03:30	4.7	5	
22		20:03:50	5.5	5	
23		20:04:10	6.1	5	CTD on Deck
24		20:04:30	4.1	5	20:07:56z

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

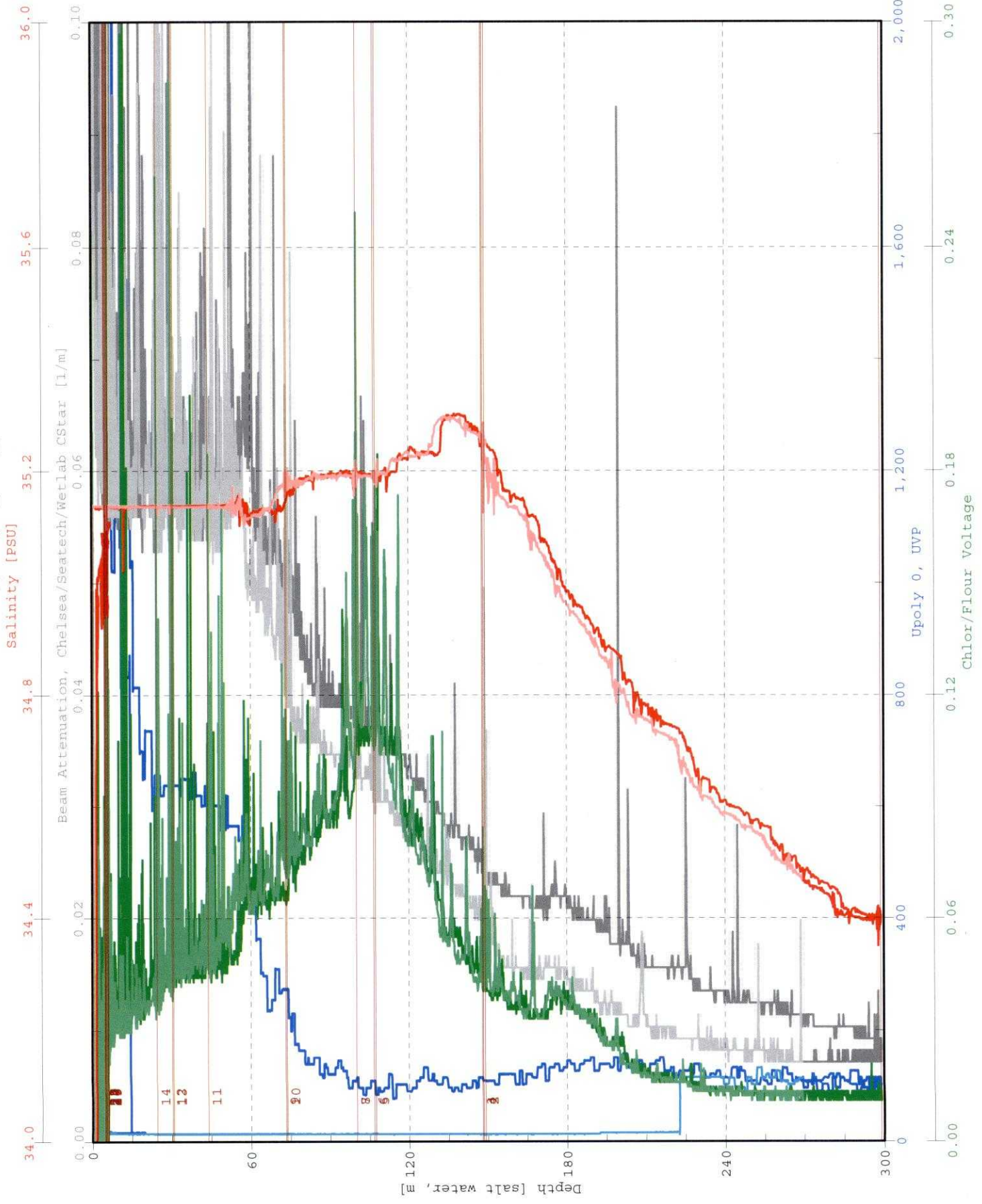
Station Number: 32
 Cast Number: 2
 Operators: AF, PC, LS, JH, MNC, JB

Date: 8/7/2008 (220) (GMT)
 Time: 19:27:40 Z (GMT)
 Position: 24° 0.973' N 157° 53.937' W

Rosette Position	Desired Depth	BECKER, MNC	Fong	Li	Hillon					
1	300		10L							
2	150									
3	150		10L							
4	150			12L						
5	DCM									
6	DCM			12L						
7	100									
8	100									
9	75									
10	75			12L						
11	45			12L						
12	30	12L								
13	30	12L								
14	25			12L						
15	5			12L						
16	5				6L					
17	5	12L								
18	5	12L								
19	5	12L								
20	5	12L								
21	5	12L								
22	5	12L								
23	5	12L								
24	5	12L								

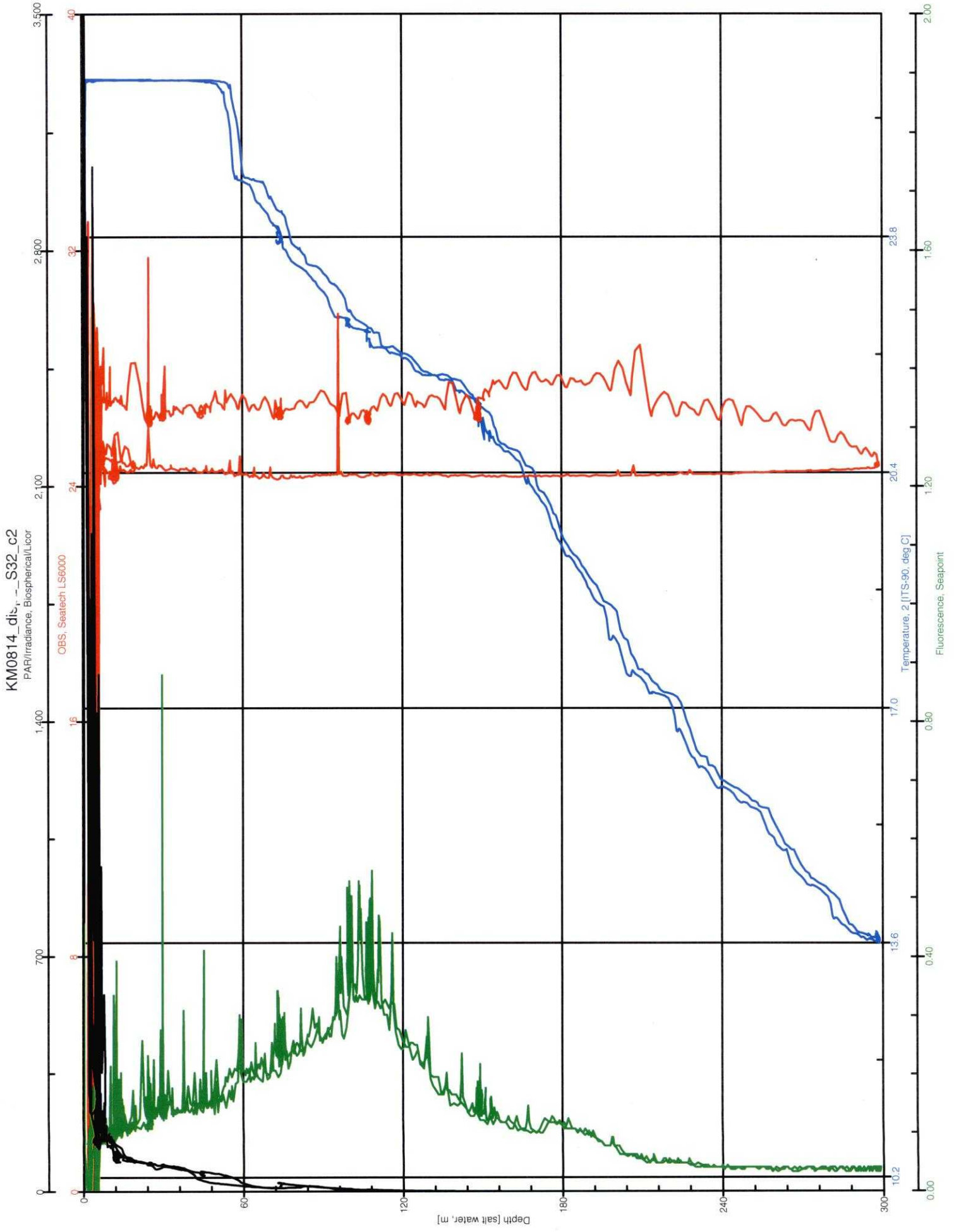
NOTES:

KM0814_disp1_S32_c2



KM0814_dib_v_-_S32_c2

PAR/Irradiance, Biospherical/Lcor



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.3	Operator 80
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 32	Cast: 3
Latitude start: 24° 09.71' N end: same	Longitude start: 157° 53.933' W end: same
Depth of water: 4324 meters	Date (GMT): (220) 08 107/2008
Pressure on Deck Begin: 734 End: 0657 - .440	Time: 20:51:55Z Start Log: 20:53:56Z In Water: 20:56:35Z Out of Water: (220) 21:28:10Z
Max cast pressure: 200 dbar	

Trip/ Niskin	Time (GMT) stopped	Confirm tripped	Pressure	Target Depth	Comments
1	(220) 20:08:09	20:08:30	198.6	200 db	20:58:56 @ 10m
2		21:08:50	199.4	200	
3		21:09:10	199.1	200	
4		21:09:30	198.6	200	
5		21:09:50	199.3	200	
6		21:10:10	199.6	200	
7	(220) 21:14:15	21:14:30	105.5	DCM	105 db
8		21:14:50	104.9	DCM	105
9		21:15:10	105.6	DCM	105
10		21:15:30	105.0	DCM	105
11		21:15:50	105.7	DCM	
12		21:16:10	106.2	DCM	
13	(220) 21:17:50	21:18:10	44.6	45	
14		21:18:30	45.7	45	
15		21:18:50	46.8	45	
16		21:19:10	45.9	45	
17		21:19:30	45.7	45	
18		21:19:50	46.3	45	
19	(220) 21:24:05	21:24:30	6.9	5 db	
20		21:24:50	7.1	5 db	
21		21:25:10	6.1	5 db	
22		21:25:30	6.4	5 db	
23		21:25:50	6.9	5 db	CTD on deck
24		21:26:10	6.8	5 db	21:29:45Z

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 32
 Cast Number: 3
 Operators: AF, PC, LS, JH, MNC, JB

Date: 8/7/2008 (220) (GMT)
 Time: _____ (GMT)
 Position: _____

Rosette Position	Desired Depth	KREY								
1	200	12L								
2	200	12L								
3	200	12L								
4	200	12L								
5	200	12L								
6	200	12L								
7	DCM	12L								
8	DCM	12L								
9	DCM	12L								
10	DCM	12L								
11	DCM	12L								
12	DCM	12L								
13	45	12L								
14	45	12L								
15	45	12L								
16	45	12L								
17	45	12L								
18	45	12L								
19	5	12L								
20	5	12L								
21	5	12L								
22	5	12L								
23	5	12L								
24	5	12L								

NOTES:

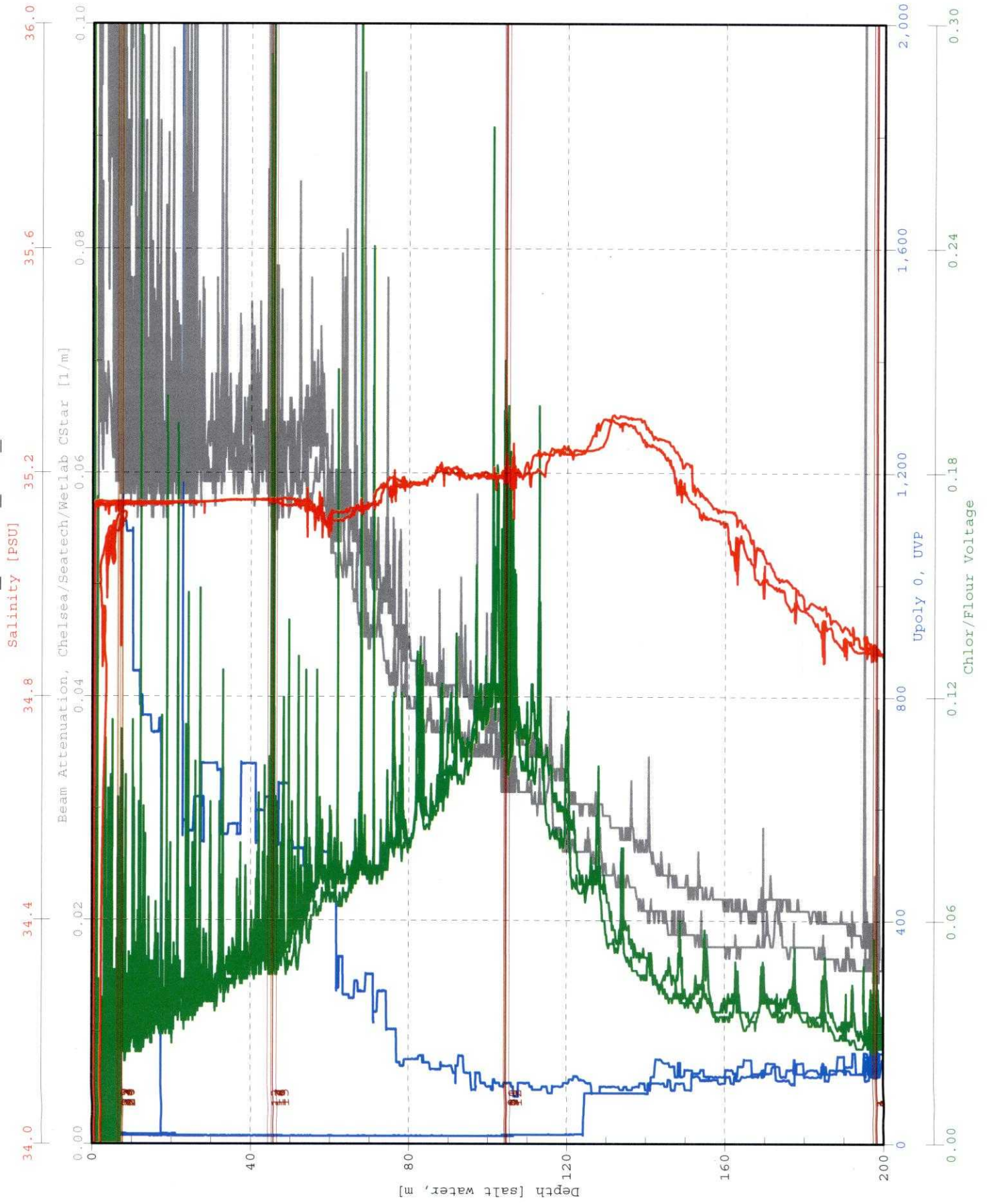
7
8

5
6

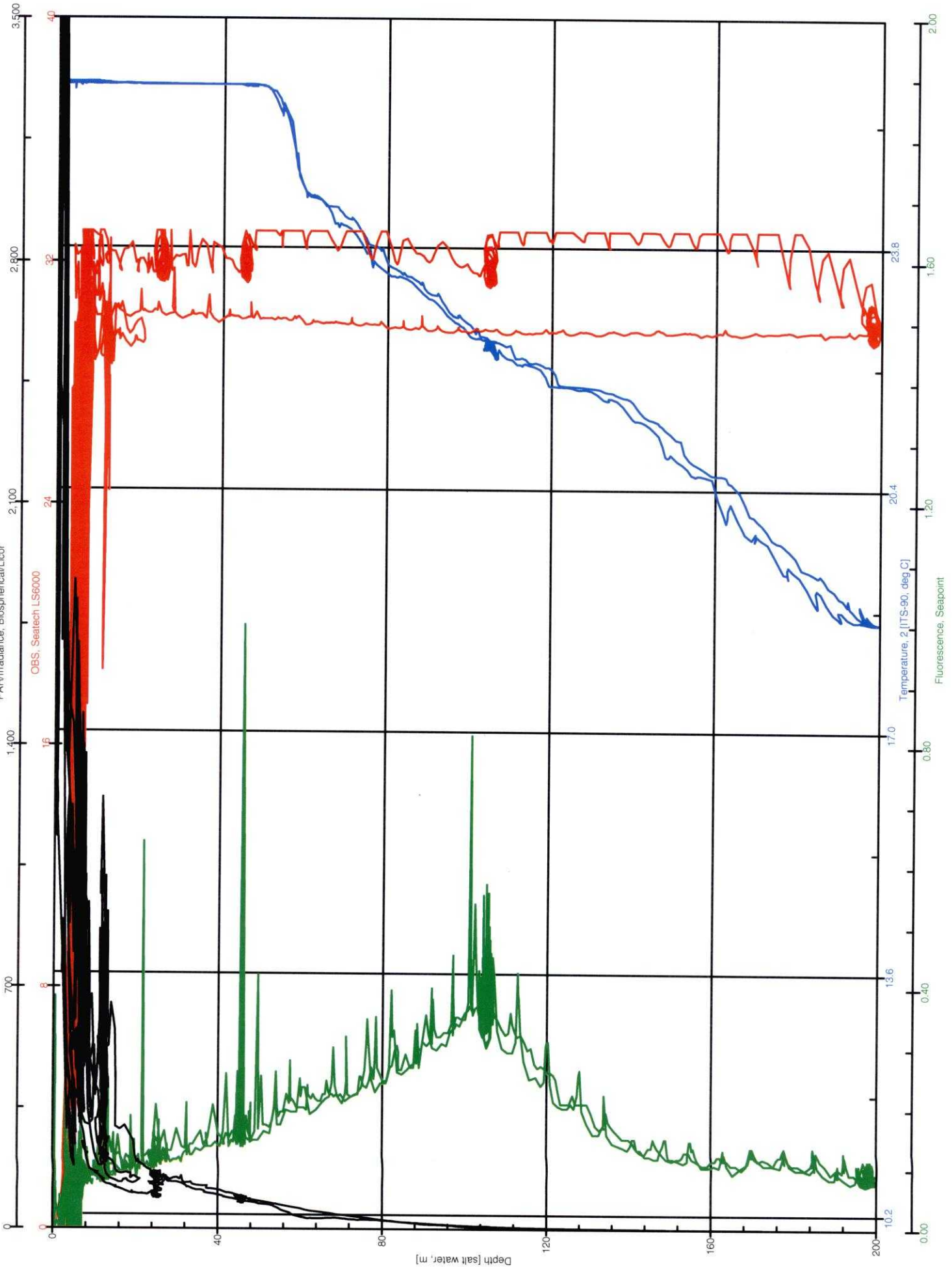
3
4

1
2

KM0814_di_1_S32_c3



KM0814_c _S32_c3
PAR/Irradiance, Biospherical/Licor



OBS, Seatech LS6000

Temperature, 2 [ITS-90, deg.C]
Fluorescence, Seapoint

km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.4	Operator SP
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 32	Cast: 4
Latitude start: 24° 0.933' N end: 24° 0.874' N	Longitude start: 157 53.828' W end: 157 53.770' W
Depth of water: 4321 meters	Date (GMT): (220) 08 07/2008
Pressure on Deck	Time: 22:07:26
Begin: 0.886 End: 0.479-.511	Start Log: 22:23:04Z In Water: 22:25:38Z
Max cast pressure: 300 dbar	Out of Water: 23:01:40Z

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1 (220)	22:39:10	22:39:30Z	300.9	300dbar	22:27:33 @10m switch st ₁₀
2		22:40:10Z	299.6	300	
3		22:40:50	300.1	300	
4 (220)	22:46:33	22:46:50	105.0	DCM	105 dbar
5		22:47:10Z	105.7	DCM	105
6 (220)	22:47:45	22:47:50Z	100.6	100	
7 (220)	22:49:17	22:49:30	76.0	100 75	
8	22:50:42Z	22:50:50	45.5	45	
9		22:51:10	45.1	45	
10		22:51:35	44.9	45	
11		22:51:50	46.8	45	
12		22:52:50	29.3	30 30	
13	22:53:31Z	22:53:50	25.2	25	
14		22:54:10	25.3	25	
15		22:54:30	25.4	25	
16		22:54:50	24.5	25	
17		22:55:10	23.3	25	
18		22:55:30	26.1	25	
19		22:55:50	25.0	25	
20		22:56:10	24.6	25db	
21		22:56:30	25.0	25	
22		22:56:50	25.7	25	
23		22:58:30	7.5	5	3m wire on Deck
24		22:58:50	7.3	5	3m wire 23 03 19Z

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

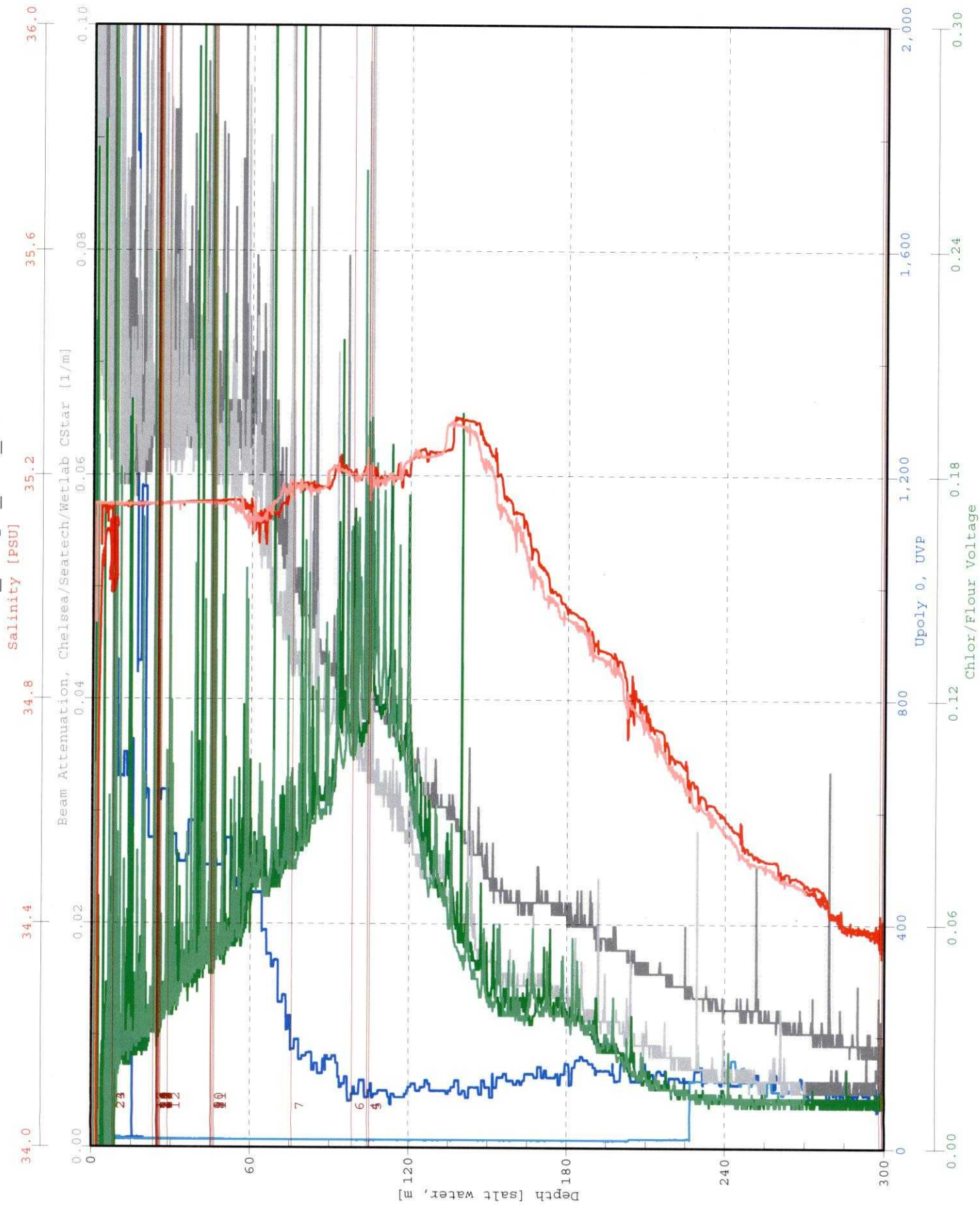
Station Number: 32
 Cast Number: 4
 Operators: AF, SP, ZK, LG

Date: 8/7/2008 (220) (GMT)
 Time: 22:07:26 (GMT)
 Position: 24 0.933' N 157 53.828' W

Rosette Position	Desired Depth	AF, KW, SD	Watkins	Breitlow	Becker					
1	300	12L								
2	300	12L								
3	300	12L								
4	DCM			12L						
5	DCM									
6	100			12L						
7	75			12L						
8	45		12L							
9	45			12L						
10	45		12L							
11	45		12L							
12	30				12L					
13	25		12L							
14	25		12L	<i>no fire</i>						
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	5			12L						
24	5									

NOTES:

KM0814_disp1_S32_c4



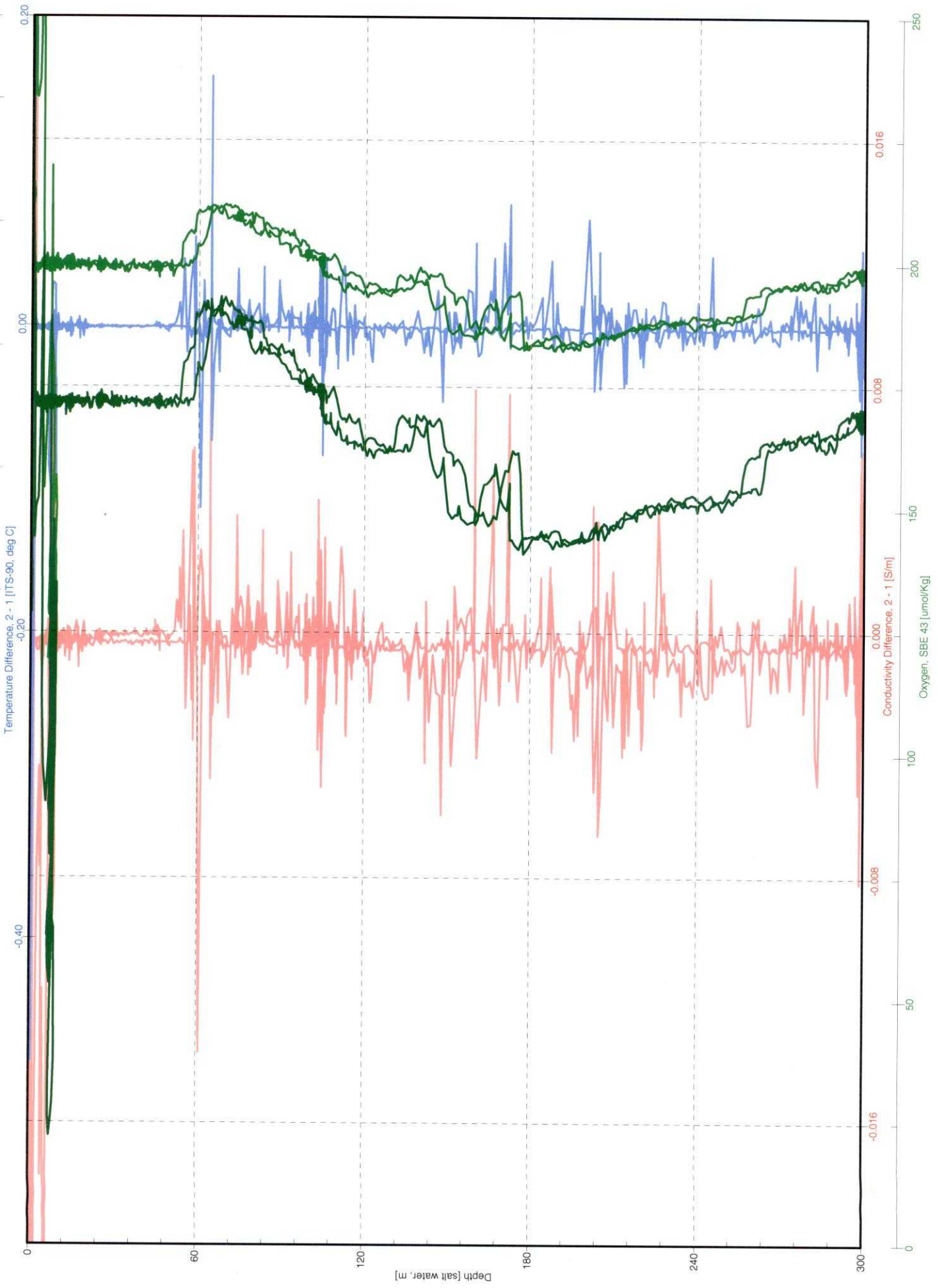
Bottle
Firing
Sequence

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_dis_r_S32_c4

Oxygen, SBE 43, 2 [umol/Kg]

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



0.20
0.00
-0.20
-0.40
0.000
-0.008
0.016

Depth [salt water, m]

Oxygen, SBE 43 [umol/Kg]

Conductivity Difference, 2 - 1 [S/m]

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

km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.4	Operator ipdyke
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487_____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 32	Cast: 5
Latitude start: 24° 0.867' N end:	Longitude start: 157° 53.759' W end:
Depth of water: 4327 meters	Date (GMT): (220) 08/07/2008
Pressure on Deck	Time: 23:50:00
Begin: 0.65 dbar End: 0.55	Start Log: 23:52:00 In Water: 23:57:40
Max cast pressure: 80 dbar	Out of Water: 00:19:19

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	00:08:32	00:09:45	24.9	25	
2		00:10:00	25.7		
3		00:10:15	25.0		
4		00:10:30	25.3		
5		00:10:45	25.7		
6		00:11:00	25.1		
7		00:11:15	25.7		
8		00:11:30	25.7		
9		00:11:45	25.9		
10		00:12:00	25.8		
11		00:12:15	24.8		
12		00:12:30	25.7		
13		00:12:45	25.4		
14		00:13:00	25.4		
15		00:13:15	26.1		
16		00:13:30	24.3		
17		00:13:45	25.4		
18		00:14:00	25.2		
19		00:14:15	25.3		
20		00:14:30	26.1		
21		00:14:45	25.2		
22		00:15:00	24.4		
23		00:15:15	25.5		
24		00:15:30	25.3		

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

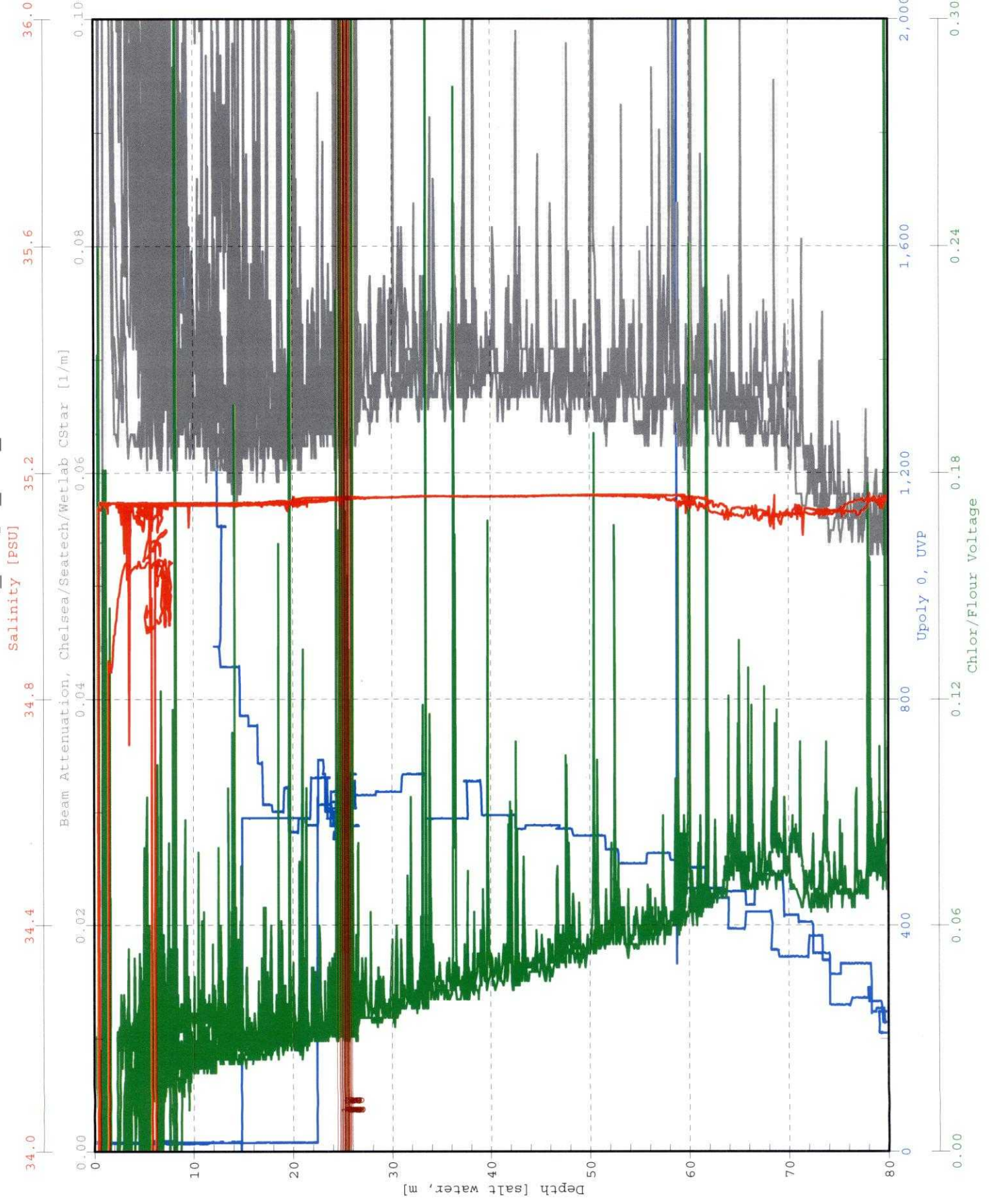
Station Number: 32
 Cast Number: ~~4~~ 5
 Operators: AF, SP, ZK, LG

Date: 8/7/2008 (220) (GMT)
 Time: _____ (GMT)
 Position: _____

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:

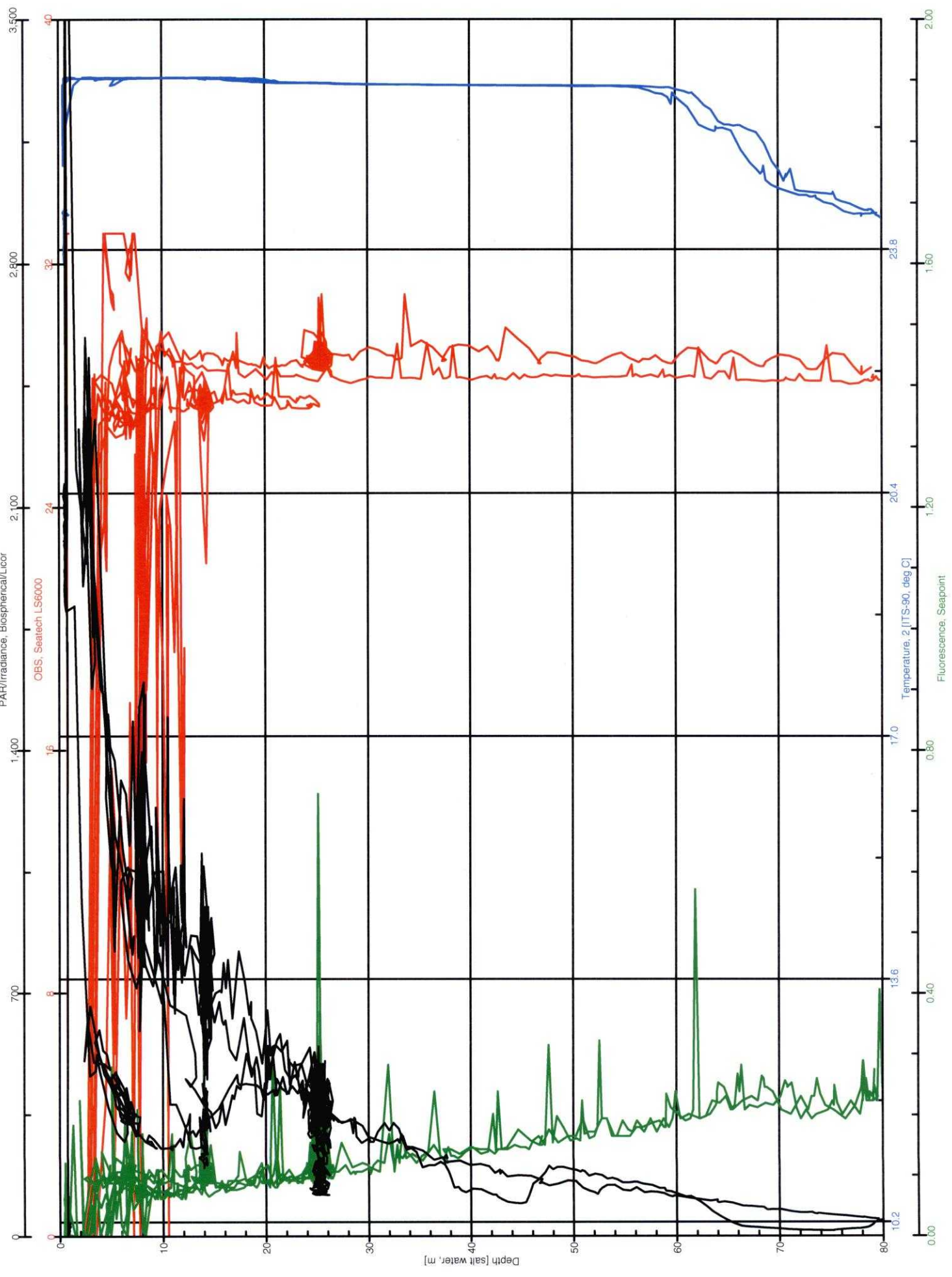
KM0814_dis_r_l_S32_c5



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_d1c_--S32_c5

PAR/radiance, Biospherical/Licor



OBS: Seatech LS6000

Temperature, 2 [ITS-90, deg C]

Fluorescence, Seapoint

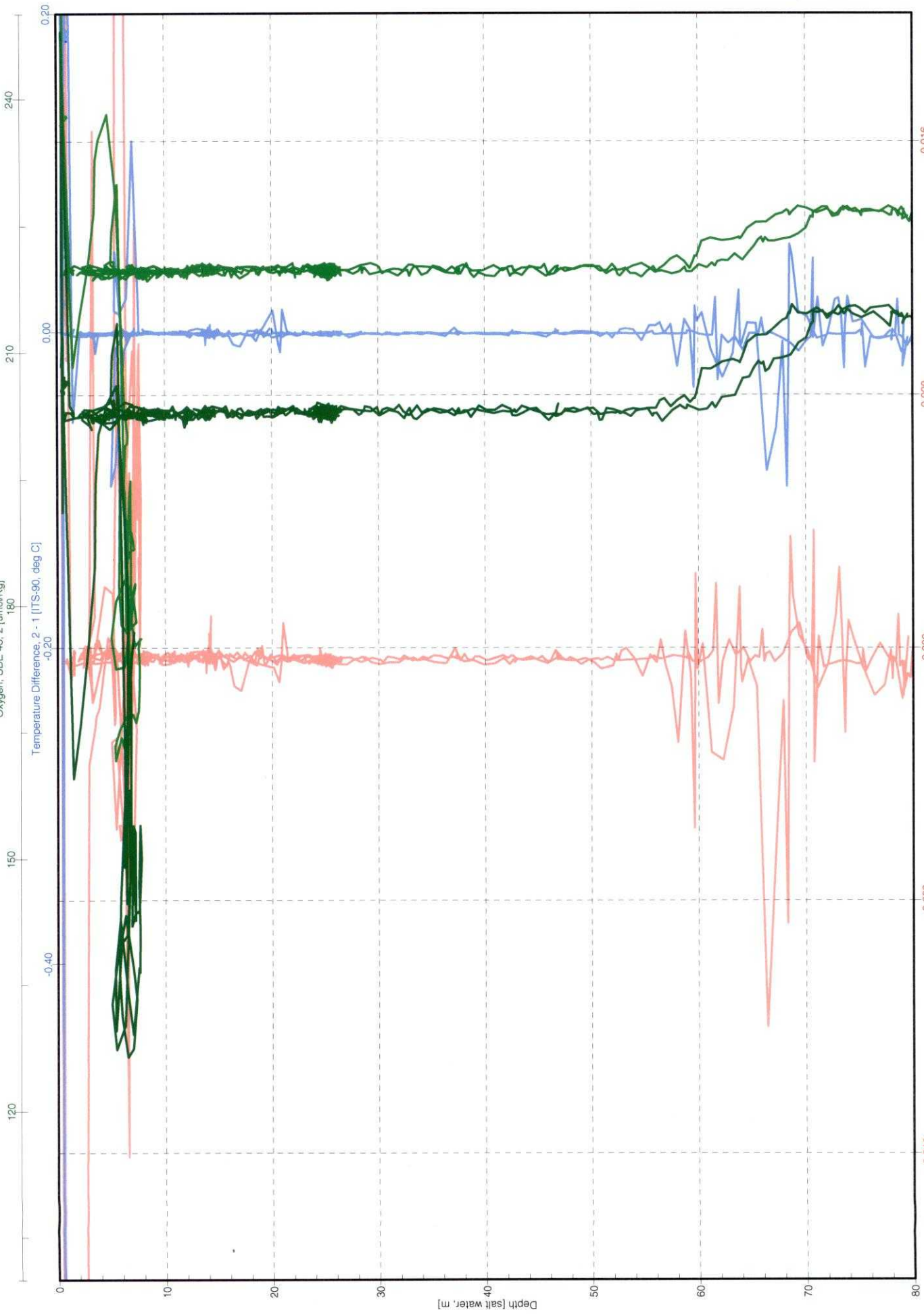
KM0814_dis_v_S32_c5

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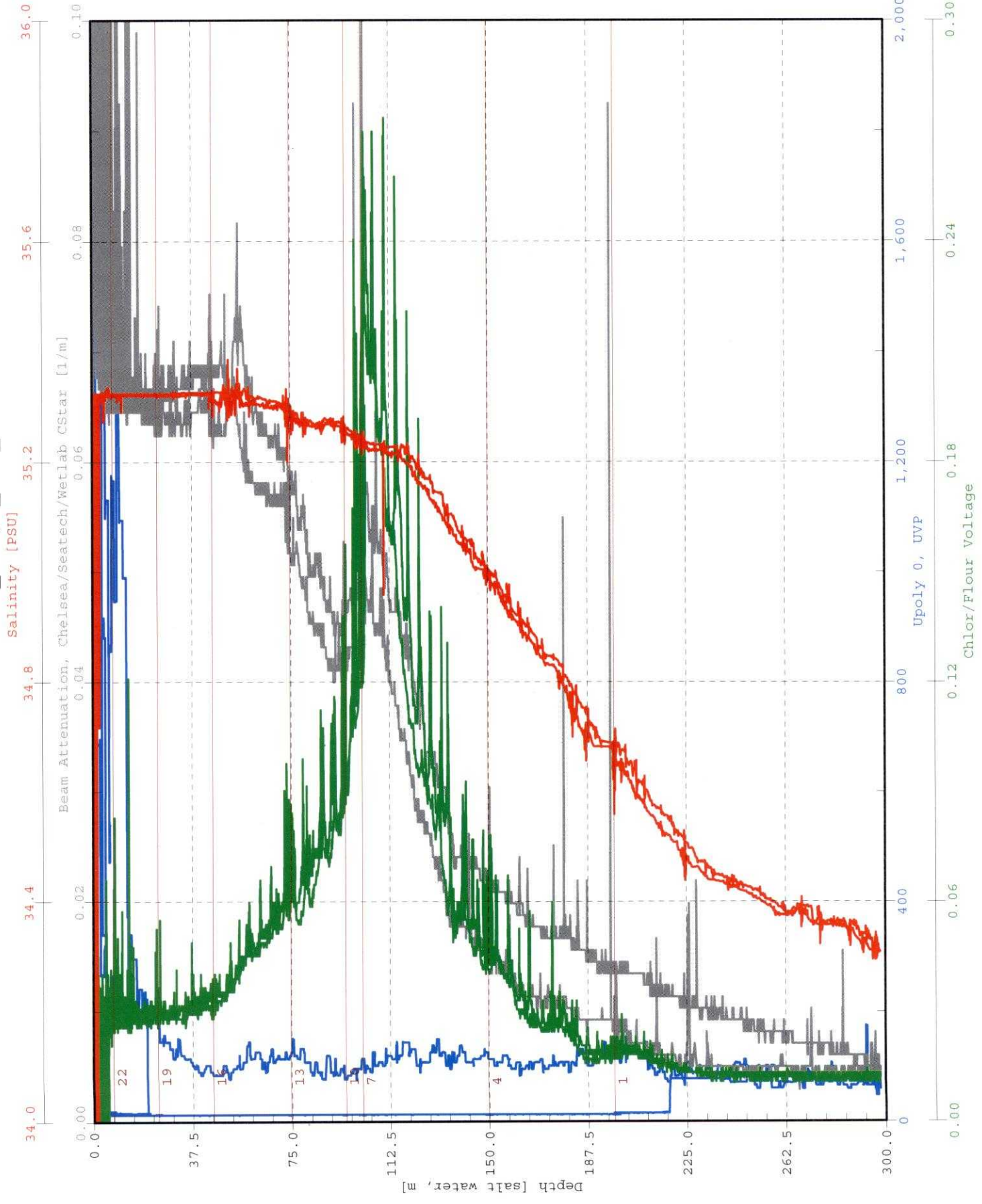
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 33	Cast: 1
Latitude start: 24° 30.00' N	Longitude start: 157° 52.835' W
end:	end:
Depth of water: 4622 meters	Date (GMT) (221) 08/08/2008
Pressure on Deck	Time: 03:13:00Z
Begin: 0.60 dbar	Start Log: 03:27:00
End: .406-.501	In Water: 03:32:23
Max cast pressure: 300 dbar	Out of Water: (221) 04:08:18Z

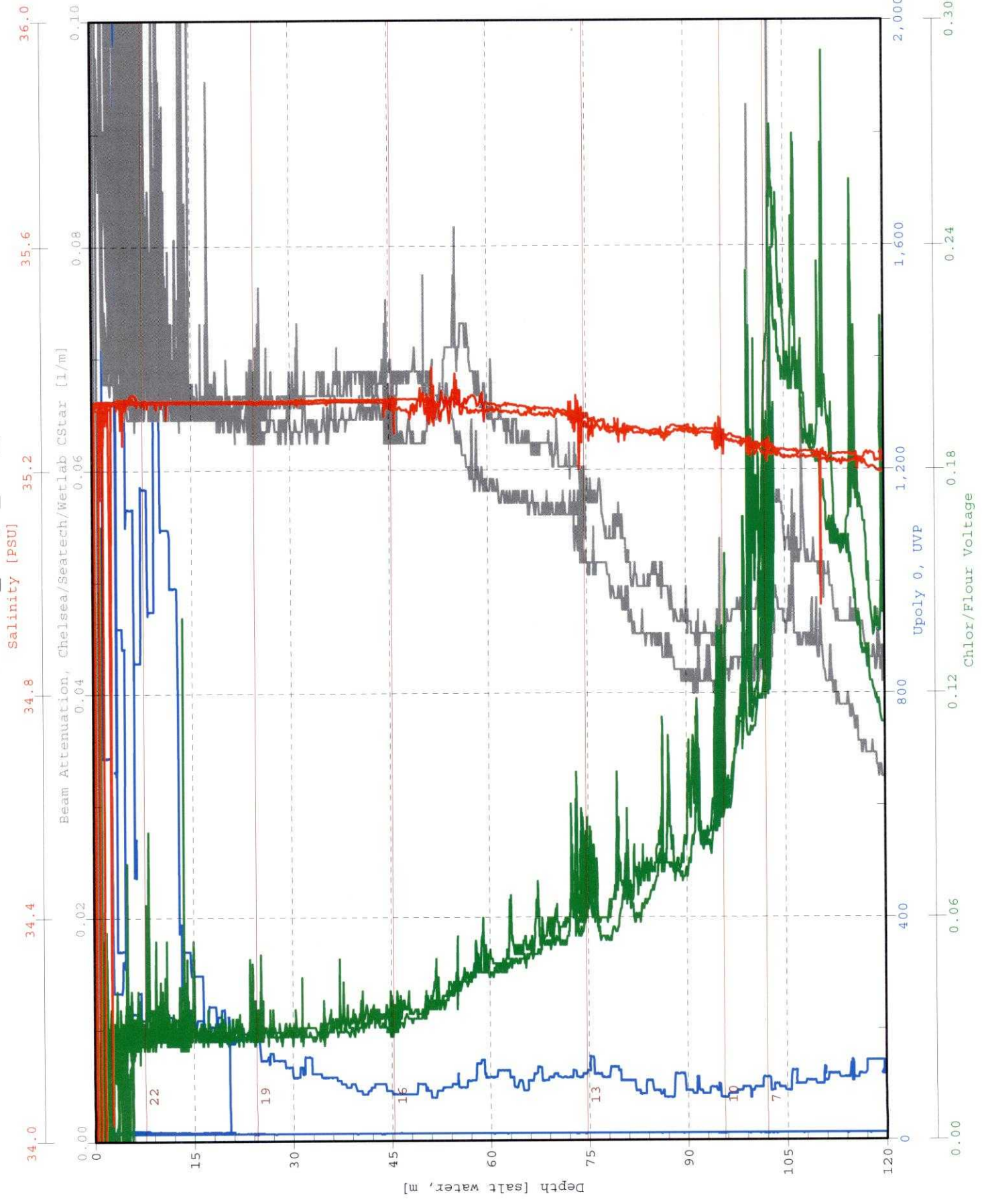
Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	(221) 03:51:28	03:51:50z	199.4	200	
2					
3					
4	(221) 03:53:50	03:54:10z	150.8	150	
5					
6					
7	03:56:33	03:56:50	102.7	101 103	(101 - just dropped steeply off - raised the package slightly)
8					
9					
10	(221) 03:57:43	03:58:10	95.7	95	
11					
12					
13	(221) 03:59:20	03:59:30z	75	75	
14					
15					
16	(221) 04:00:48	04:01:10	45.4	45	
17					
18					
19	(221) 04:02:03	04:02:30	24.7	25	
20					
21					
22		04:05:10	7.6 db	5 db	(3m of wire out)
23	(221) 04:10:56z				CTD on deck
24					

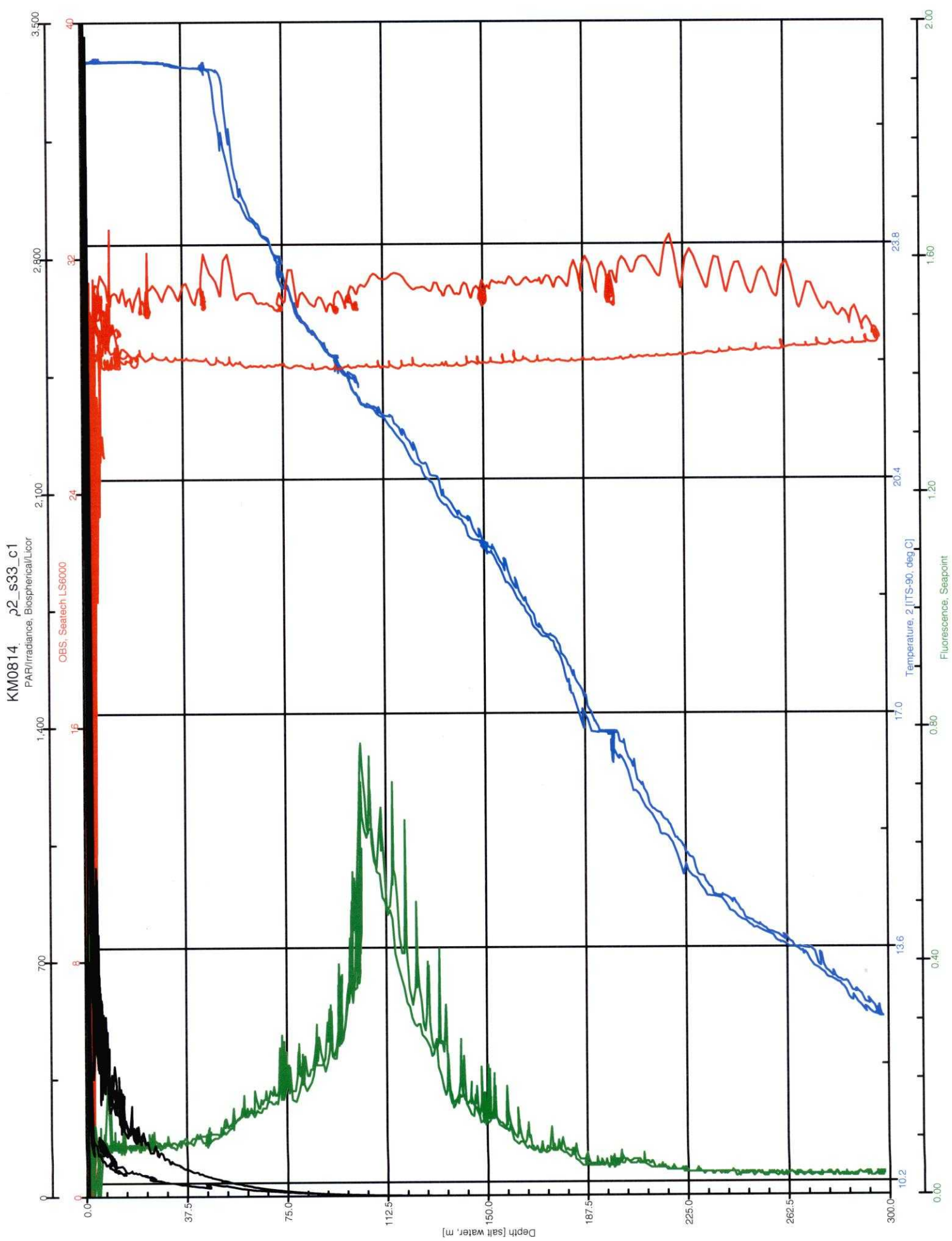
KM0814_c_p1_S33_c1



Bottle
Firing
Sequence
1 4 7
10 13 16
19 22

KM0814_c1_p1_S33_c1





KM0814_03_S33_c1

Oxygen, SBE 43, 2 [umol/Kg]

180

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

-0.20

240

210

150

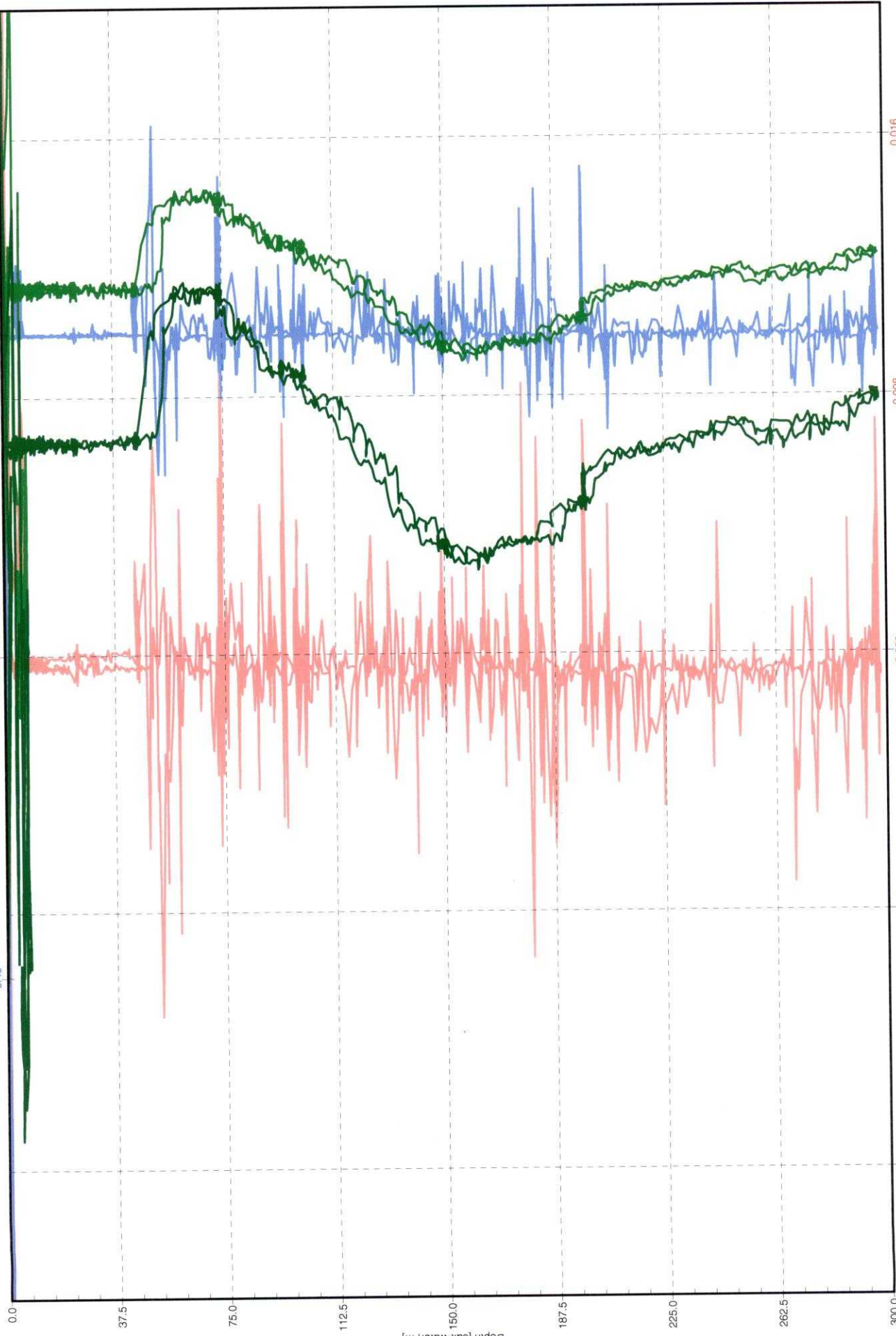
120

0.20

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-0.40

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km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
	12L	26.6	CP

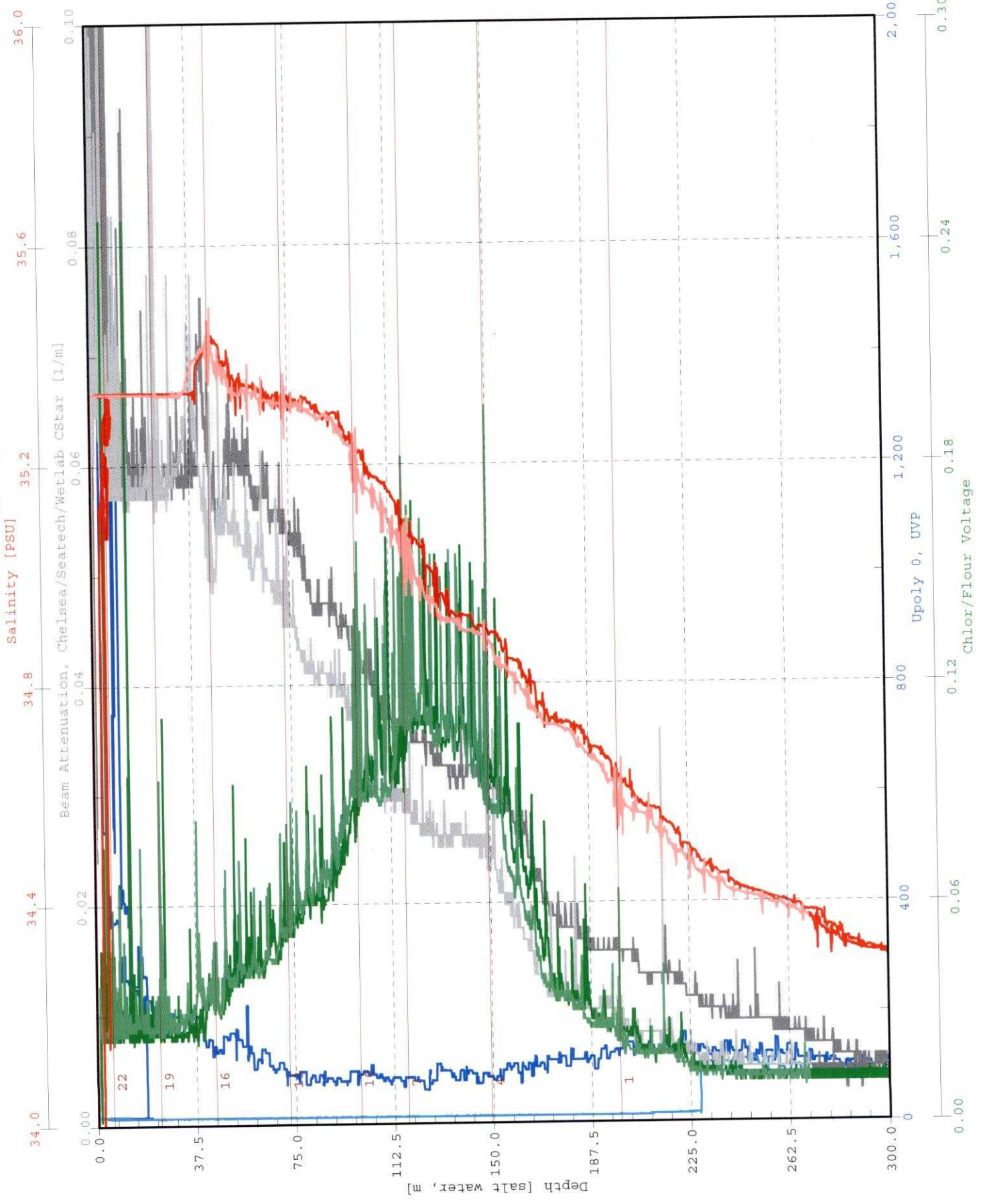
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487___
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 34	Cast: 1
Latitude start: 24° 38.917'N end: 24° 38.910'N	Longitude start: 157 47.131'W end: 157 47.136'W
Depth of water: 4645 meters	Date (GMT): (221) 08/08/2008
Pressure on Deck	Time: 05:16:05z
Begin: .853	Start Log: (221) 05:23:00z
End: .453	In Water: 05:25:22z
Max cast pressure: 300 dbar	Out of Water: 05:59:00z

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	(221) 05:43:37	05:43:50	199.5	200	05:28 20z @10m
2					
3					
4	(221) 05:45:20	05:45:30	150.0	150	
5					
6					
7	(221) 05:47:22	05:47:30	118.4	DCM 120	
8					
9					
10	(221) 05:48:50	05:49:05	100.0	DCM - 110 or 20 100dbar	
11					
12					
13	(221) 05:50:18	05:50:30	73.1	75	
14					
15					
16	(221) 05:51:36	05:51:50	45.3	45	
17					
18					
19	(221) 05:52:59	05:53:20	23.7	25	
20					
21					
22	(221) 05:56:40	05:56:50	6.1	5	
23					
24					

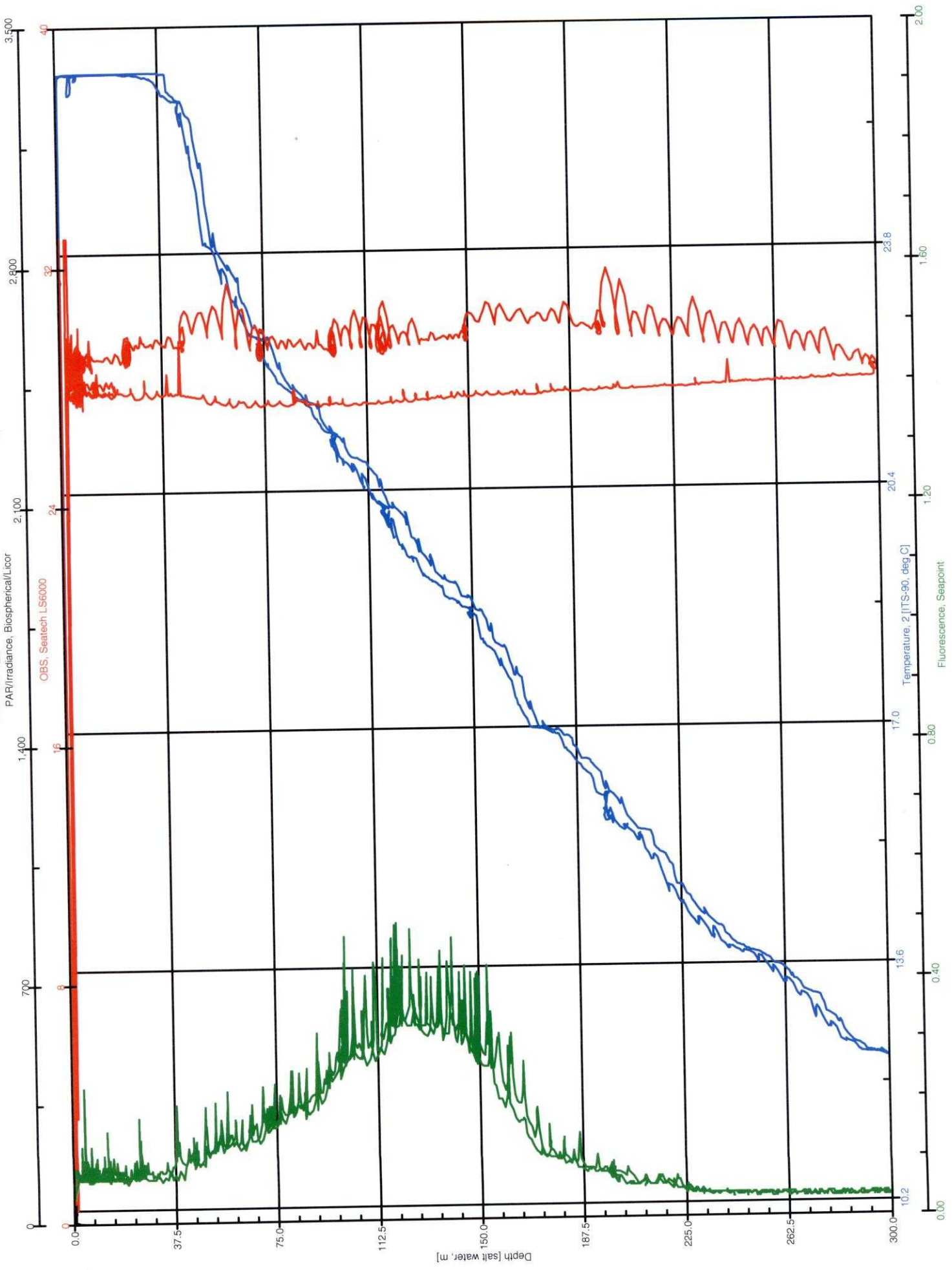
KM0814_di 1_S34_c1



KM0814_c1_s34_c1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



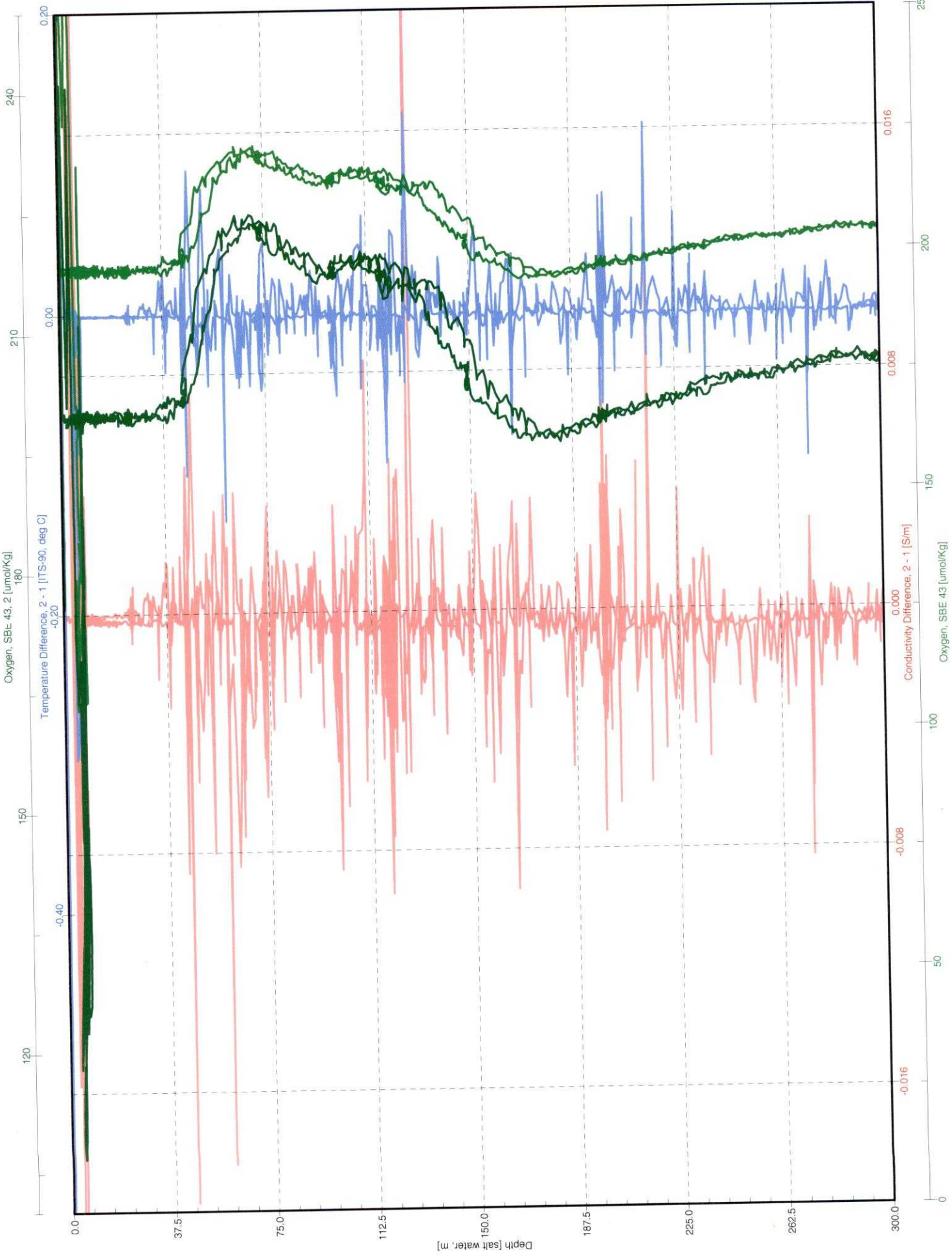
KM0814_1_S34_c1

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
		26.5	Calil

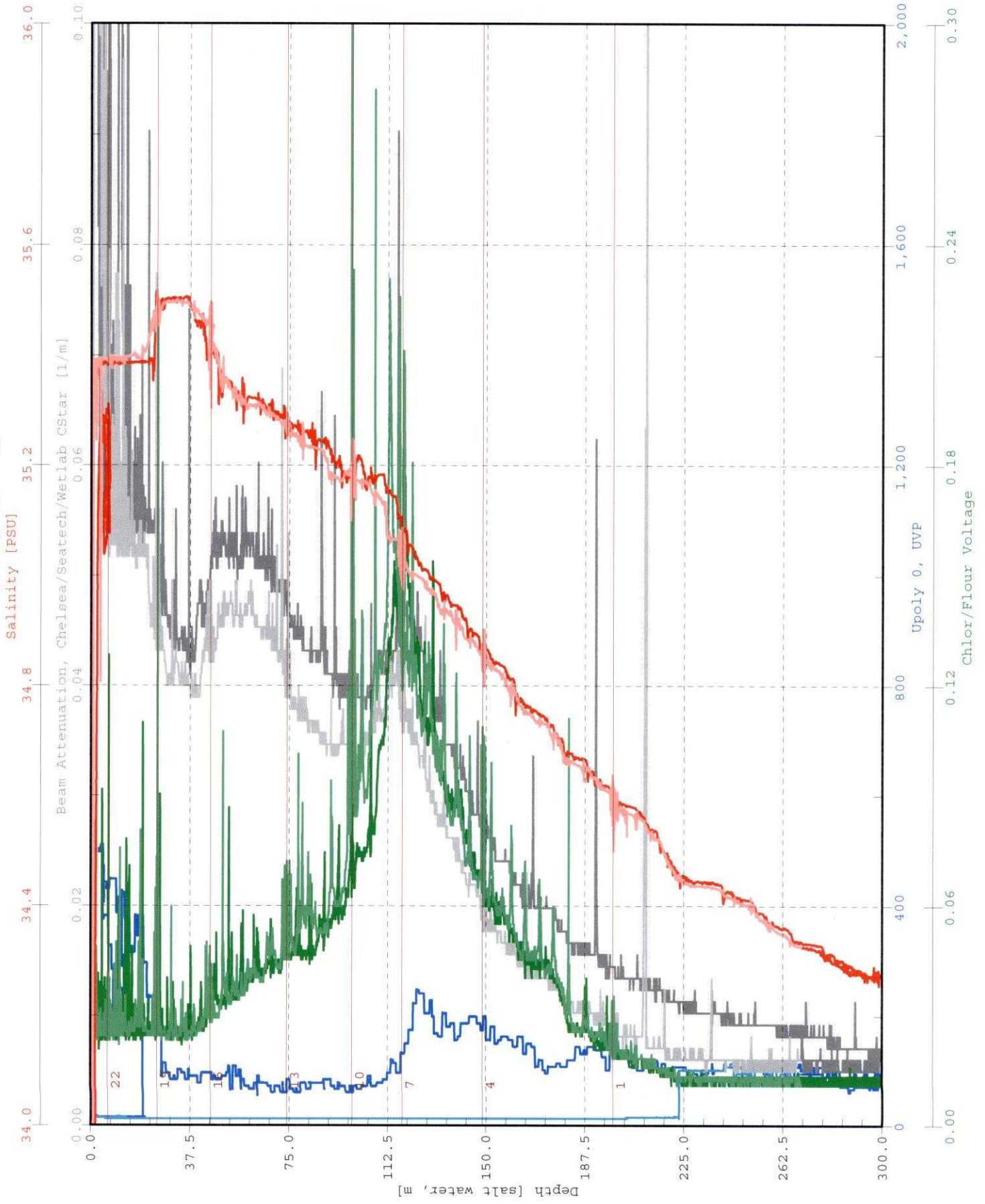
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 ___
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 35	Cast: 1
Latitude start: 24d 47.390'N	Longitude start: 157d 41.168'W
end: 24d 47.394'N	end: 157d 41.031'W
Depth of water: 4729 meters	Date (GMT): 221 08/05/08
Pressure on Deck	Time: 07:12:36
Begin: 0.84	Start Log: 07:13:01
End: 0.43	In Water: 07:16:01
Max cast pressure: 300 dbar	Out of Water: 07:48:27

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	07:31:56	07:32:30	199.76	200	DCM = 118 dbar
2					
3					
4	07:34:20	07:34:40	150.06	150	
5					
6					
7	07:36:10	07:36:30	119.39	DCM	
8					
9					
10	07:37:40	07:38:00	99.78	100	
11					
12					
13	07:39:04	07:39:25	74.52	75	
14					
15					
16	07:40:29	07:40:50	46.14	45	
17					
18					
19	07:42:02	07:42:20	25.69	25	
20					
21					
22	07:45:48	07:46:05	6.66	5	
23					
24					

KM0814_di_1_S35_c1

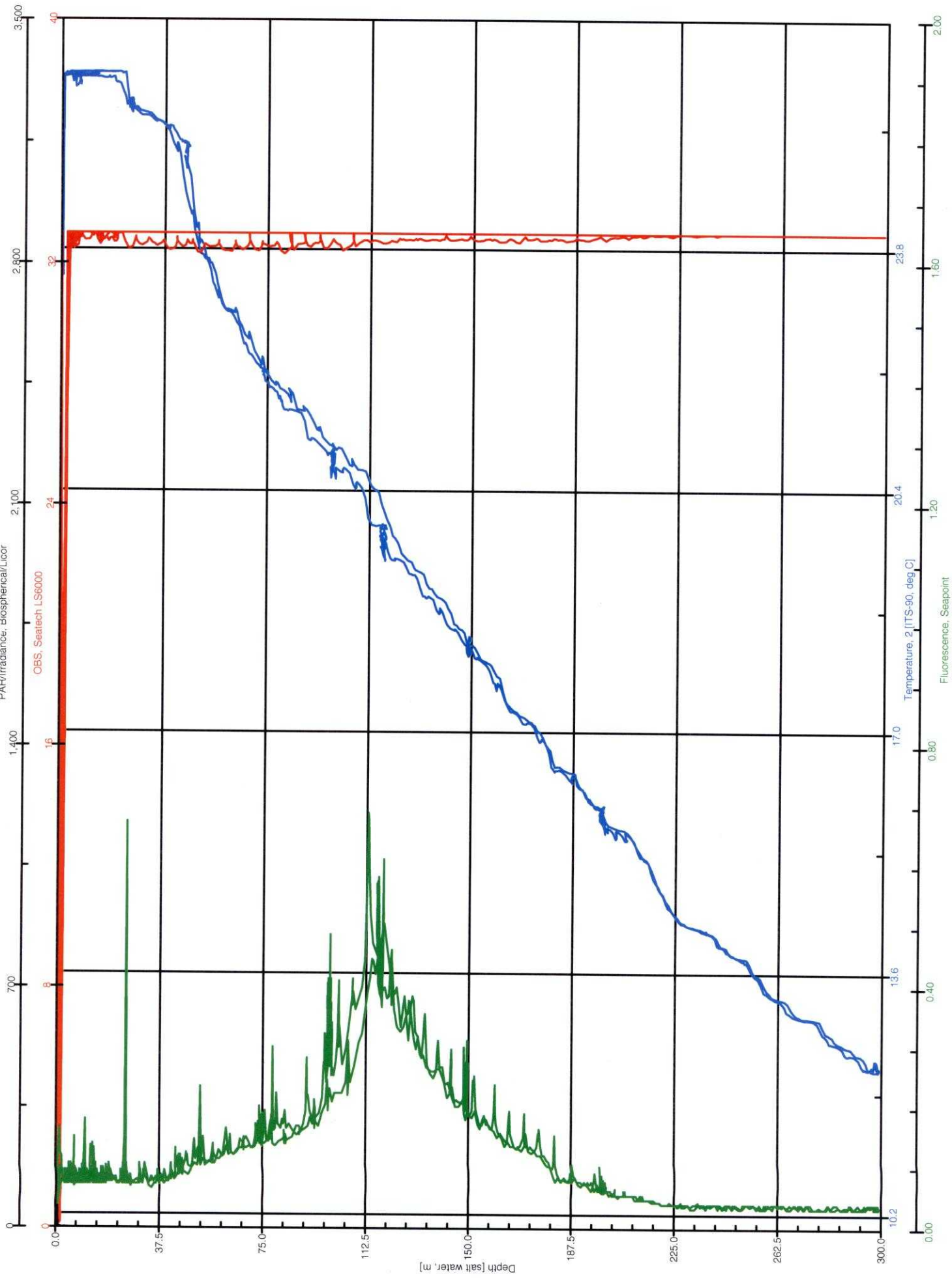


Bottle
Firing
Sequence
1 4 7
10 13 16
19 22

KM0814_x_2_s35_c1

PAR/Irradiance, diospherical/Licor

OBS. Seatech LS6000



KM0814_1_S35_c1

Oxygen, SBE 43, 2 [umol/Kg]

180

Temperature Difference, 2 - 1 [(ITS-90, deg C)

-0.20

240

0.20

210

0.00

150

-0.40

120

Depth [salt water, m]

37.5

75.0

112.5

150.0

187.5

225.0

262.5

300.0

Conductivity Difference, 2 - 1 [S/m]

0.000

-0.008

-0.016

Oxygen, SBE 43 [umol/Kg]

0.008

0.016

0

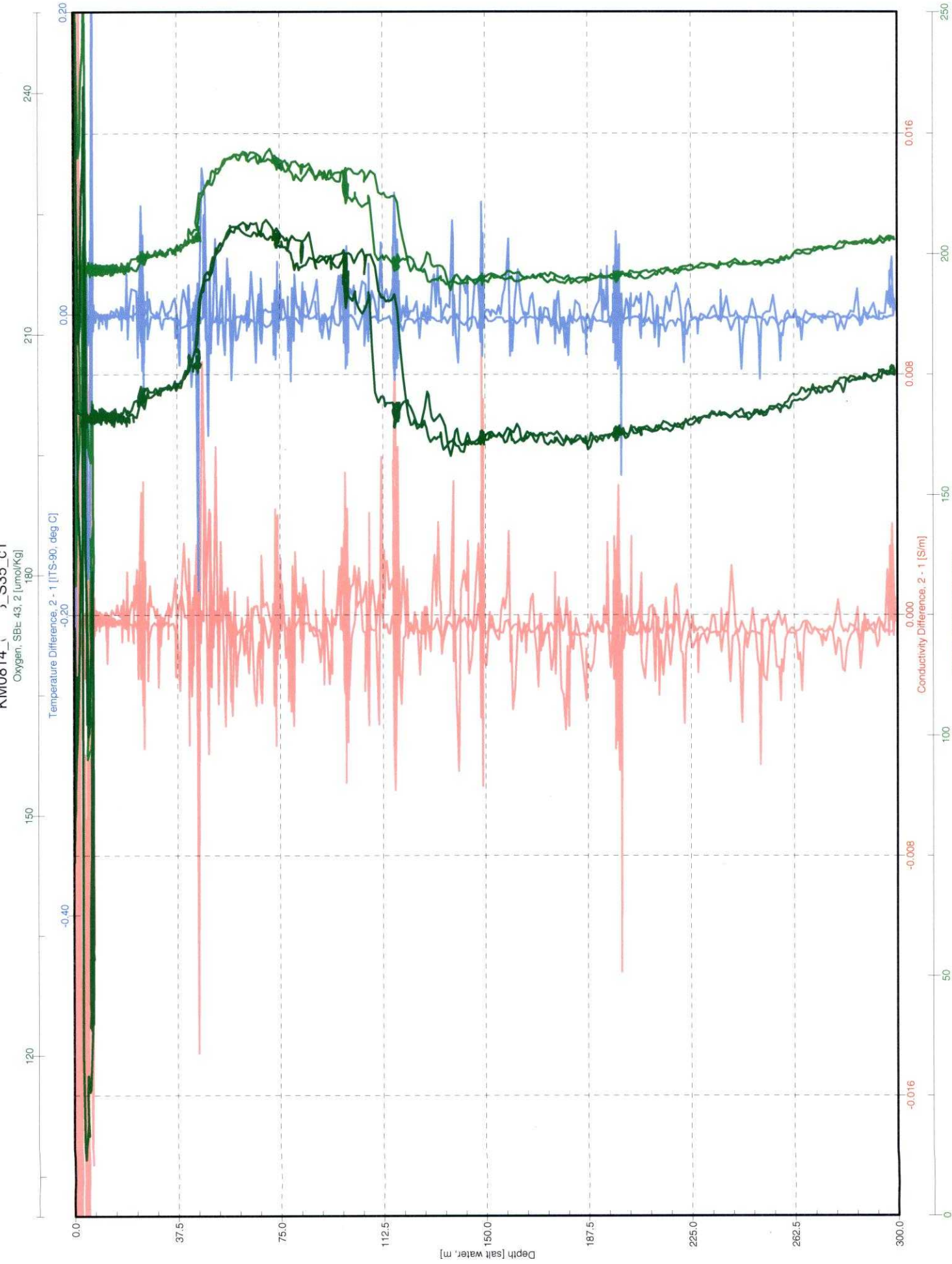
50

100

150

200

250



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 25.9	Operator calil
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 36	Cast: 1
Latitude start: 25d 5.013'N	Longitude start: 157d 30.009'W
end:	end:
Depth of water: 4772 meters	Date (GMT): 221 08/08/2008
Pressure on Deck	Time: 10:10:02
Begin: 0.86 -0.68	Start Log: 10:07:33
End:	In Water: 10:10:02
Max cast pressure: 80 dbar	Out of Water:

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	10:20:47	10:21:40	44.95	45	
2		24:20	45.39	45	
3		25:40	45.31	45	
4		10:22:00	46.18	45	
5		27:20	45.89	45	
6		24:40	44.97	45	
7		10:22:20		45	
8		25:20	45.54	45	
9		25:00	44.97	45	
10		10:22:40	45.00	45	
11		26:00	44.75	45	
12		26:20	45.83	45	
13		10:23:00	44.72	45	
14		26:40	45.65	45	
15		27:00	45.75	45	
16		10:23:20	45.90	45	
17		28:40	44.35	45	
18		27:40	46.08	45	
19		10:23:40	45.38	45	
20		28:20	44.53	45	
21		28:00	45.47	45	
22		10:24:00	44.26	45	
23		29:00	45.76	45	
24		29:20	45.85	45	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: UVP Gridding transect

Station Number: 36 Date: 8/8/2008 (221) (GMT)

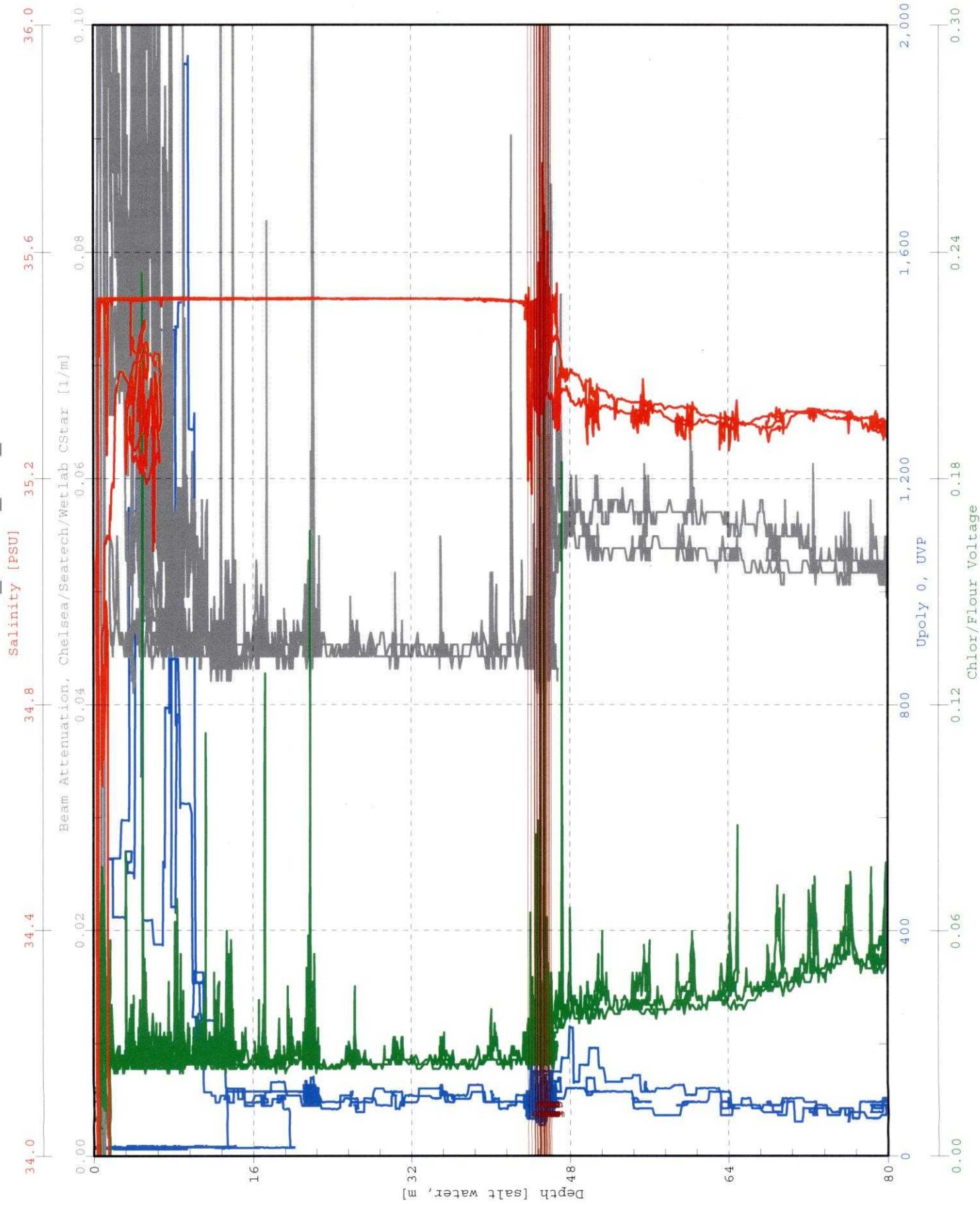
Cast Number: 1 Time: (GMT)

Operators: AF, SP, LG, ZK Position:

Target Depth ~~500~~
80

Rosette Position	Desired Depth						Kolber	
Rosette Position	Desired Depth	DEPTH FIRED					Enrichment	
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	

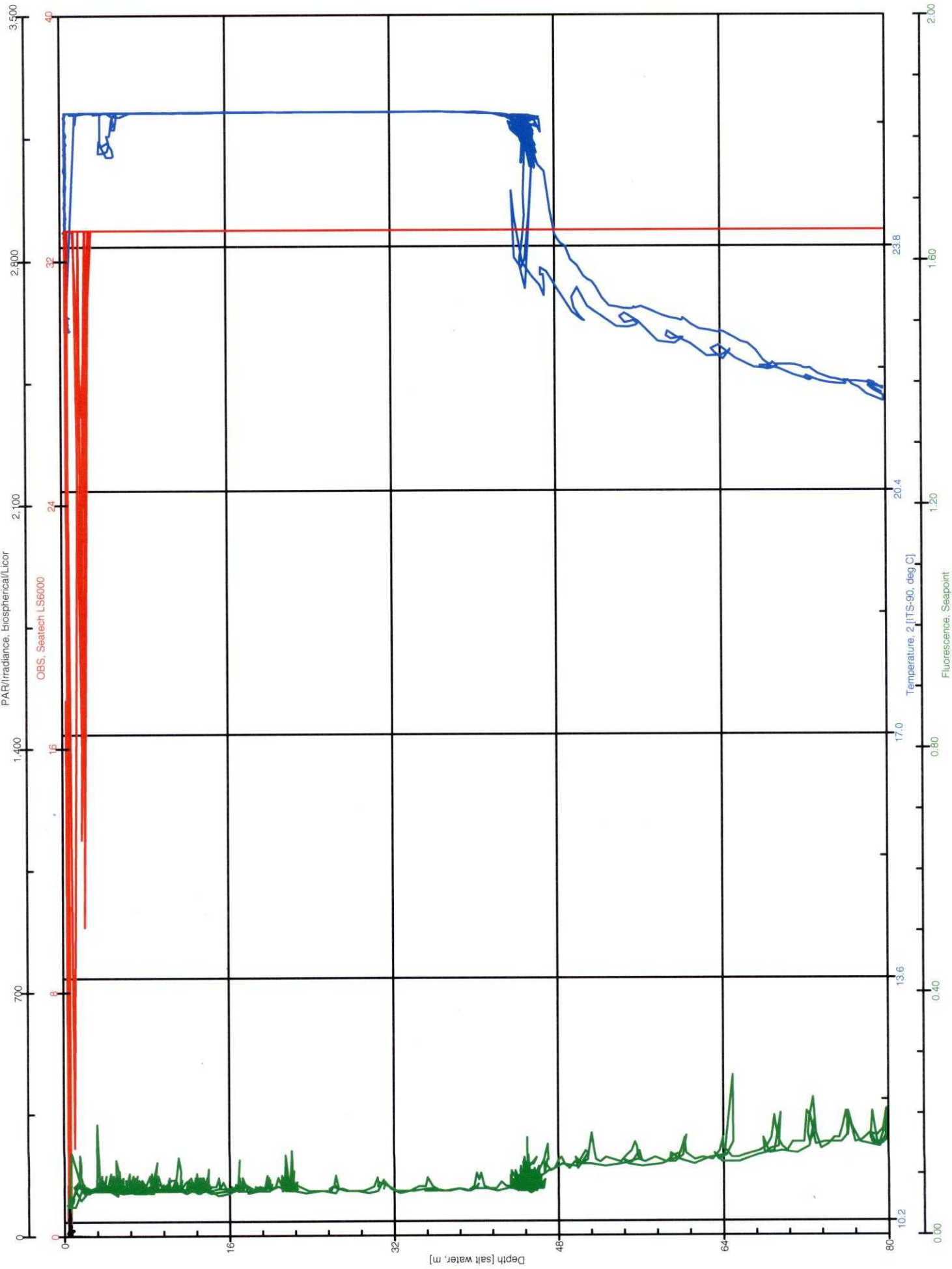
KM0814_di_1_S36_C1



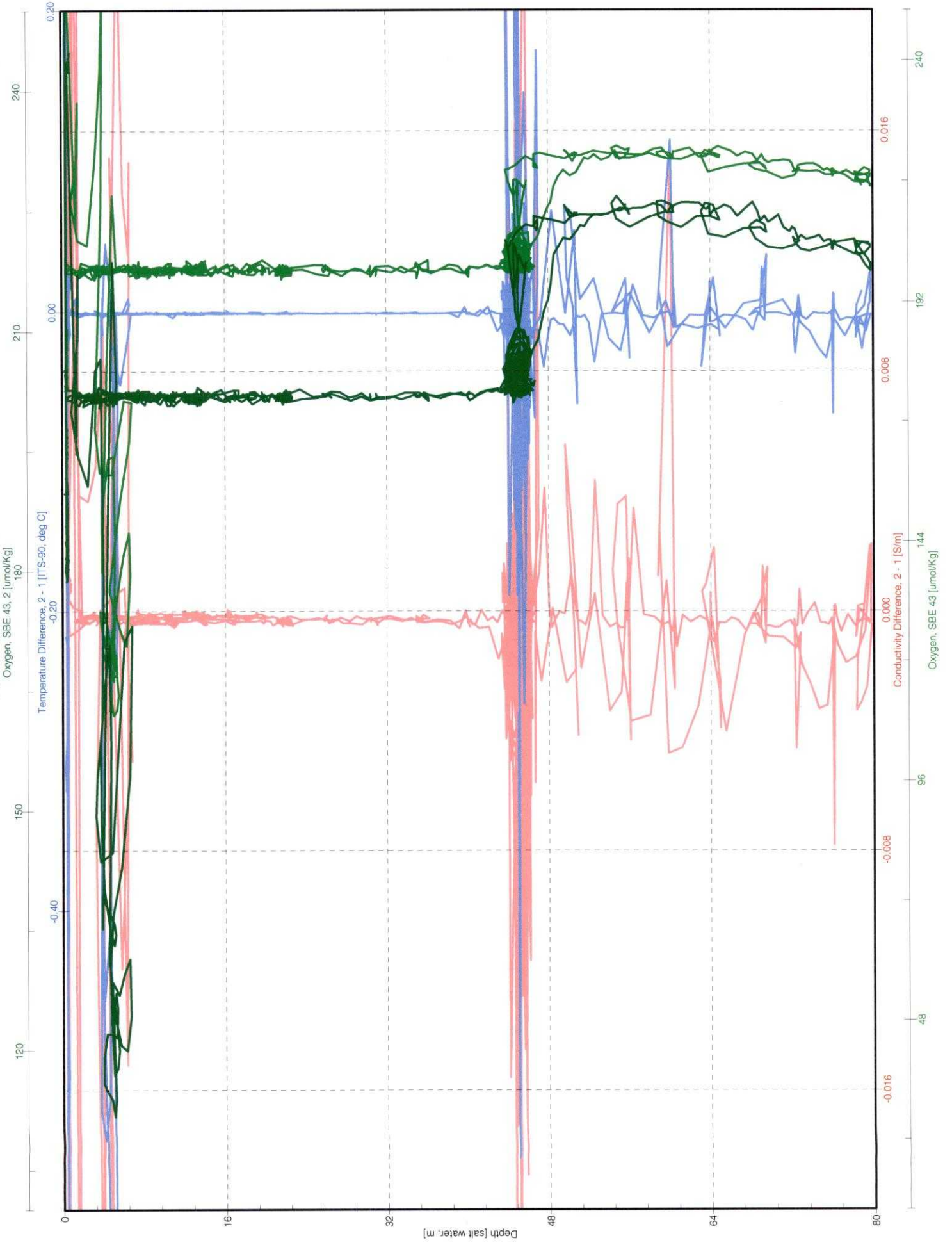
Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_d _S36_c1

PAR/Irradiance, Biospherical/Licor



KM0814_di_S36_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 25.9	Operator Calil
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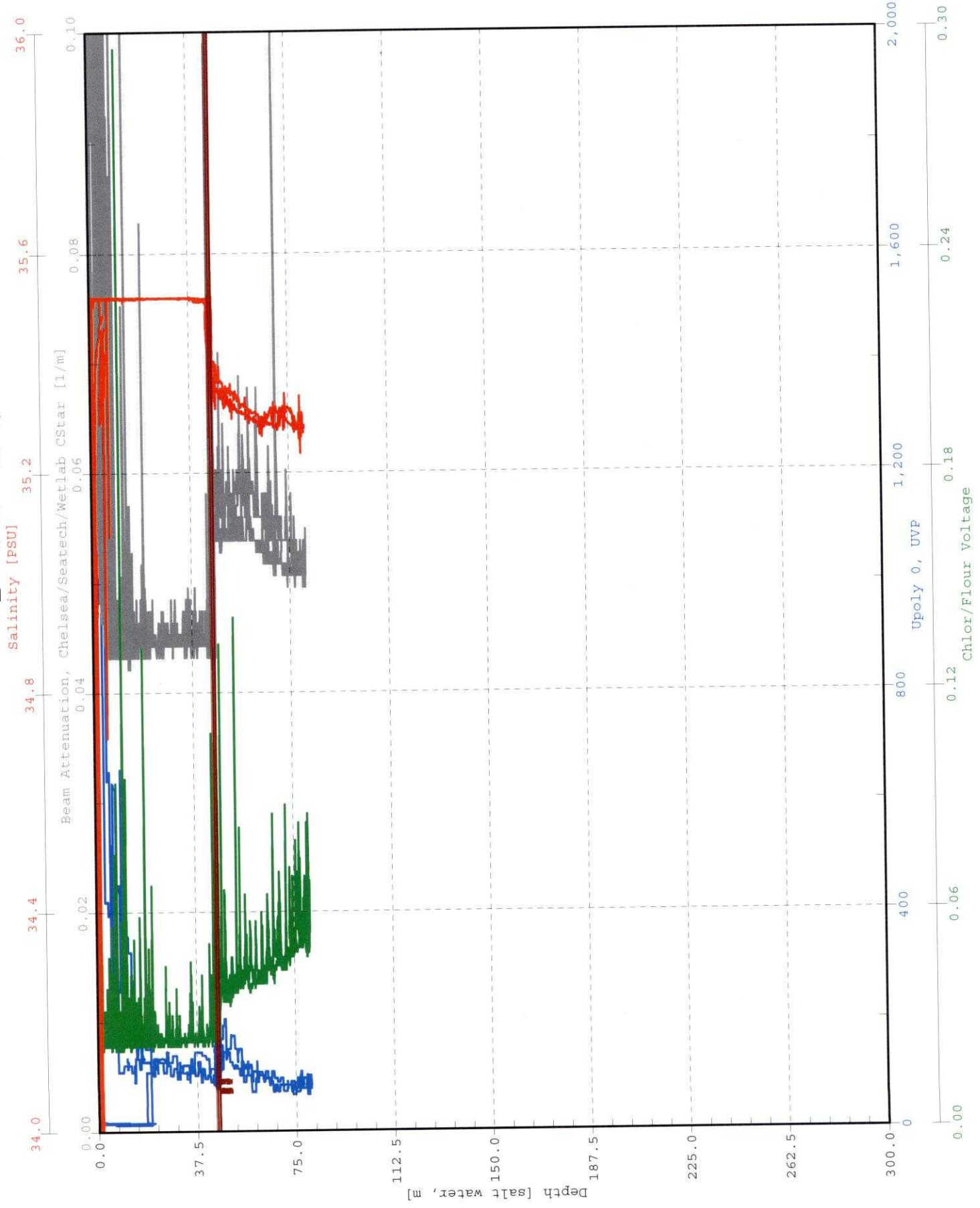
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487_____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 36	Cast: 2
Latitude start: 29d 5.012' N end:	Longitude start: 157d 30.010' W end:
Depth of water: 4770 meters	Date (GMT): 221 08/08/2008
Pressure on Deck	Time: 11:05:45Z
Begin: 0.89	Start Log: 11:09:30
End: 2.04	In Water: 11:11:39
Max cast pressure: 80 dbar	Out of Water: 11:35:51

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	11:22:03	22:20	45.51	45	
2		22:40	46.13	45	
3		23:00	46.46	45	
4		23:20	46.05	45	
5		23:40	45.11	45	
6		24:00	45.63	45	
7		24:20	46.15	45	
8		24:40	44.51	45	
9		25:00	45.88	45	
10		25:20	45.08	45	
11		25:40	45.32	45	
12		26:00	45.65	45	
13		26:20	45.46	45	
14		26:40	45.94	45	
15		27:00	45.22	45	
16		27:20	46.03	45	
17		27:40	45.39	45	
18		28:00	45.95	45	
19		28:20	45.63	45	
20		28:40	44.50	45	
21		29:00	45.92	45	
22		29:20	45.63	45	
23		29:40	45.73	45	
24		30:00	45.69	45	

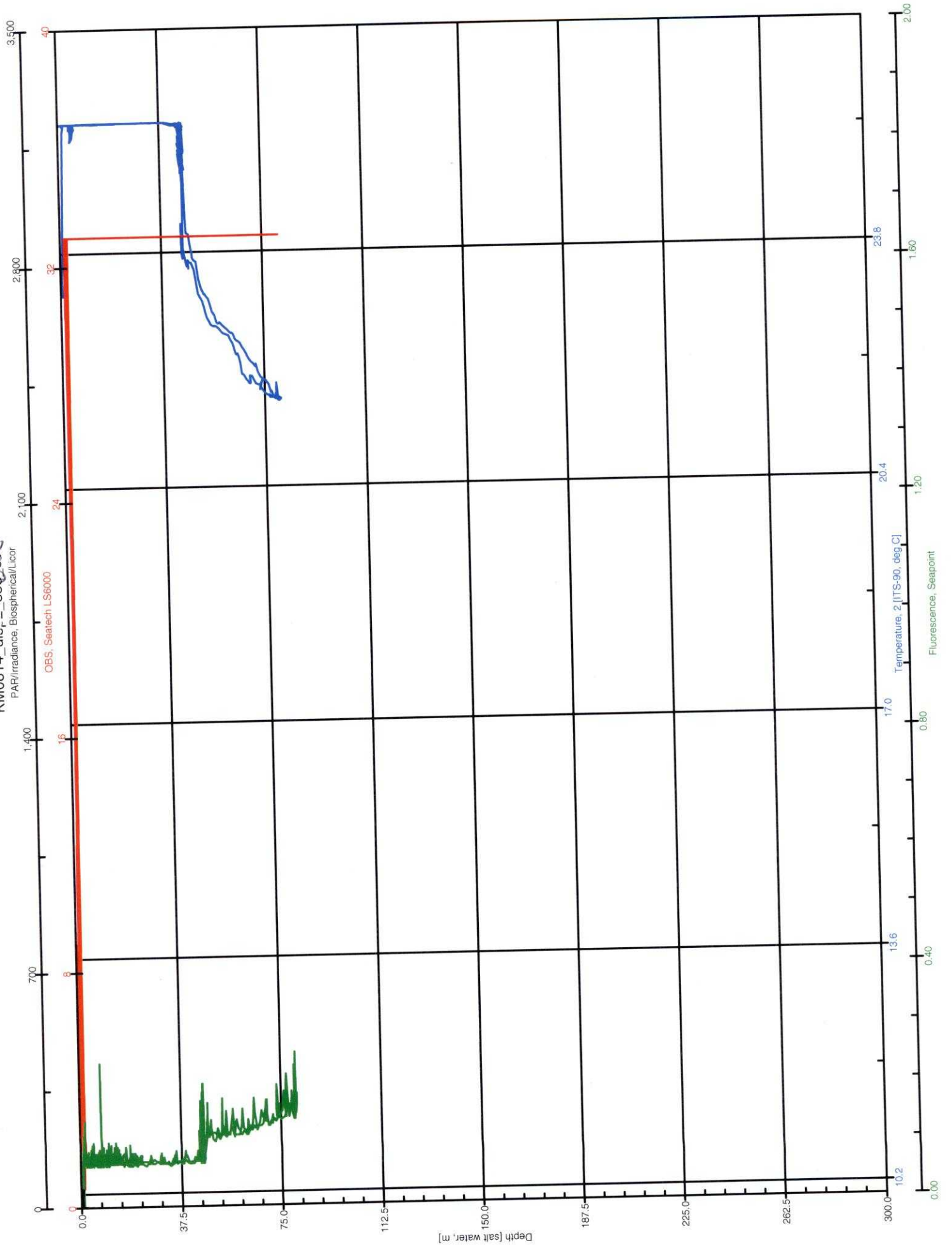
KM0814_disr1_S36_CD 536C2



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

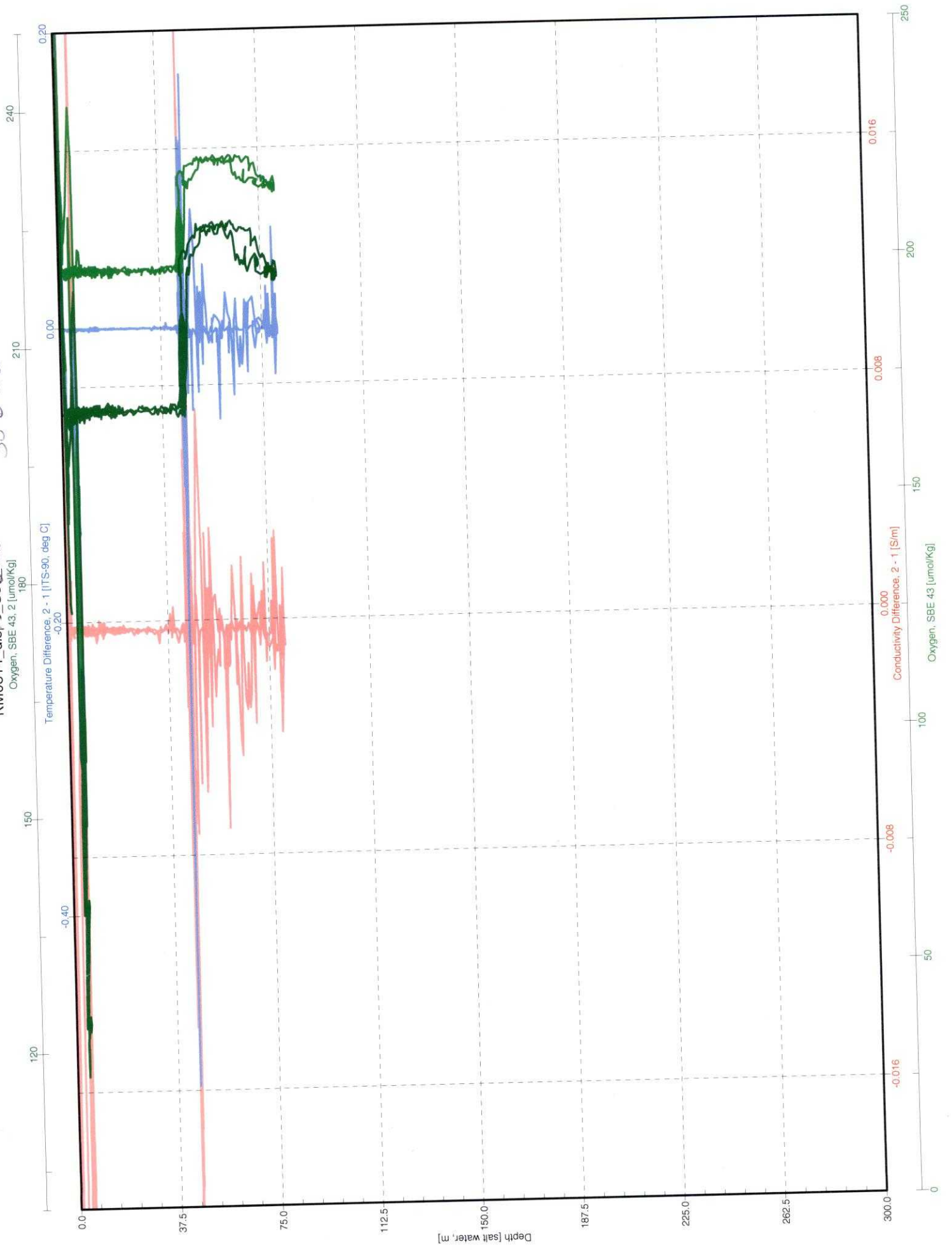
536C2

KM0814_dis_r_s35.cr
PAR/Irradiance, Biospherical/Licor



KM0814_dis_--S35.c12

S36C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		25.9	Calil

Station: 36	Cast: 3
Latitude start: 25d 5.01'N	Longitude start: 157d 30.00'W
end:	end:
Depth of water: 4771 meters	Date (GMT): 221 08/08/08
Pressure on Deck	Time: 12:06:09Z
Begin: 0.86	Start Log: 12:08:09Z
End: 0.37	In Water: 12:10:19Z
Max cast pressure: 500 dbar	Out of Water: 12:55:03

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

Time-GMT	Comments

Trip/Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	12:27:47	12:28:10	500.85	500	
2		12:28:30	500.40	500	
3		12:28:50	501.26	500	
4	12:33:56	12:34:20	300.82	300	
5		12:34:40	300.57	300	
6		12:35:00	300.51	300	
7		12:35:20	300.59	300	
8	12:38:21	13:38:40	200.55	200	
9		39:00	201.61	200	
10		39:20	201.62	200	
11	12:43:45	12:44:20	44.85	45	
12		44:40	45.13	45	
13		45:00	44.55	45	
14		45:20	44.77	45	
15		45:40	44.75	45	
16		46:00	45.25	45	
17		46:20	44.72	45	
18		46:40	45.08	45	
19		47:00	45.02	45	
20		47:20	45.95	45	
21		47:40	45.37	45	
22		48:00	44.37	45	
23		49:20	45.91	45	
24		49:40	45.31	45	

C-MORE CRUISE LOG

OPEREX

Station Data Sheet: UVP Gridding transect

Station Number: ~~38~~ **36** Date: 8/8/2008 (221) (GMT)

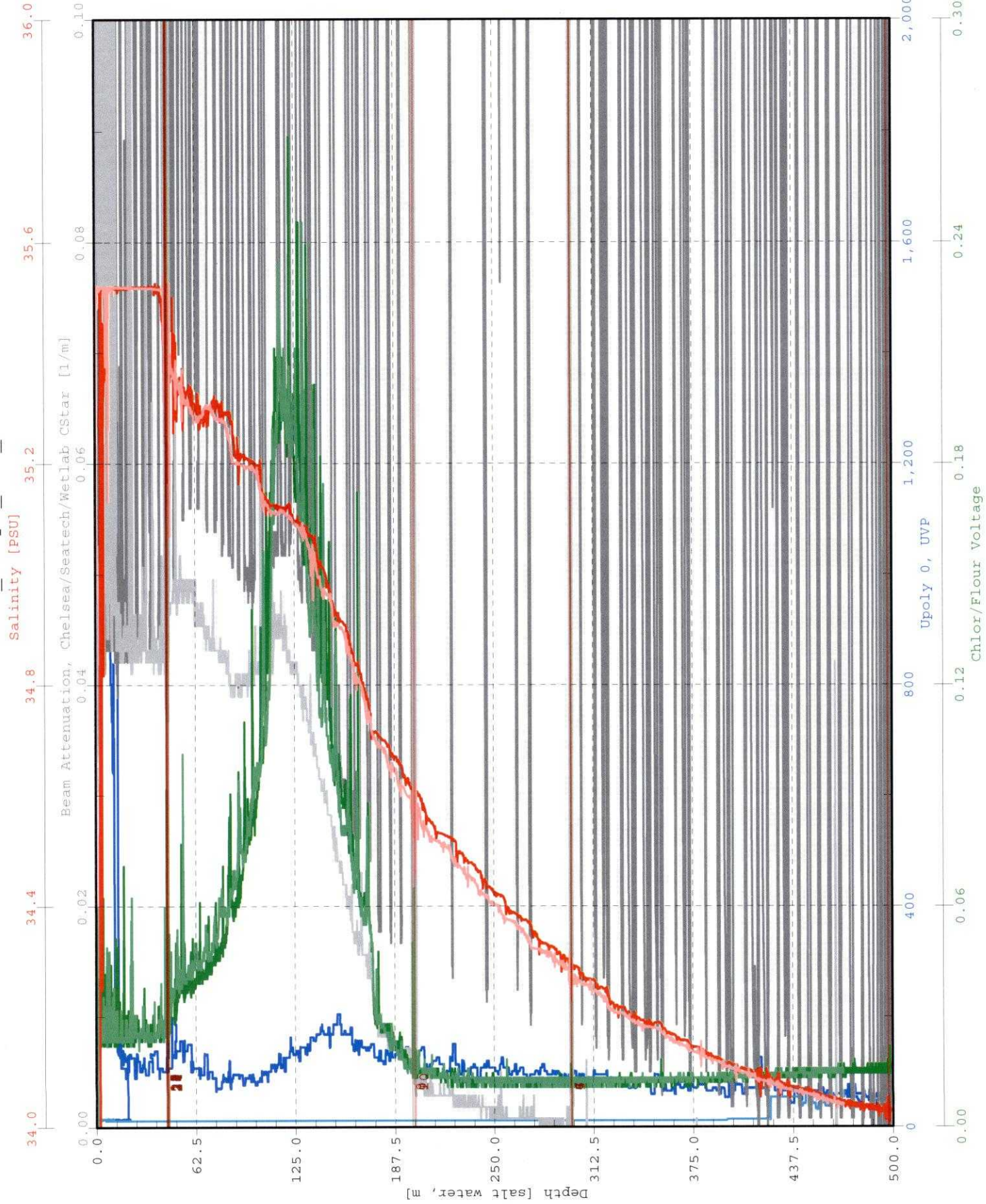
Cast Number: ~~1~~ **3** Time: (GMT)

Operators: AF, SP, LG, ZK Position:

Target Depth ~~500~~

Rosette Position	Desired Depth						Kolber
Rosette Position	Desired Depth	DEPTH FIRED				Enrichment	
1	500					X	
2	500					X	
3	500					X	
4	300					X	
5	300					X	
6	300					X	
7	300					X	
8	200					X	
9	200					X	
10	200					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	

KM0814_dis_r1_S36_c3



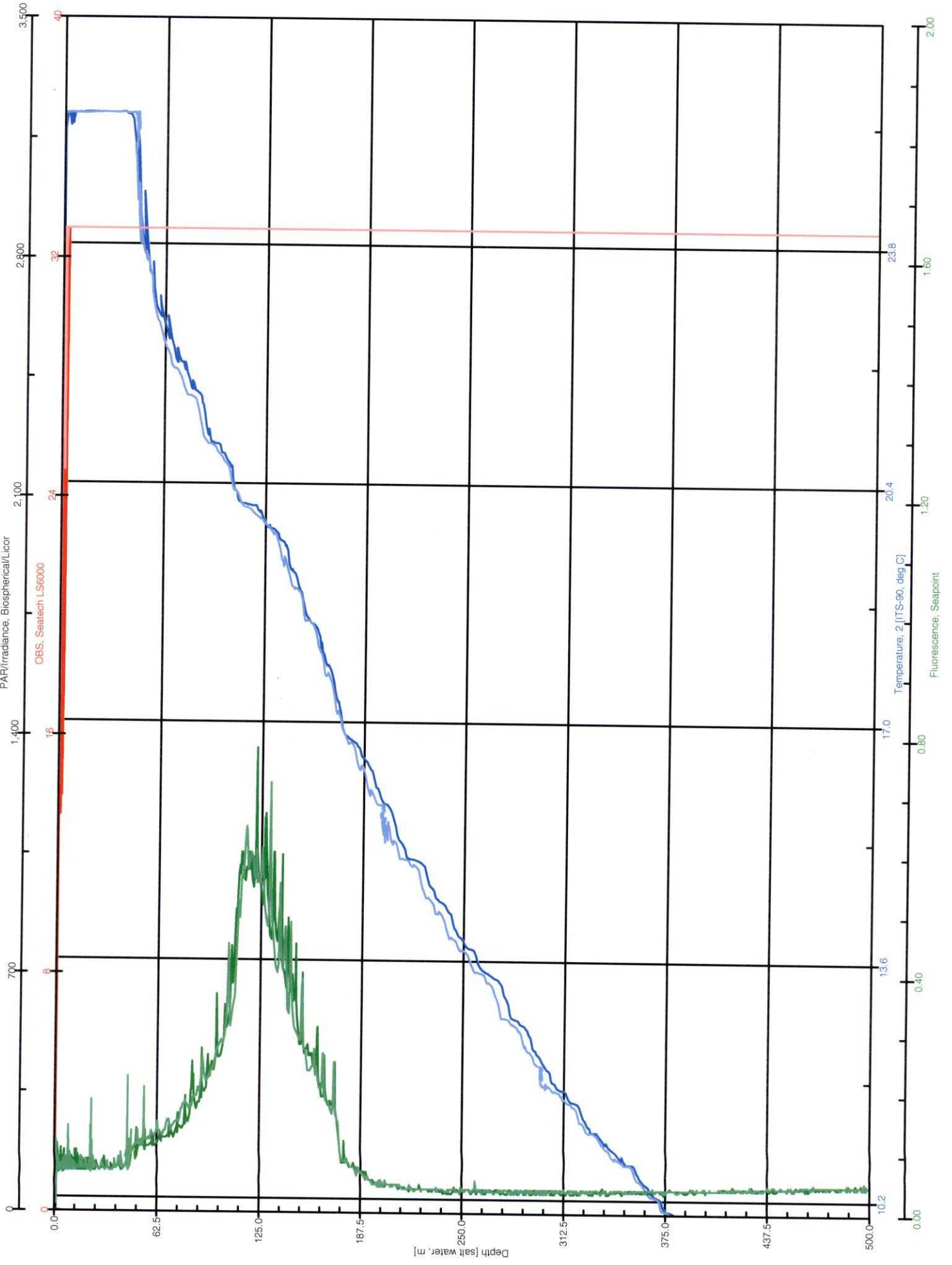
Bottle
Firing
Sequence

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_d1c..._s36_c3

PAR/Irradiance, Biospherical/Libor

OBS: Seatech LS6000



KM0814_dis, _S36_c3

Oxygen, SBE 43, 2 [umol/Kg]

180

Temperature Difference, 2 - 1 [(TS-90, deg C)]

-0.20

0.00

0.20

0.000

Conductivity Difference, 2 - 1 [S/m]

0.008

0.016

0.000

Oxygen, SBE 43 [umol/Kg]

-0.008

-0.016

240

210

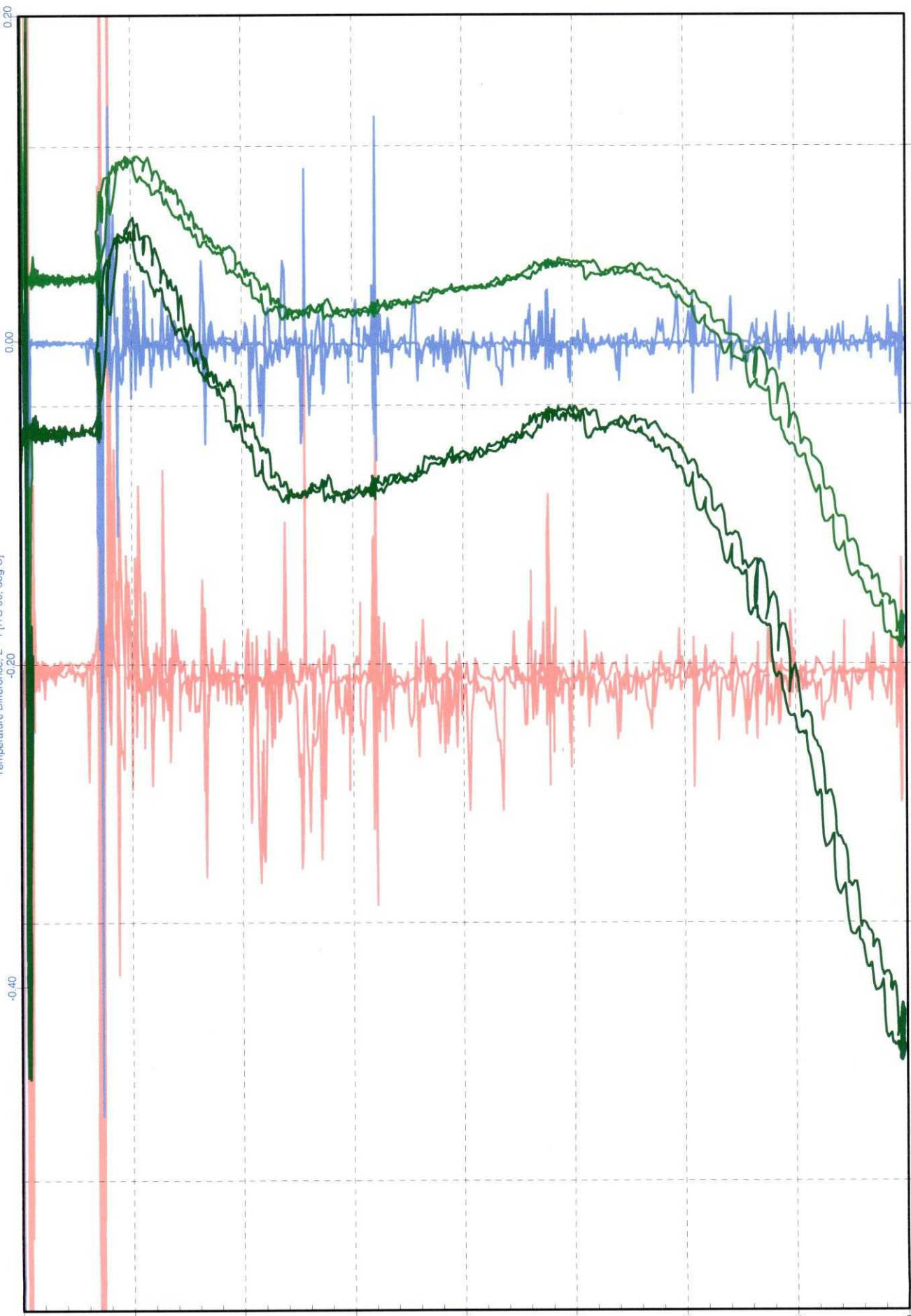
150

120

250
200
150
100
50
0

Depth [salt water, m]

0.0 62.5 125.0 187.5 250.0 312.5 375.0 437.5 500.0



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		25.9	Calil

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

Time-GMT	Comments

Station: 36	Cast: 4
Latitude start: 25d 5.011'N	Longitude start: 157d 30.010'W
end:	end:
Depth of water: 4770 meters	Date (GMT): 221 08/08/2008
Pressure on Deck	Time: 13:41:18 Z
Begin: 0.3715	Start Log: 13:44:16 Z
End: 0.36	In Water: 13:46:20 Z
Max cast pressure: 200 dbar	Out of Water: 14:31:14

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	14:04:37	14:05:00	175.67	175	DCM = 126 dbar
2	14:07:14	14:07:35	150.41	150	
3	14:09:33	14:09:50	126.41	DCM	
4	14:10:56	14:11:20	110.51	110	* Beam attenuation
5	14:12:29	14:12:50	99.64	100	signal lock's
6		14:13:10	99.59	100	"weld"
7		14:13:30	99.73	100	
8		14:13:50	99.73	100	
9	14:15:27	14:15:45	76.45	75	
10		14:16:05	76.45	75	
11		14:16:25	74.12	75	
12		14:16:45	76.25	75	
13	14:18:47	14:19:00	46.08	45	
14		14:19:20	45.37	45	
15		14:19:40	45.60	45	
16		14:20:00	46.26	45	
17	14:21:37	14:21:55	25.77	25	
18		14:22:15	25.53	25	
19		14:22:35	25.43	25	
20		14:22:55	25.45	25	
21	14:27:17	14:27:40	5.21	5	} 3 m of wire out
22		28:00	5.07	5	
23		:20	5.11	5	
24		:40	4.38	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Target depth = 200

Station Number: 36 Date: 8/8/2008 (221) (GMT)
 Cast Number: 4 Time: _____ (GMT)
 Operators: AF, PC, LG, JB, DV, ST, LAV Position: _____

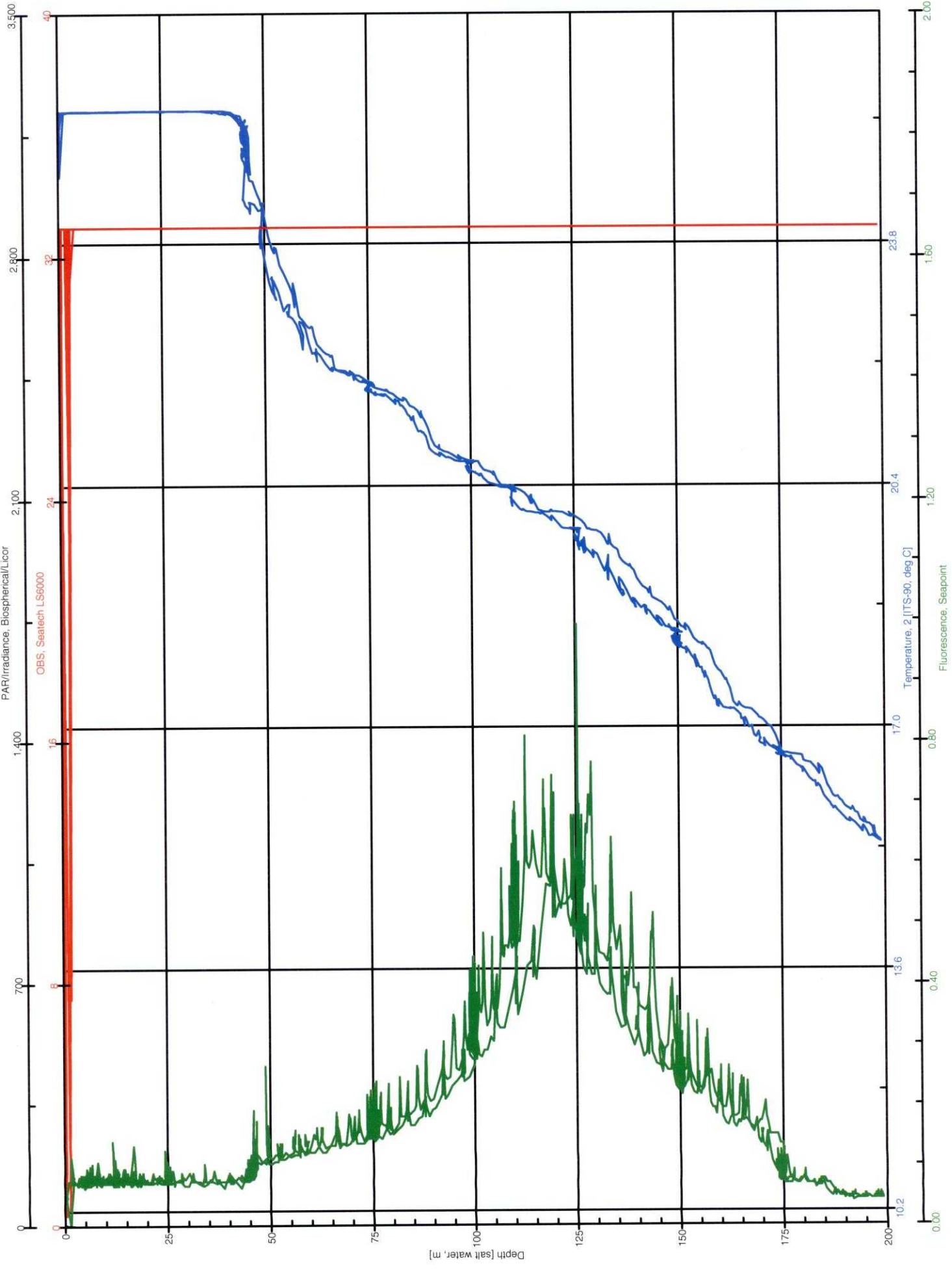
Rosette Position	Desired Depth	PAERL HILTON								
1	175	12L								
2	150	12L								
3	DCM	12L								
4	110	12L								
5	100	12L								
6	100	12L								
7	100	12L								
8	100	12L								
9	75	12L								
10	75	12L								
11	75	12L								
12	75	12L								
13	45	12L								
14	45	12L								
15	45	12L								
16	45	12L								
17	25	12L								
18	25	12L								
19	25	12L								
20	25	12L								
21	5	12L								
22	5	12L								
23	5	12L								
24	5	12L								

NOTES: N2-FIXATION GAS ARRAY CAST

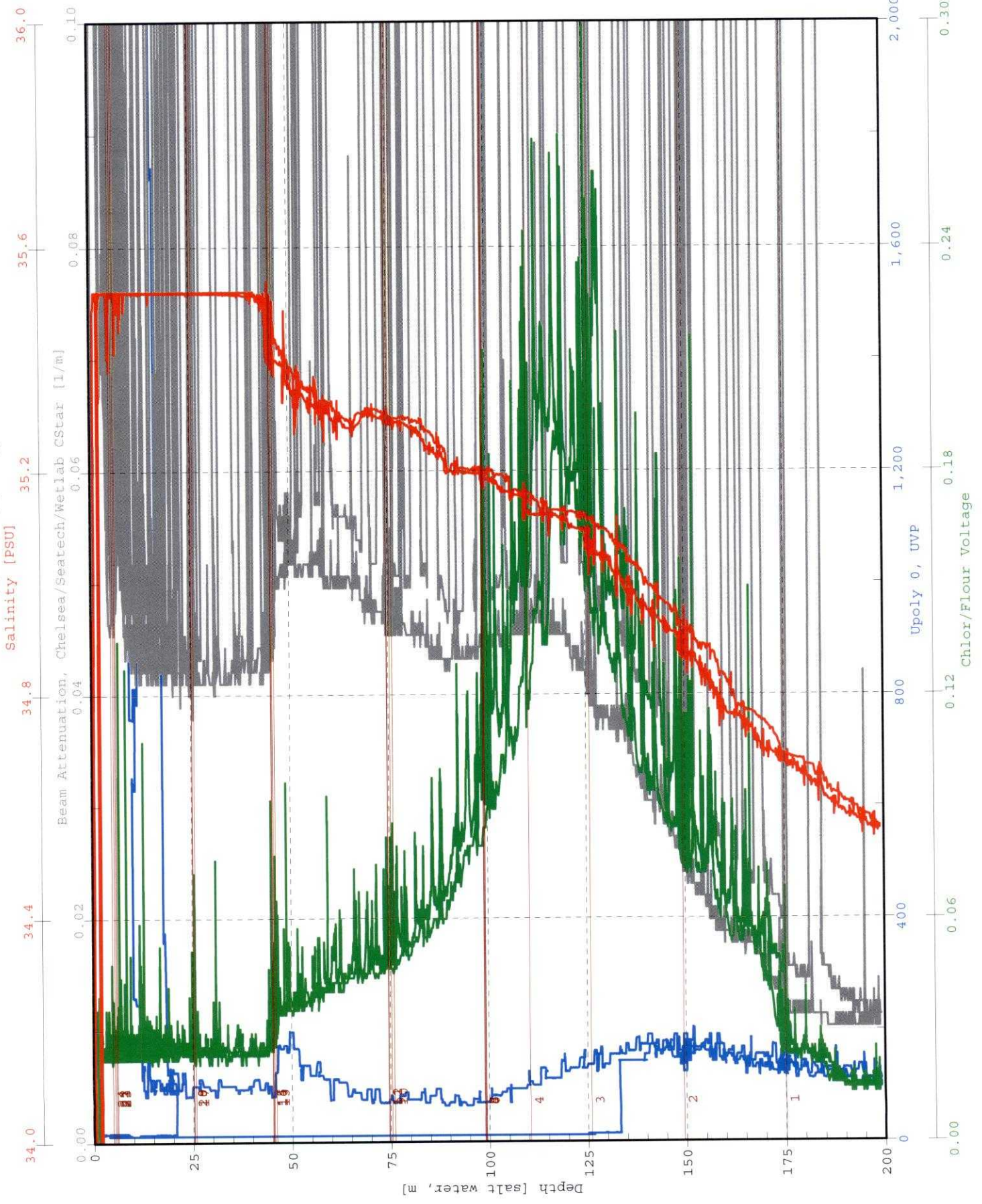
KM0814_di_..._s36_c4

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



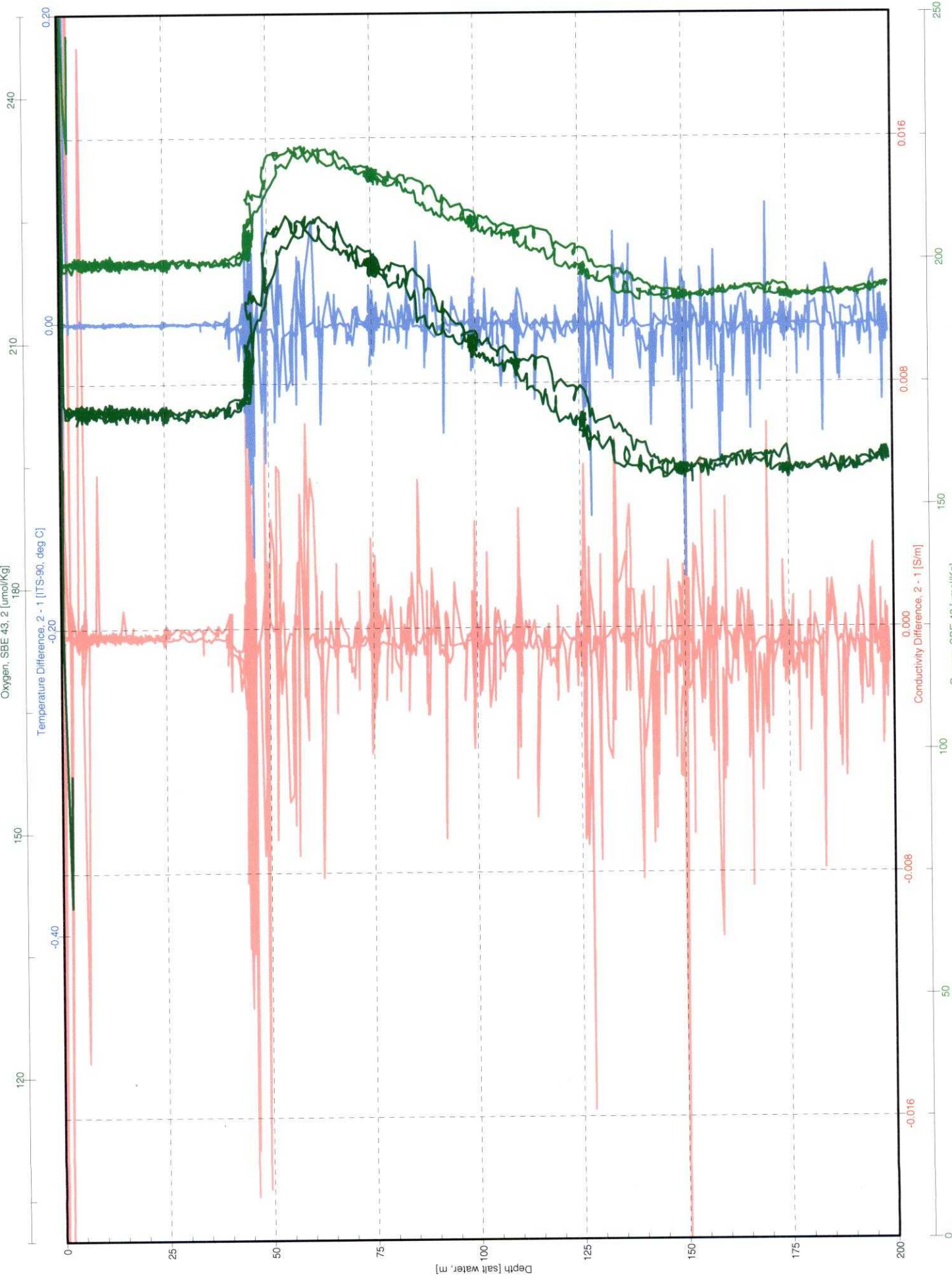
KM0814_disp1_S36_c4



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_dis_1_S36_c4

Oxygen, SBE 43, 2 [umol/Kg]



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: 36	Cast: 5
Latitude start: 25d 5.008'N end:	Longitude start: 157d 30.013'W end:
Depth of water: 4772 meters	Date (GMT): 221 08/08/08
Pressure on Deck Begin: 0.77 End: 0.55	Time: 15:06:00 Start Log: 15:09:56 In Water: 15:11:57 Out of Water: 15:48:15
Max cast pressure: 200 dbar	

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	15:26:27	15:27:00	199.14	200	DCM = 122
2		15:27:20	200.51	200	
3		15:27:40	200.45	200	
4		15:28:00	200.09	200	
5		15:28:20	199.79	200	
6		15:28:40	200.83	200	
7	15:31:20	15:31:50	121.45	DCM	
8		15:32:10	122.20	DCM	
9		15:32:30	121.92	DCM	
10		15:32:50	121.98	DCM	
11		15:33:00	122.54	DCM	
12		15:33:20	121.68	DCM	
13	15:36:17	15:36:40	44.22	45	
14		15:37:00	44.22	45	
15		15:37:20	46.29	45	
16		15:37:40	45.44	45	
17		15:38:00	45.39	45	
18		15:38:20	44.54	45	
19	15:44:06	15:44:25	6.49	5	} 3 m o/wire out
20		44:45	6.89	5	
21		45:05	6.98	5	
22		45:25	5.82	5	
23		45:45	6.39	5	
24		46:05	6.48	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

z = 200 dba

Station Number: 36

Date: 8/8/2008 (221) (GMT)

Cast Number: 5

Time: _____ (GMT)

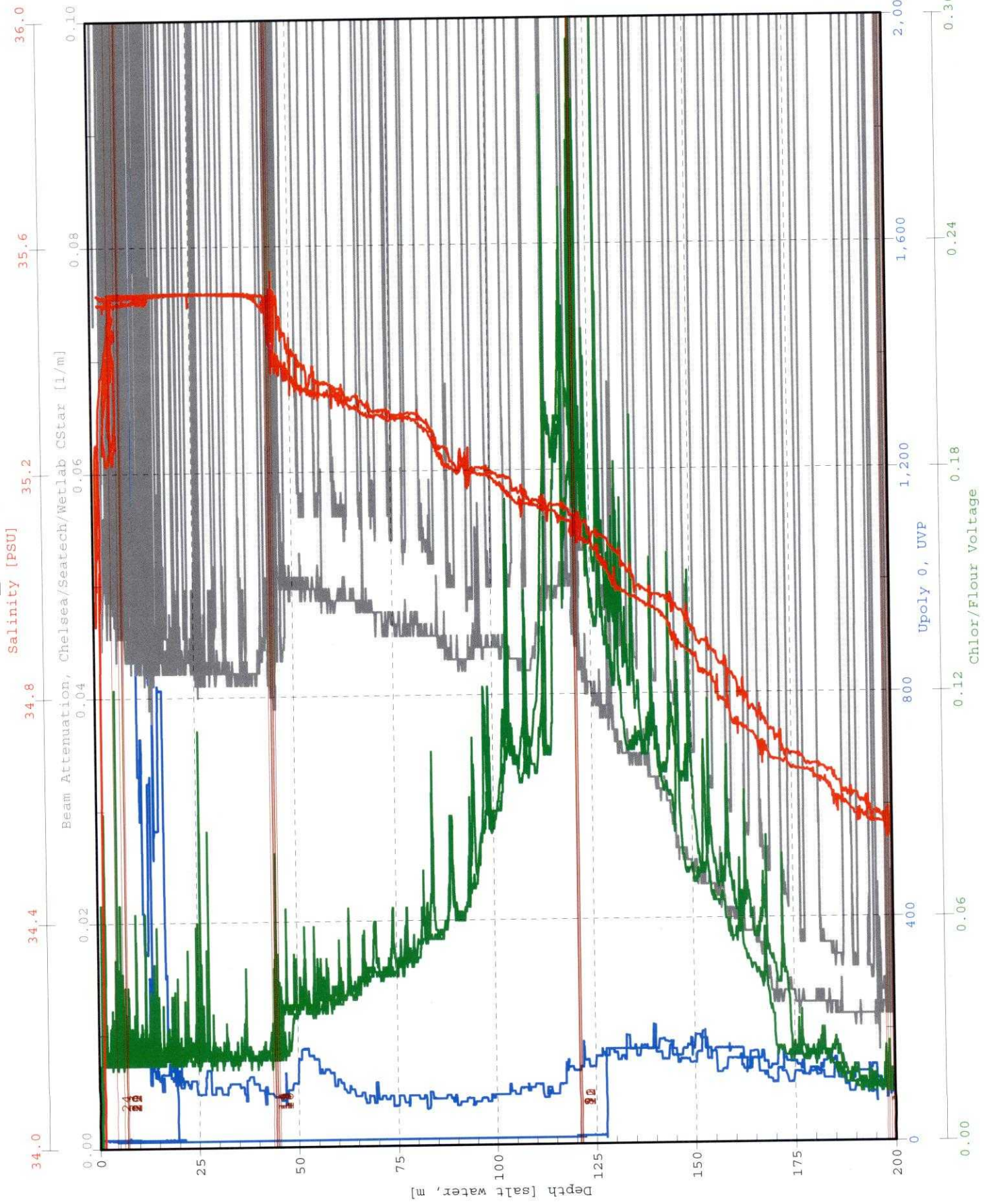
Operators: AF, PC, LG, JB, DV, ST, LAV

Position: _____

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

NOTES: KREY PROTEIN CAST

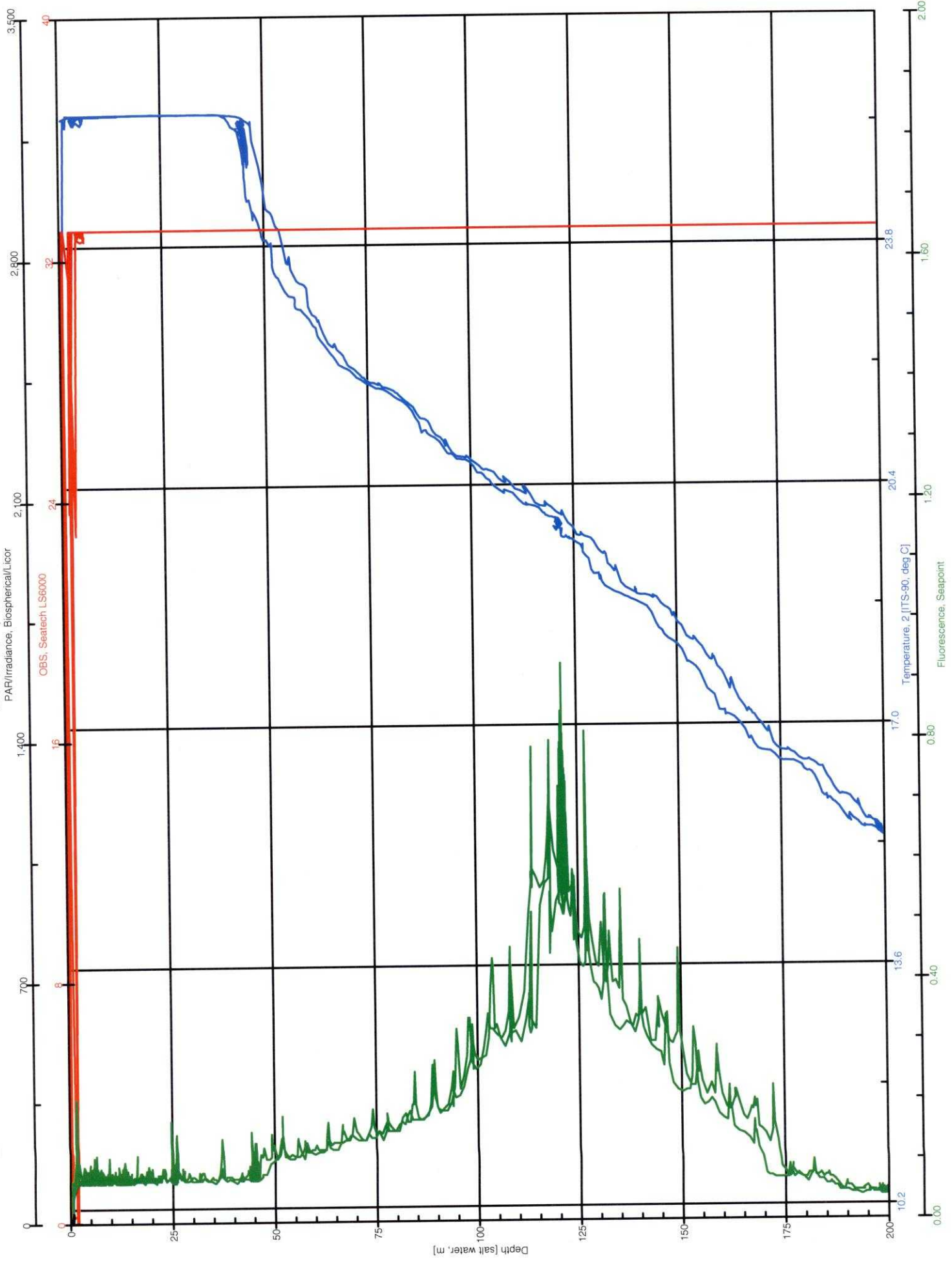
KM0814_disp1_S36_c5



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_dis_r__s36_c5
PAR/Irradiance, Biospherical/Licor



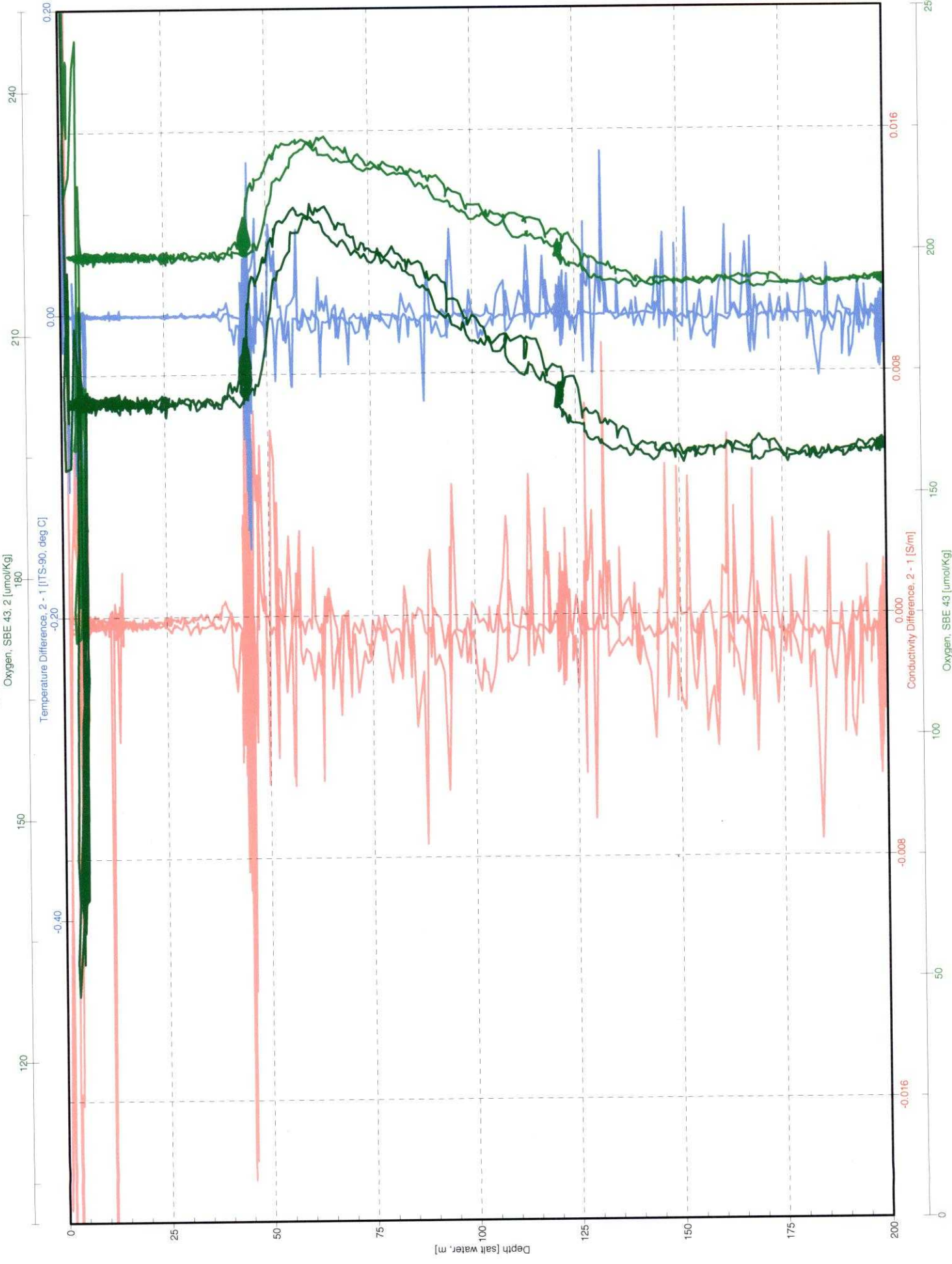
KM0814_dis_r_S36_c5

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 25.9	Operator Cali'd
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 36	Cast: 6
Latitude start: 25d 5.009'N	Longitude start: 157d 30.016'W
end:	end:
Depth of water: 4771 meters	Date (GMT): 221 08 10P1 2008
Pressure on Deck	Time: 17:34:31
Begin: 0.83	Start Log: 17:35:07
End: 0.73	In Water: 17:39:29
Max cast pressure: 200 dbar	Out of Water: 18:10:08

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
					DCM = 115 dbar
1	17:50:37	17:51:00	198.97	200	
2		17:51:20	199.43	200	
3		17:51:40	200.23	200	
4		17:52:00	201.54	200	
5	17:53:47	17:54:10	150.23	150	
6		17:54:30	151.81	150	
7		17:54:50	150.82	150	
8	17:56:10	17:56:30	114.72	DCM	
9		17:56:50	115.06	DCM	
10		17:57:10	113.73	DCM	
11	17:57:59	17:58:15	100.55	100	
12		17:58:35	100.17	100	
13		17:58:55	99.42	100	
14	17:59:57	18:00:15	75.95	75	
15		18:00:35	75.16	75	
16		18:00:55	75.44	75	
17	18:02:11	18:02:40	45.79	45	
18		18:03:00	45.41	45	
19	↗	18:04:40	24.59	25	
20	18:04:21	18:05:00	24.68	25	
21		18:05:20	23.93	25	
22	18:07:37	18:08:00	5.05	5	} 3m of wire out
23		18:08:20	5.47	5	
24		18:08:40	6.10	5	

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

Station Number: 36
 Cast Number: 6
 Operators: AF, MNC, PC, LS, JB, KB, KW

Date: 8/8/2008 (221) (GMT)
 Time: (GMT)
 Position:

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

NOTES:

Niskin 12, 13 leaking

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

Station Number: 36 Date: 8/8/2008 (221) (GMT)
 Cast Number: 6 Time: (GMT)
 Operators: AF, MNC, PC, LS, JB, KB, KW Position:

Rosette Position	Desired Depth	Oxygen	Temp	pH	DIC	Nuts	DOC	LLNuts	Chl a	FCM
1	200	1	16.2	1	x	x	x	x	x	x
2	200									
3	200									
4	200									
5	150	2,3,5sw	18.6	2	x	x	x	x	x	x
6	150									
7	150									
8	DCM	7	20.6	3	x	x	x	x	x	x
9	DCM									
10	DCM									
11	100	8	20.8	4	x	x	x	x	x	x
12	100									
13	100									
14	75	9,10,11	22.3	5	x	x	x	x	x	x
15	75									
16	75									
17	45	12	24.7	6	x	x	x	x	x	x
18	45									
19	25									
20	25	13	25.2	7	x	x	x	x	x	x
21	25									
22	5	14,15,16	25.3	8	x	x	x	x	x	x
23	5									
24	5									

NOTES:

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

Station Number: 36
Cast Number: 6
Operators: AF, MNC, PC, LS, JB, KB, KW

Date: 8/8/2008 (221) (GMT)
Time: (GMT)
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	2,3,5		2	x	x	x	x	x	x
6	150									
7	150									
8	DCM	7		3	x	x	x	x	x	x
9	DCM									
10	DCM									
11	100	8		4	x	x	x	x	x	x
12	100									
13	100									
14	75	9,10,11		5	x	x	x	x	x	x
15	75									
16	75									
17	45	12		6	x	x	x	x	x	x
18	45									
19	25									
20	25	13		7	x	x	x	x	x	x
21	25									
22	5	14,15,16		8	x	x	x	x	x	x
23	5									
24	5									

NOTES:

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

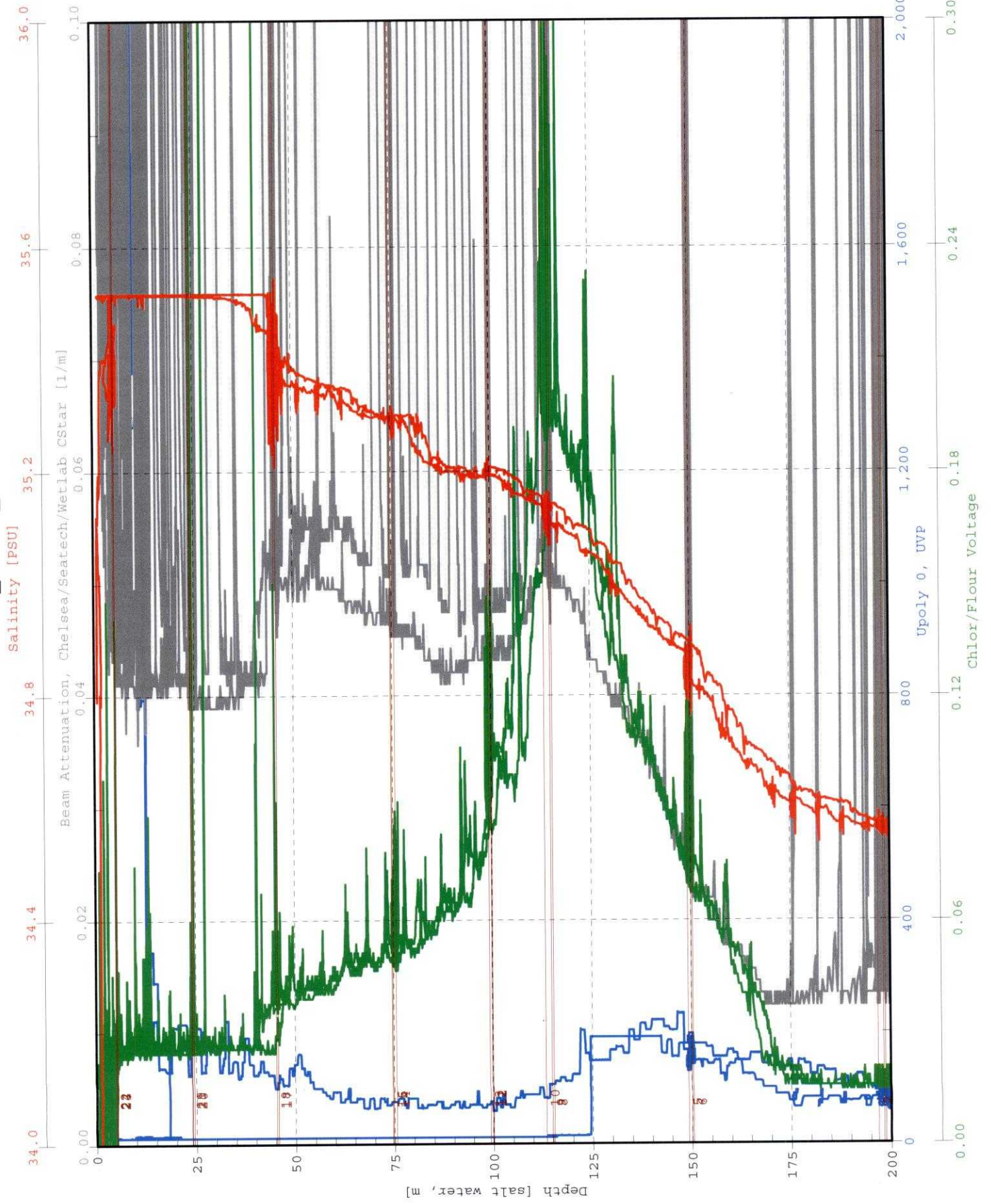
Station Number: 36
Cast Number: 6
Operators: AF, MNC, PC, LS, JB, KB, KW

Date: 8/8/2008 (221) (GMT)
Time: (GMT)
Position:

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

NOTES:

KM0814_disp1_S36_c6

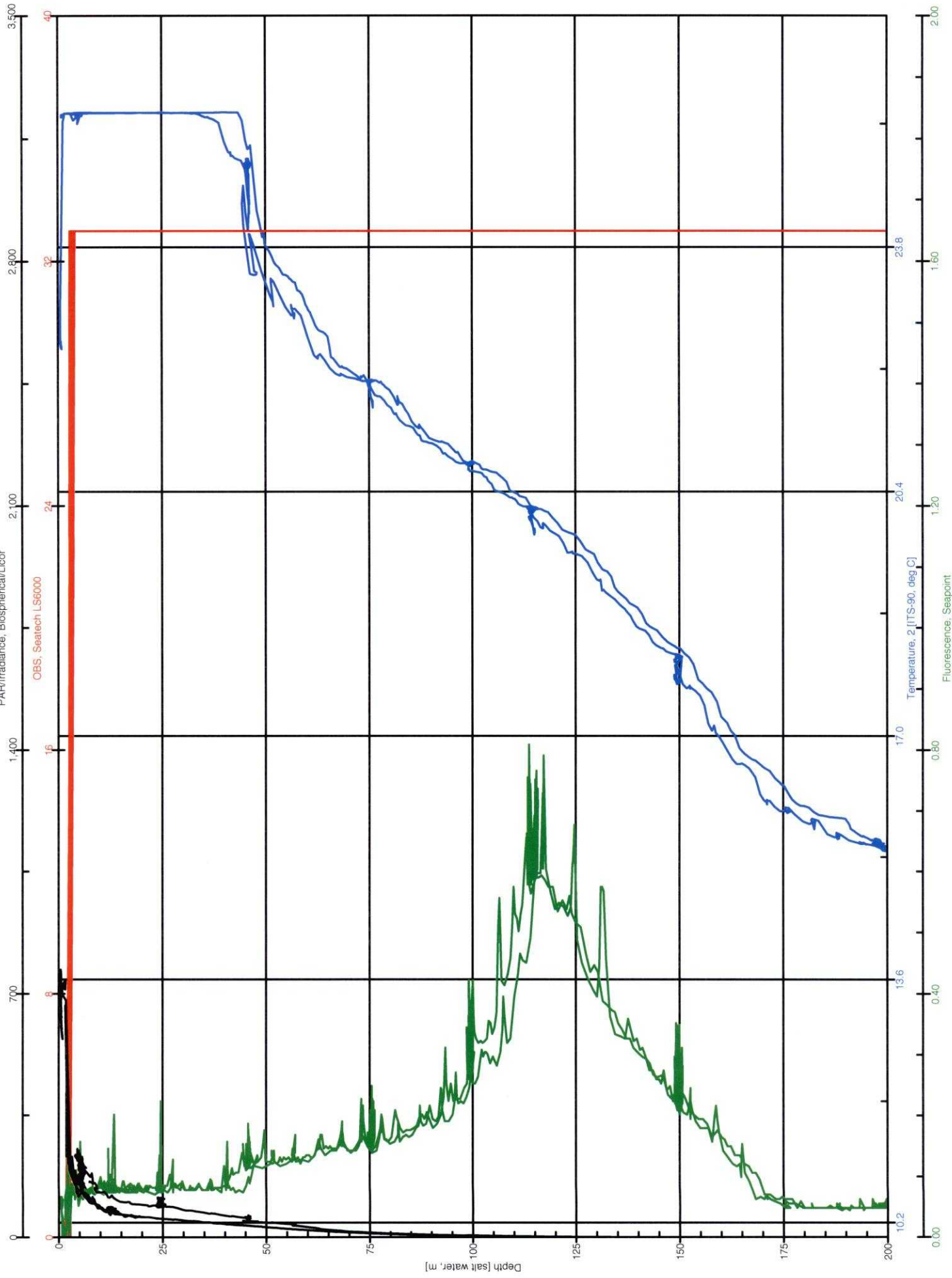


Bottle
Firing
Sequence

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_dis_...s36_c6

PAP/Irradiance, Biospherical/Licor



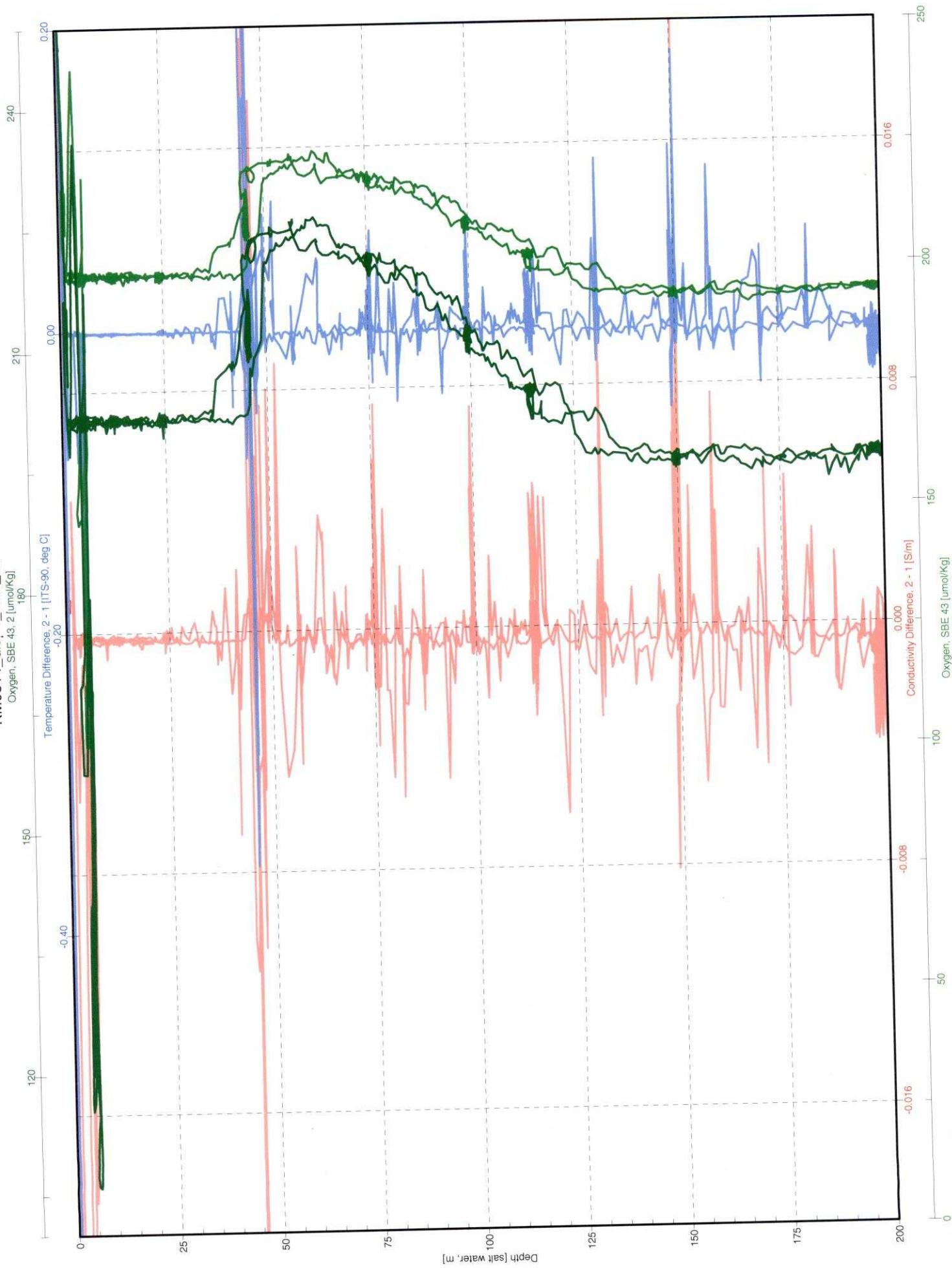
KM0814_dis_ -_S36_c6

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

Time-GMT	Comments

Station: 36	Cast: 7
Latitude start: 25° 5.009' N end: 25° 5.010' N	Longitude start: 157° 30.016' W end: 157° 30.016' W
Depth of water: 4773 meters	Date (GMT): (271) 08/08/08
Pressure on Deck	Time: 19:30:00
Begin: missed it	Start Log: 19:47:00
End: 0.40 dbar	In Water: 19:49:05
Max cast pressure: 300 1000 dbar	Out of Water: 20:24:15

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	20:04:14	20:04:30	200.4	200	10 m @ 19:51:25
2		20:04:45	200.8	200	
3	20:06:27	20:06:45	150.5	150	
4	20:08:07	20:08:30	120.4	DCM	120 dbar
5		20:08:45	120.5	DCM	
6	20:10:05	20:10:30	99.4	100	
7		20:10:45	100.1	100	
8	20:11:52	20:11:15	75.9	75	
9		20:12:30	74.2	75	
10	20:13:42	20:14:00	45.5	45	
11		20:14:15	45.5	45	
12		20:14:30	45.4	45	
13		20:14:45	45.2	45	
14		20:15:00	46.0	45	
15		20:15:15	44.8	45	
16	20:16:28	20:16:45	25.6	25	
17		20:17:00	25.6	25	
18		20:17:15	25.6	25	
19		20:17:30	25.3	25	
20		20:17:45	25.8	25	
21		20:18:00	25.9	25	
22		20:18:15	25.4	25	
23	20:19:52	20:20:15	5.2	5	
24		20:20:30	5.0	5	

C-MORE CRUISE LOG OPEREX Station Data Sheet

Station Number: 36
 Cast Number: 7
 Operators:

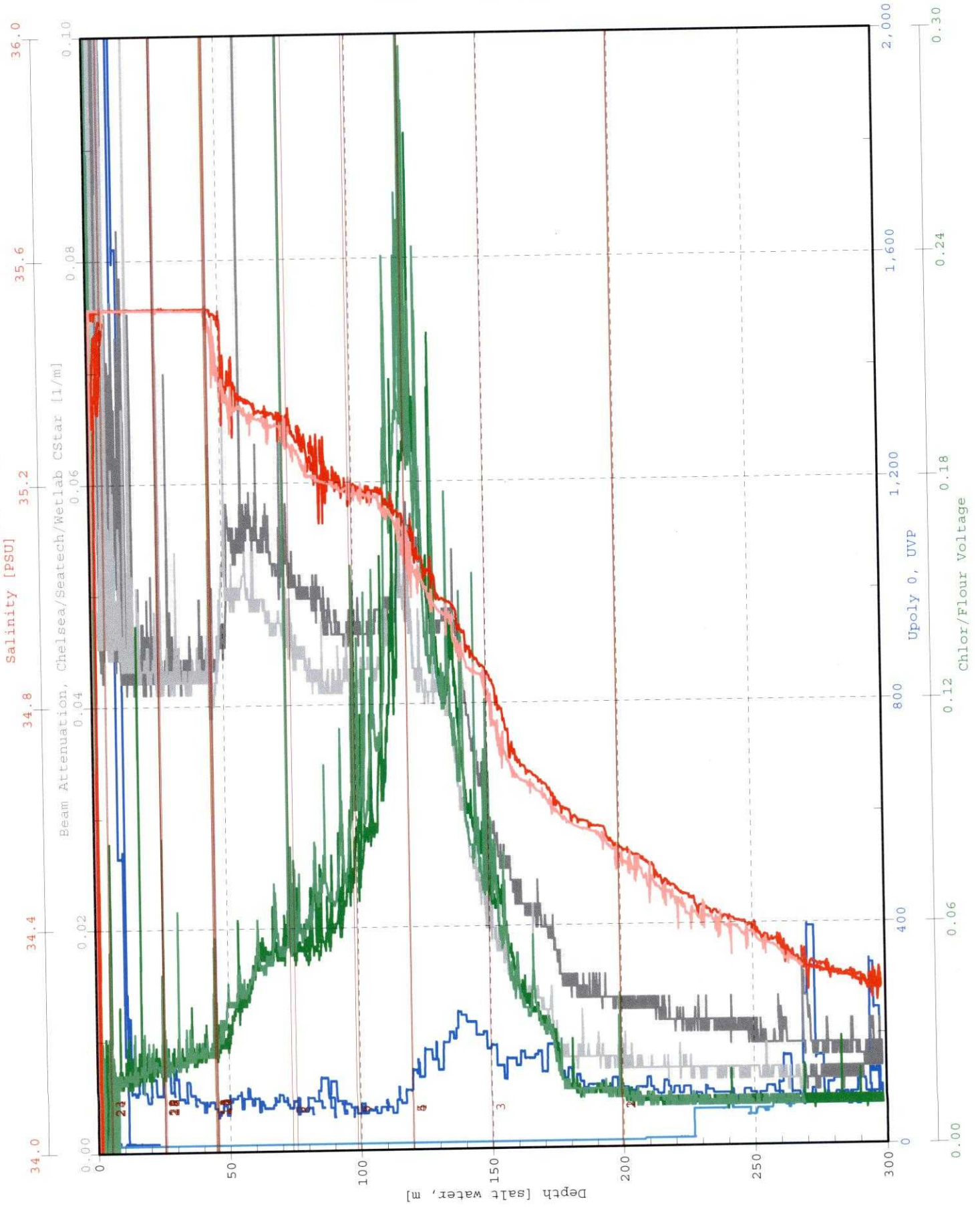
Date: 8/8/2008 (221) (GMT)
 Time: _____ (GMT)
 Position: _____

Rosette Position	Desired Depth	WATKINS	DUHAMEL	WILSON	KREY	BJORKMAN	TOTAL
1	200			2L*			2L
2	200				1L*		1L
3	150			2L*			2L
4	DCM		2L		1L*		3L
5	DCM			2L*			2L
6	100		2L		1L*		3L
7	100			2L*			2L
8	75		2L	2L*			4L
9	75				1L*		1L
10	45	12L					12L
11	45	12L					12L
12	45	12L					11L
13	45	12L					12L
14	45		2L	2L*			4L
15	45				1L*		1L
16	25	8L		2L*			10L
17	25	10L			1L*		11L
18	25	12L					12L
19	25	12L					12L
20	25						
21	25		12L				12L
22	25					10L	10L
23	5		2L		1L*		3L
24	5			2L*			2L

NOTES:

Handwritten scribbles and signatures at the bottom of the page, including a large stylized signature that appears to be 'M. J. ...'.

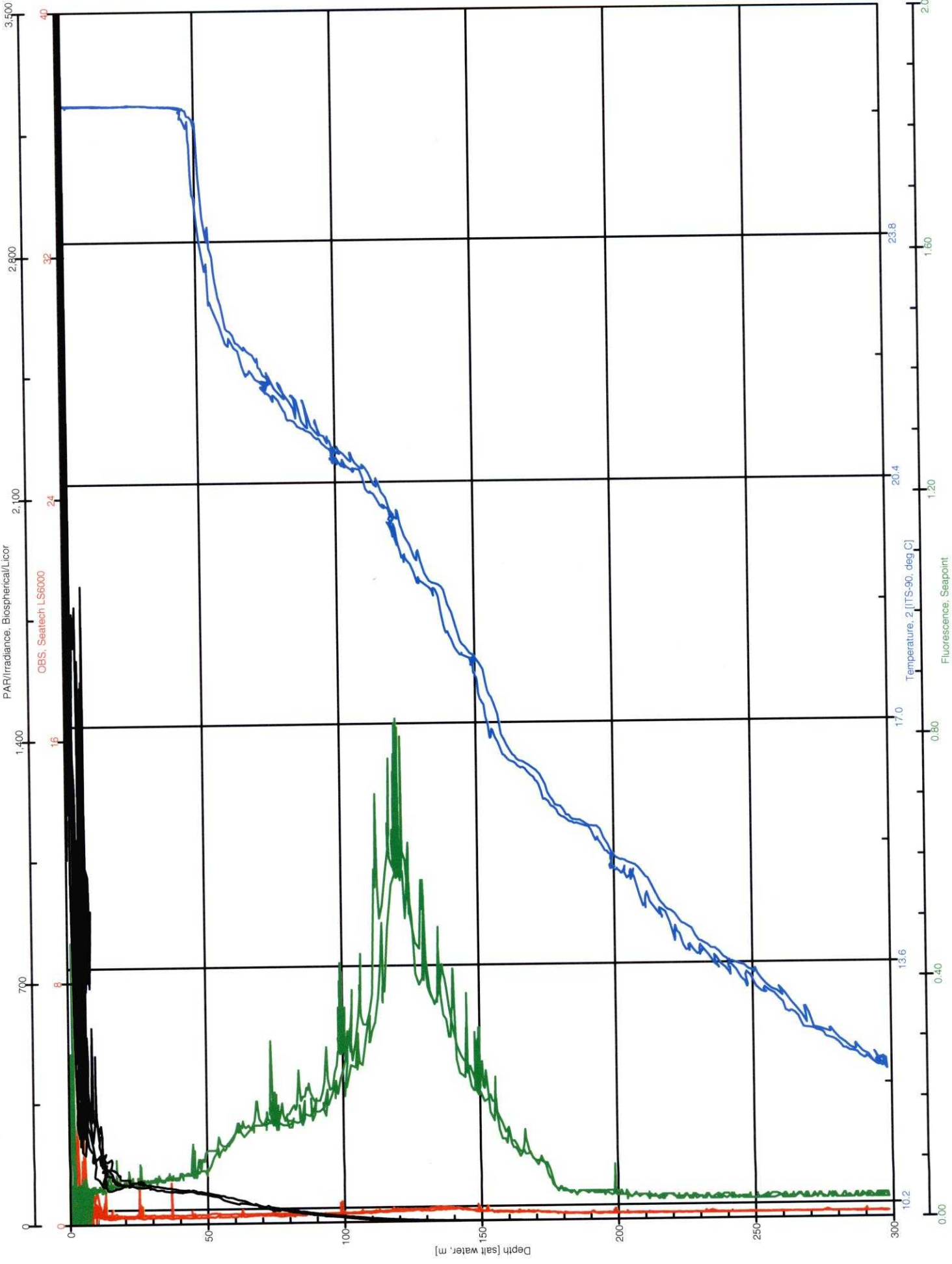
KM0814_disp1_S36_c7



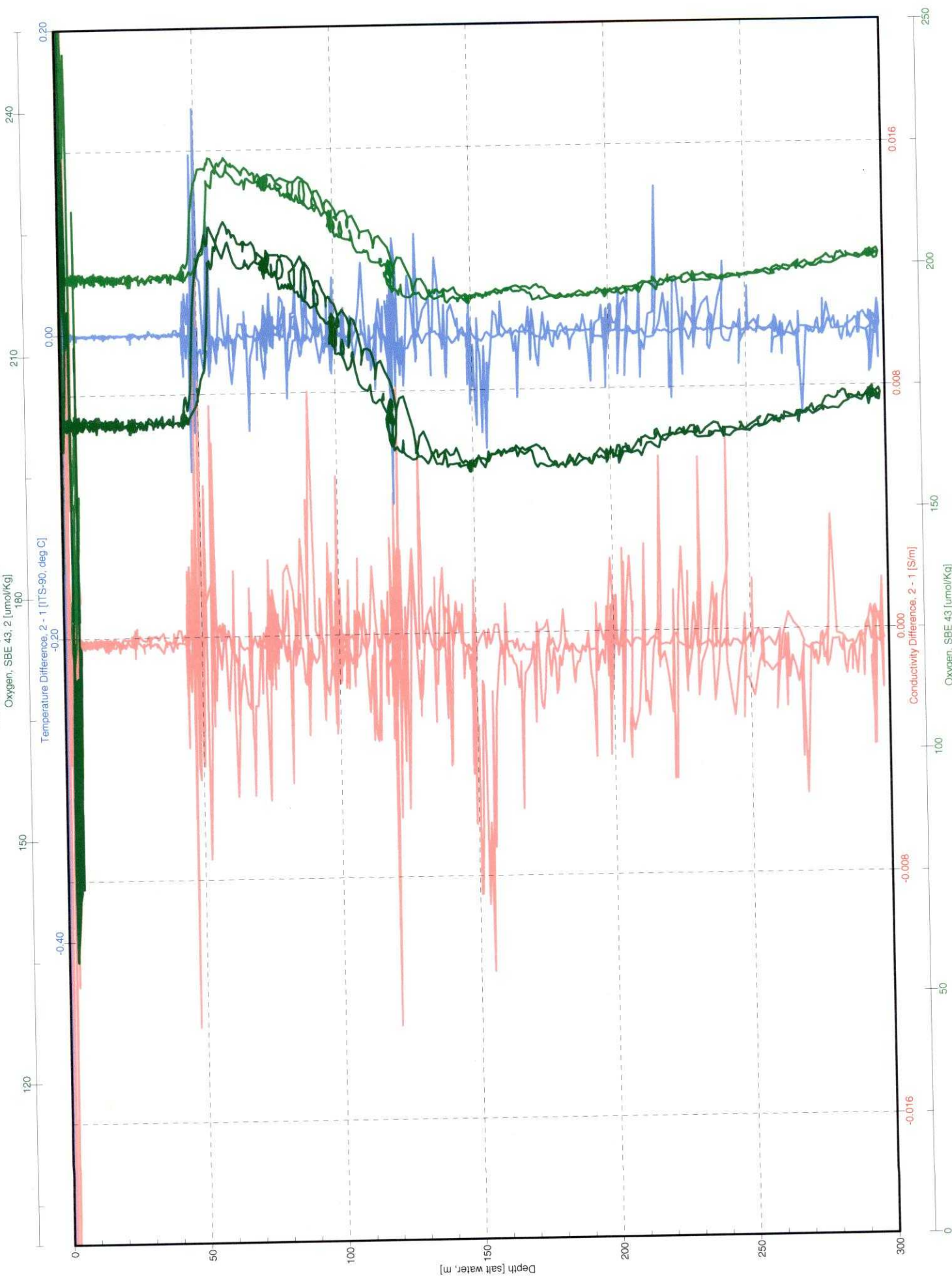
KM0814_dis_..._s36_c7

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



KM0814_dis_~_S36_c7



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.0	updyke

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

Time-GMT	Comments

Station: 36	Cast: 8
Latitude start: 25° 5.010' N end: 25 5.010' N	Longitude start: 157° 30.018' W end: 157° 30.016' W
Depth of water: 4781 meters	Date (GMT): (221) 08/08/08
Pressure on Deck	Time: 21:15:00
Begin: 0.75 dbar End: 0.338 - .274	Start Log: 21:16:00 In Water: 21:17:50
Max cast pressure: 1000 dbar	Out of Water: (221) 22:24:20z

Trip/Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	21:47:08	21:47:30	999.4	1000	21:20:20 @ 10m
2		21:47:45	999.6	1000	
3		21:48:00	998.1	1000	
4	22:03:08	22:03:15	301.2	300	
5		22:03:30	300.4	300	
6		22:03:45	301.7	300	
7	22:08:27	22:08:45	136.8	150 140	137 dbar
8		22:09:00	137.4	150 140	
9		22:09:15	136.9	150 140	
10	22:10:33	22:10:45	119.1	DCM	120 dbar
11		22:11:00	120.8	DCM	
12		22:11:15	119.9	DCM	
13		22:11:30	120.5	DCM	
14		22:11:45	119.8	DCM	
15		22:12:00	121.2	DCM	120 dbar
16	(221) 22:15:40	22:15:50	25.5	25	
17		22:16:10	25.7	25	
18		22:16:30	25.3	25	
19	22:19:03z	22:19:30	5.5	5	3m of wire
20		22:19:50z	5.5	5	"
21		22:20:10z	5.7	5	"
22		22:20:30z	5.8	5	"
23		22:20:50z	5.9	5	"
24		22:21:10z	5.1	5	" CTD on deck 22:26:20z

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

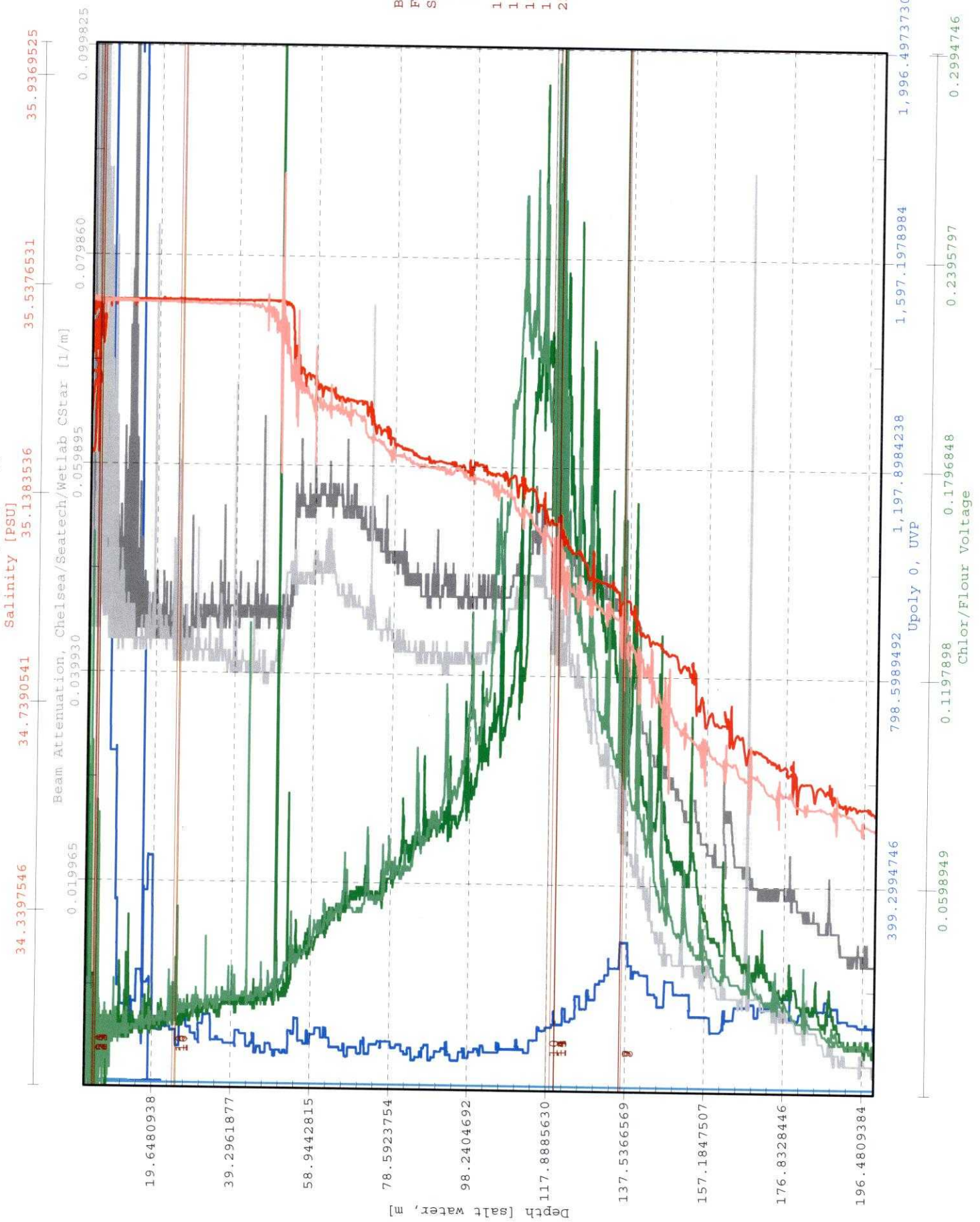
Station Number: 36
Cast Number: 8
Operators:

Date: 8/8/2008 (221) (GMT)
Time: _____ (GMT)
Position: _____

Rosette Position	Desired Depth	JB, MNC	Hilton					
1	1000	12L						
2	1000	12L						
3	1000	12L						
4	300	12L						
5	300	12L						
6	300	12L						
7	140		12L					
8	140		12L					
9	140		12L					
10	DCM		12L					
11	DCM		12L					
12	DCM		12L					
13	DCM	12L						
14	DCM	12L						
15	DCM	12L						
16	25		12L					
17	25		12L					
18	25		12L					
19	5		12L					
20	5		12L					
21	5		12L					
22	5	12L						
23	5	12L						
24	5	12L						

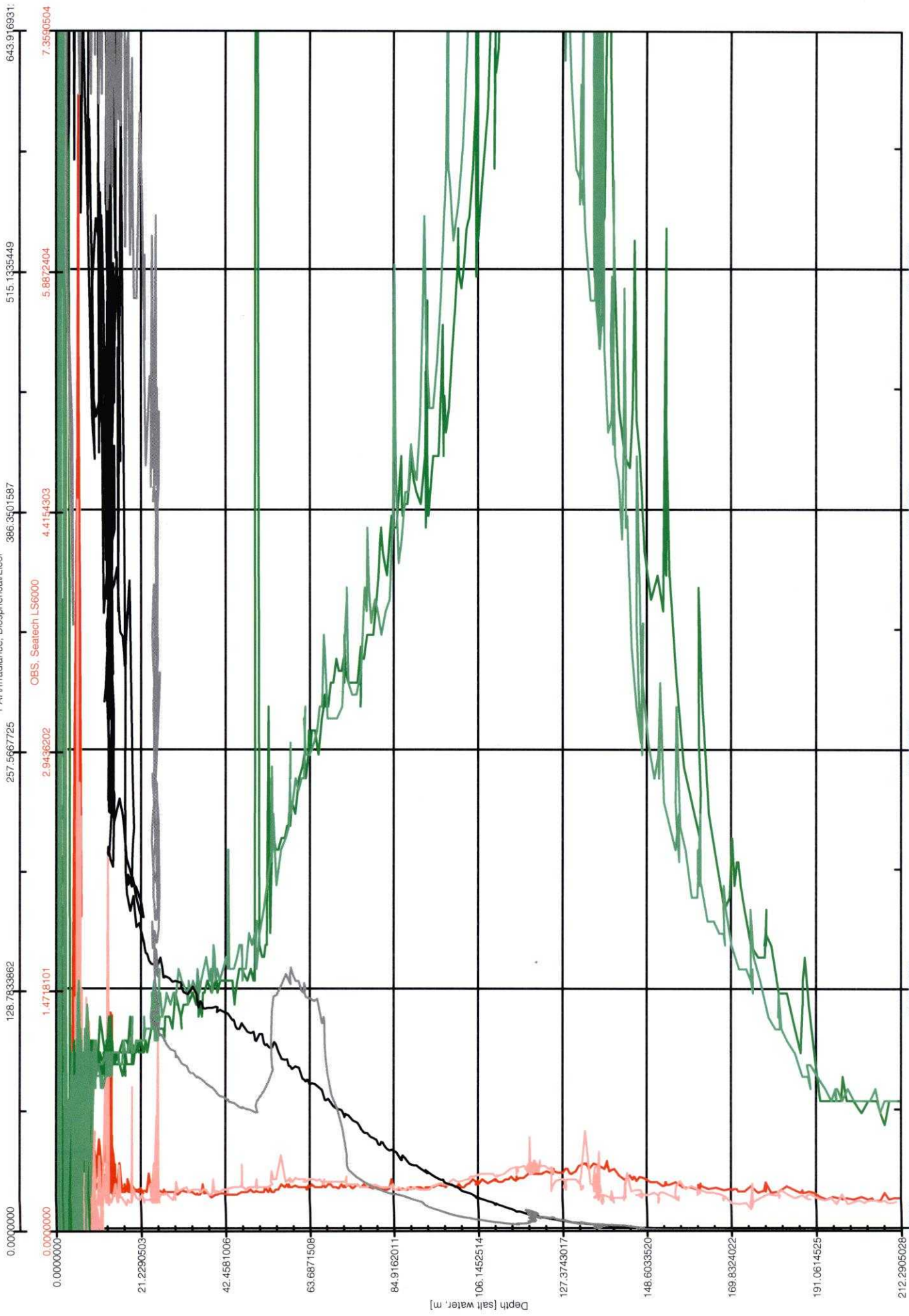
NOTES:

KM0814_ä_p1_S36_c8



KM0814 p2_s36_c8

PAR/Irradiance, Biospherical/Licor



KM0814_03_S36_c8

Oxygen, SBE 43.2 [umol/Kg]

180

0.00

0.20

240

210

150

120

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

-0.20

0.00

0.20

240

210

150

120

0

100

200

300

400

500

600

700

800

900

1,000

0

0.016

0.008

0.000

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

1,000

Depth [salt water, m]

Conductivity Difference, 2 - 1 [S/m]

Oxygen, SBE 43 [umol/Kg]

0.000

0.016

0.008

-0.008

-0.016

250

200

150

100

50

0

0

</

km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		24.1	sp, bu

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

Time-GMT	Comments

GMT

Station: 36	Cast: 9
Latitude start: 25° 5.011' N end: 25° 5.012' N	Longitude start: 157° 30.005' W end: 157° 30.004' W
Depth of water: 4772 meters	Date (GMT) (221) 08 10/01/2008
Pressure on Deck	Time: 23:50:00Z
Begin: 667 End: 0.443 dbar	Start Log: (221) 23:51:55Z In Water: 23:54:30Z Out of Water: (222) 00:30:30
Max cast pressure: 200 dbar	

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	00:09:30	00:09:45	150.2	150	23:56:50
2		00:10:00	149.4	150	
3		00:10:15	150.2	150	
4	00:11:48	00:11:00	120.1	DCM	120 dbar
5		00:11:15	121.6	DCM	
6		00:11:30	120.4	DCM	
7		00:11:45	119.5	DCM	
8	00:14:25	00:14:45	99.5	100	
9	00:16:23	00:16:45	76.3	75	
10		00:17:00	75.7	75	
11		00:17:15	75.5	75	
12		00:17:30	74.8	75	
13	00:19:20	00:19:45	43.3	45	
14		00:20:00	45.4	45	
15		00:20:15	44.8	45	
16		00:20:30	45.3	45	
17	00:21:34	00:21:45	25.4	25	
18		00:22:00	25.9	25	
19		00:22:15	26.2	25	
20		00:22:30	26.3	25	
21	00:24:52	00:25:15	9.1	5	
22		00:25:30	5.3	5	
23		00:25:45	5.6	5	
24		00:26:00	7.5	5	

C-MORE CRUISE LOG OPEREX Station Data Sheet

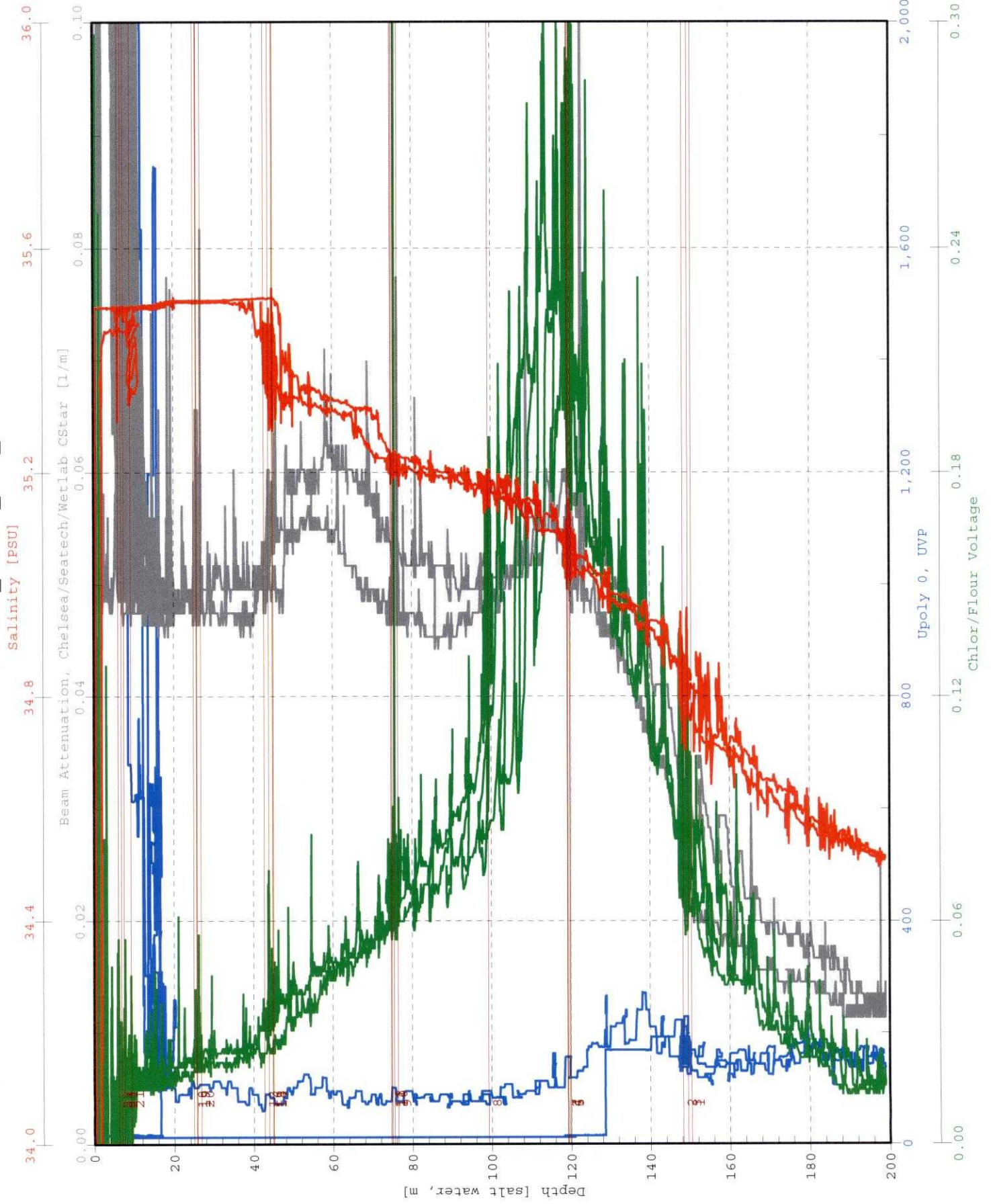
Station Number: 36
 Cast Number: 9
 Operators:

Date: (GMT)
 Time: (GMT)
 Position:

Rosette Position	Desired Depth	Li	Breitlow	Doggett	Temp.			
✓ 1	150	12L						
2	150	12L						
3	150	12L						
✓ 4	DCM	12L						
* 5	DCM	12L						
6	DCM	12L						
7	DCM		5L					
8	100		5L					
✓ 9	75	12L						
* 10	75	12L						
11	75	12L						
12	75		5L					
✓ 13	45	12L						
* 14	45	12L						
15	45	12L						
16	45		5L					
✓ 17	25	12L						
18	25	12L						
19	25	12L						
20	25		5L	0.5L				
✓ 21	5	12L						
* 22	5	12L						
23	5	12L						
24	5		5L					

NOTES:

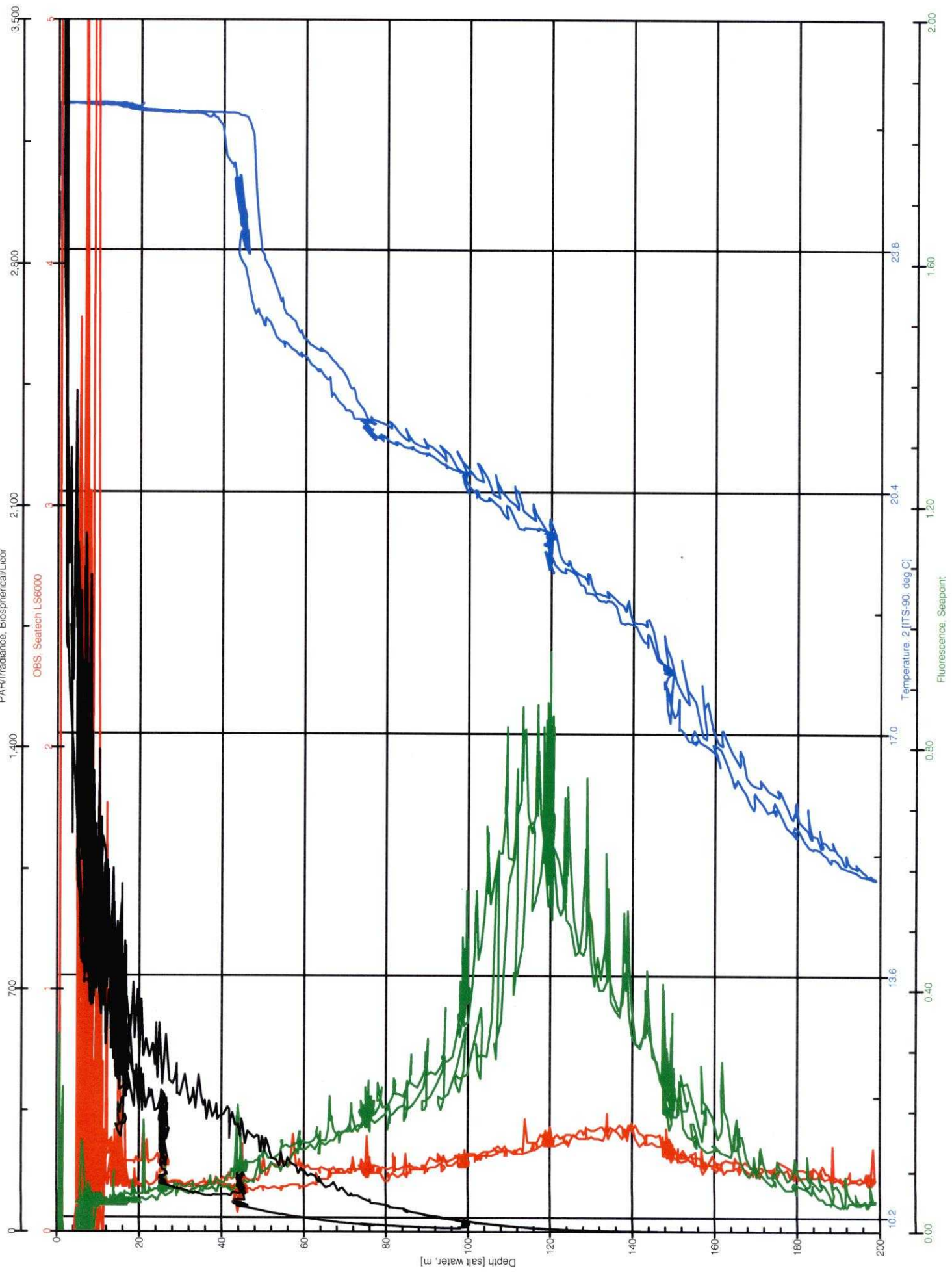
KM0814_disr1_S36_C9



KM0814_dis, _s36_c9

PAR/Irradiance, Biospherical/Libor

OBS, Seatech LS6000



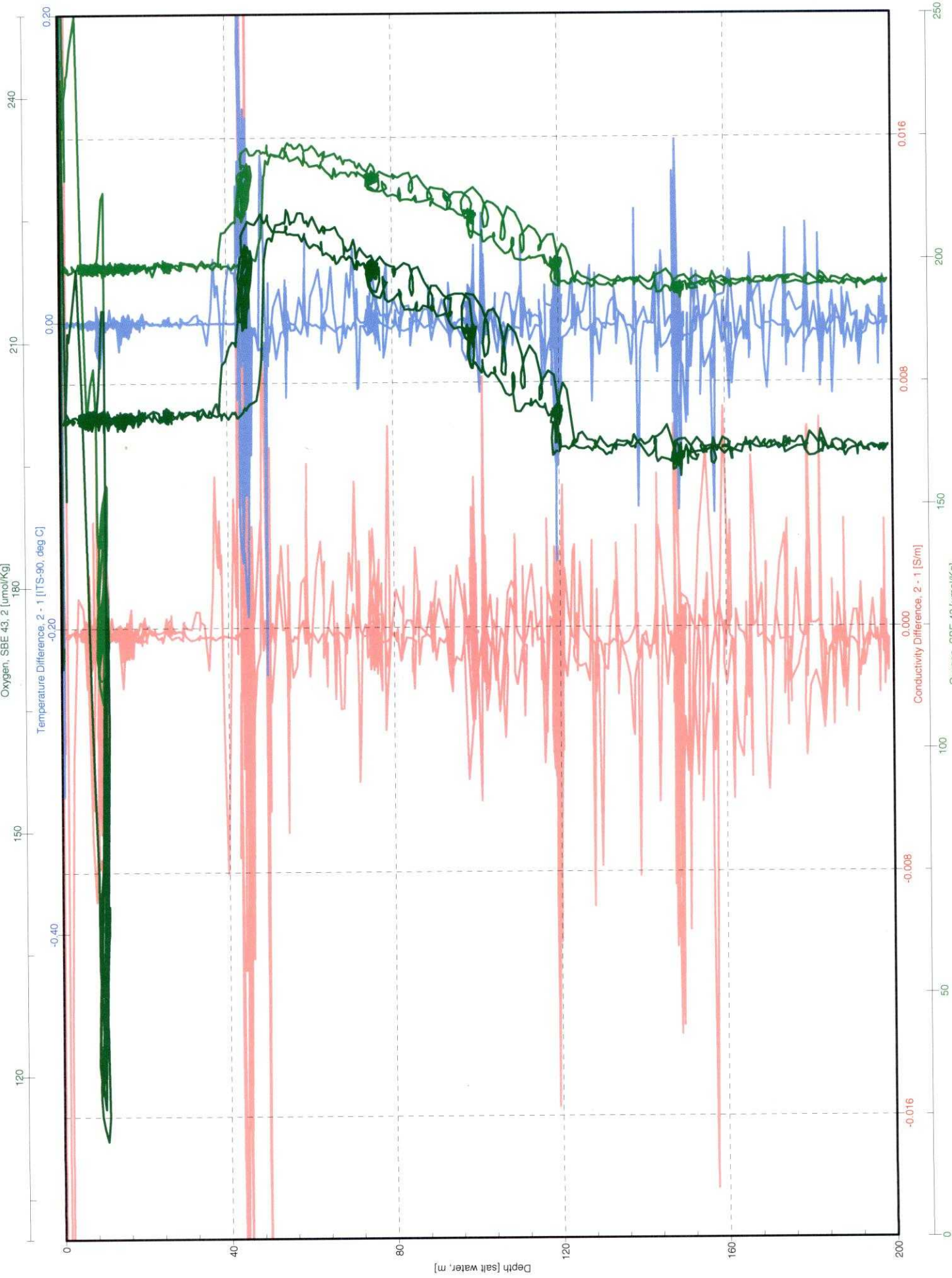
KM0814_dis, _S36_c9

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
		26.1	updyke

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

Time-GMT	Comments

Station: 36	Cast: 10
Latitude start: 25° 5.102' N end: 25° 5.087' N	Longitude start: 157° 30.021' W end: 157° 30.033' W
Depth of water: 4771 meters	Date (GMT): (222) 08 1091 2008
Pressure on Deck	Time: 01:35:29Z
Begin: 784- End: 586	Start Log: 01:37:14Z In Water: 01:44:25Z
Max cast pressure: 250 dbar	Out of Water: 02:23:38Z

Trip/ Niskin	Time stopped	Confirm tripped	Pressure dbar	Target Depth	Comments
1 (222)	02:00:00Z	02:00:10	200.0	200	01:47:40Z @ 10m switch status
2		02:00:30	199.3	200	
3 (222)	02:01:48	02:02:10	149.4	150	
4		02:02:30	149.4	150	
5 (222)	02:03:50	02:04:10	116.0	DCM	116 dbar
6		02:04:30	115.9	DCM	116 "
7		02:04:50	115.9	DCM	116 "
8		02:05:10	115.1	DCM	116 "
9 (222)	02:05:59	02:06:10	107.9	75 105	
10	02:06:55	02:07:10	94.3	75 95	
11	02:07:45	02:07:50Z		45 85	
12		02:08:30	74.9	45 75	
13		02:08:50	75.2	75	
14 (222)	02:09:25	02:09:30	65.9	65	
15 (222)	02:10:08	02:10:10	55.3	55	
16 (222)	02:10:51	02:11:10	46.3	45	
17		02:11:30	45.4	45	
18		02:11:50	45.3	45	
19		02:12:10	44.9	45	
20 (222)	02:13:06	02:13:30	25.6	25	
21 (222)	02:14:45	02:16:10	16.8	15	(17m on wife)
22	02:17:20	02:17:30	9.0	5	
23		02:18:30	5.9	5	CTD on deck
24		02:18:50	6.8	5	02:25:37Z

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

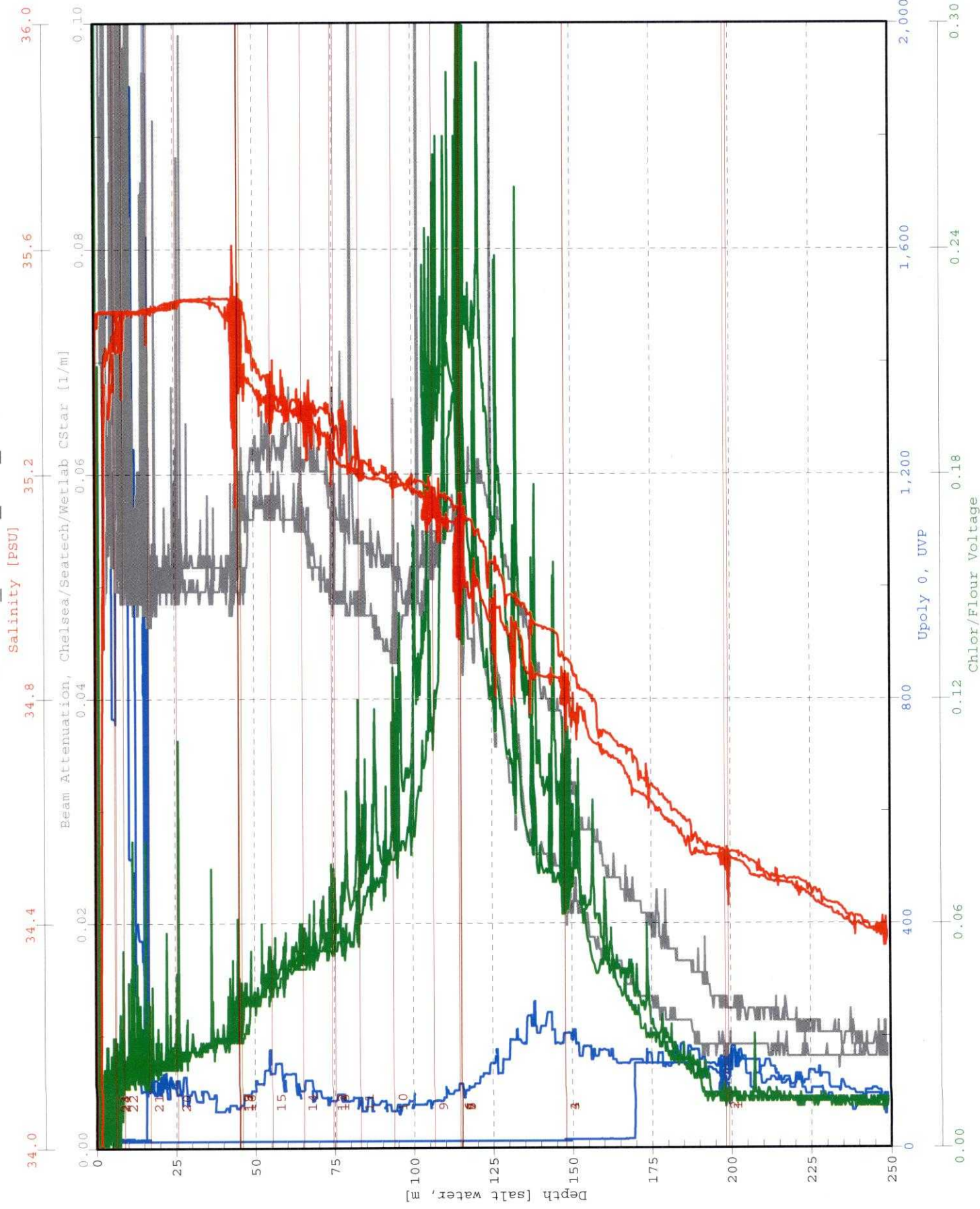
Station Number: 36
Cast Number: 10
Operators:

Date: 8/9/2008 (GMT)
Time: 01:35:29Z (GMT)
Position: 25° 5.102' N 157° 30.021' W

Rosette Position	Desired Depth	Wilson	Fong	Viviani	Ventouras	Kolber		
1	200				12L			
2	200	x						
3	150		12L					
4	150	x						
5	DCM		12L					
6	DCM			12L				
7	DCM				12L			
8	DCM	x						
9	105	x						
10	95	x 3						
11	85	x						
12	75		12L					
13	75	x 3						
14	65	x						
15	55	x 3						
16	45	x						
17	45					12L		
18	45				12L			
19	45		12L					
20	25	x 3						
21	15	x						
22	5	x 3						
23	5				12L			
24	5		12L					

NOTES:

KM0814_di. _S36_c10

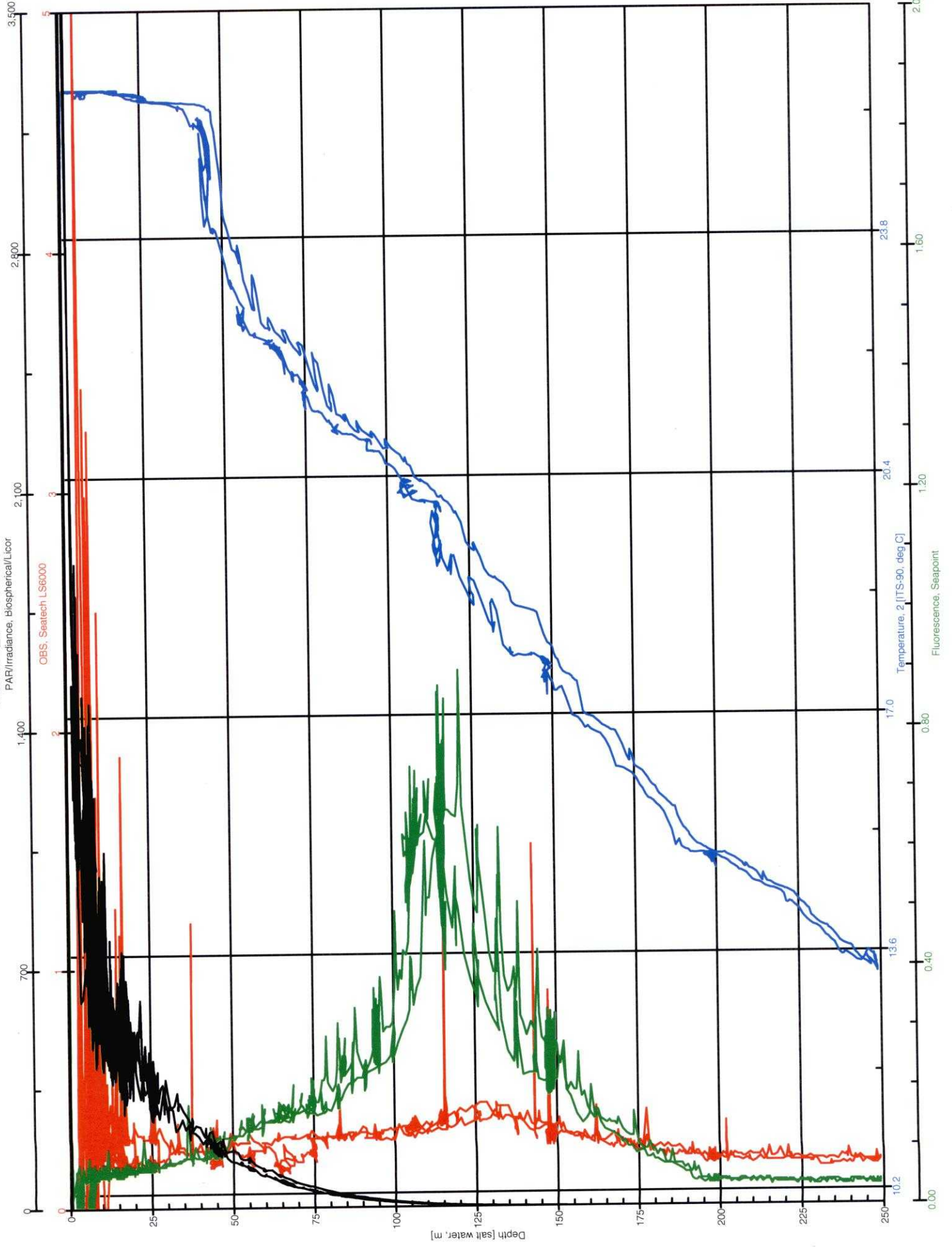


Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24

KM0814_c_s36_c10

PAR/Irradiance, Biospherical/Libor

OBS, Seatech LS6000



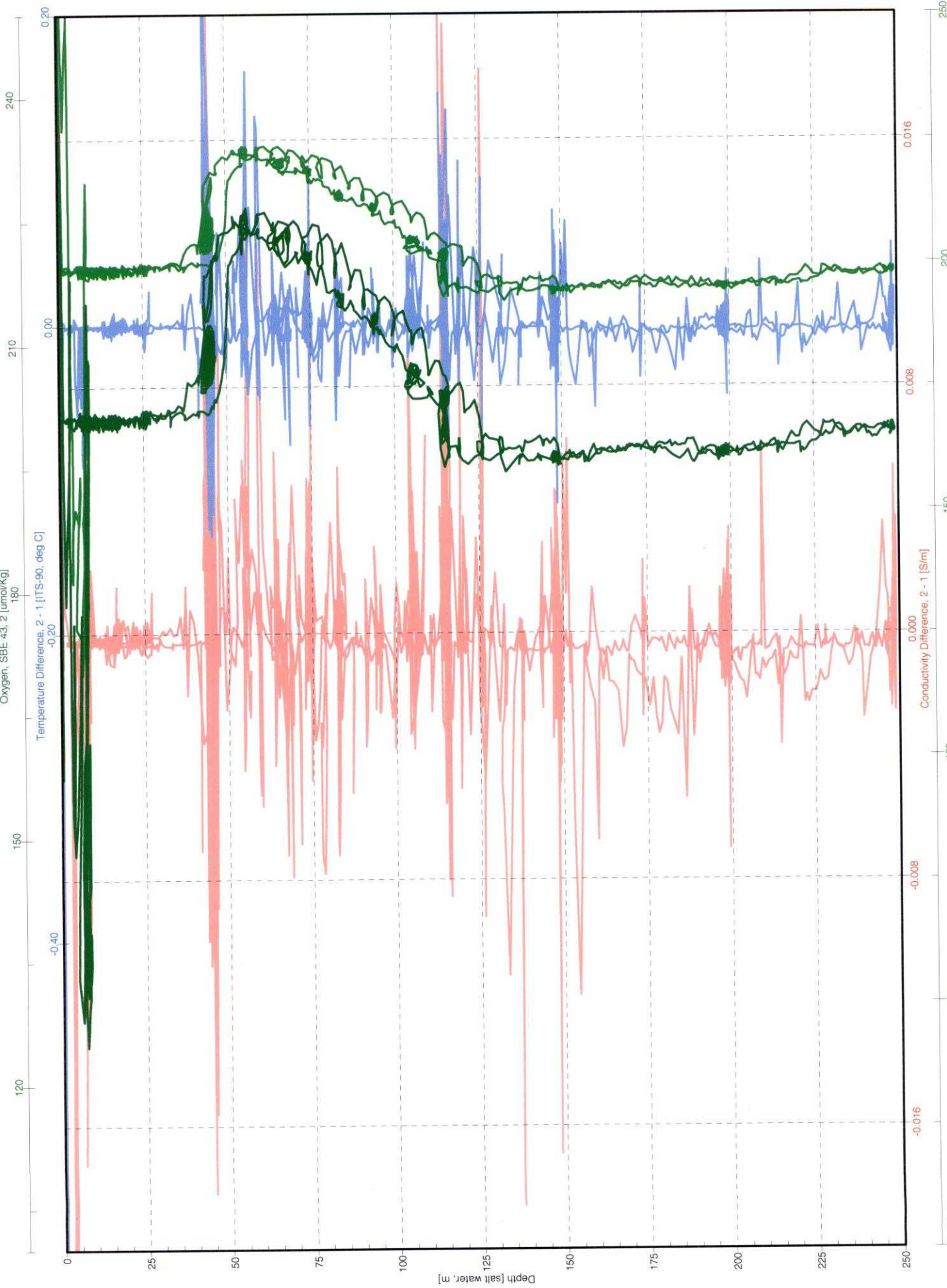
KM0814_d _S36_c10

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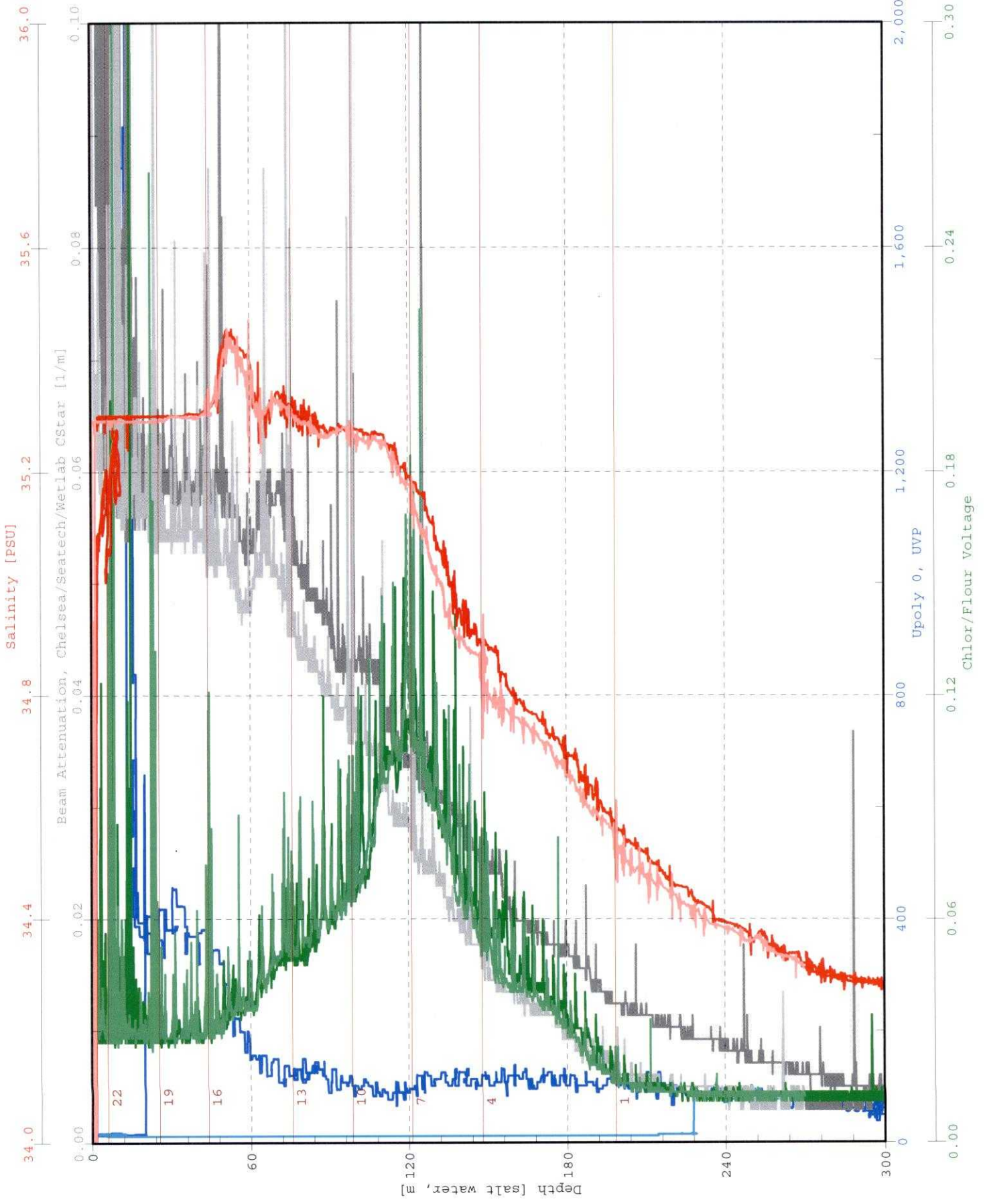
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 37	Cast: 1
Latitude start: 25° 36.115' N end: 25° 36.135' N	Longitude start: 156° 38.825' W end: 156° 38.819' W
Depth of water: 5082 meters	Date (GMT) (222) 8/19/2008
Pressure on Deck Begin: 661 End: 367	Time: 07:32:41 Z Start Log: 07:43:08 Z In Water: 07:45:35 Z Out of Water: 08:23:15 Z
Max cast pressure: 300 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2					
3					
* 4 (222) 08:09:30 Z	08:09:50	149.7	150		
5					
6					
* 7 (222) 08:11:00	08:11:30 Z	122.0	DCM	122 dbar	
8					
9					
* 10 (222) 08:12:40	08:13:10	99.9	100		
11					
12					
* 13 (222) 08:14:21	08:14:30	76.2	75		
14					
15					
* 16 (222) 08:16:10	08:16:15 Z	44.7	45		
17					
18					
* 19 (222) 08:17:30	08:17:50 Z	25.5	25		
20					
21					
* 22 (222) 08:20:32	08:20:50 Z	5.8	5		
23		08:24:42 Z			
24		08:23:15 Z			CTD on Deck

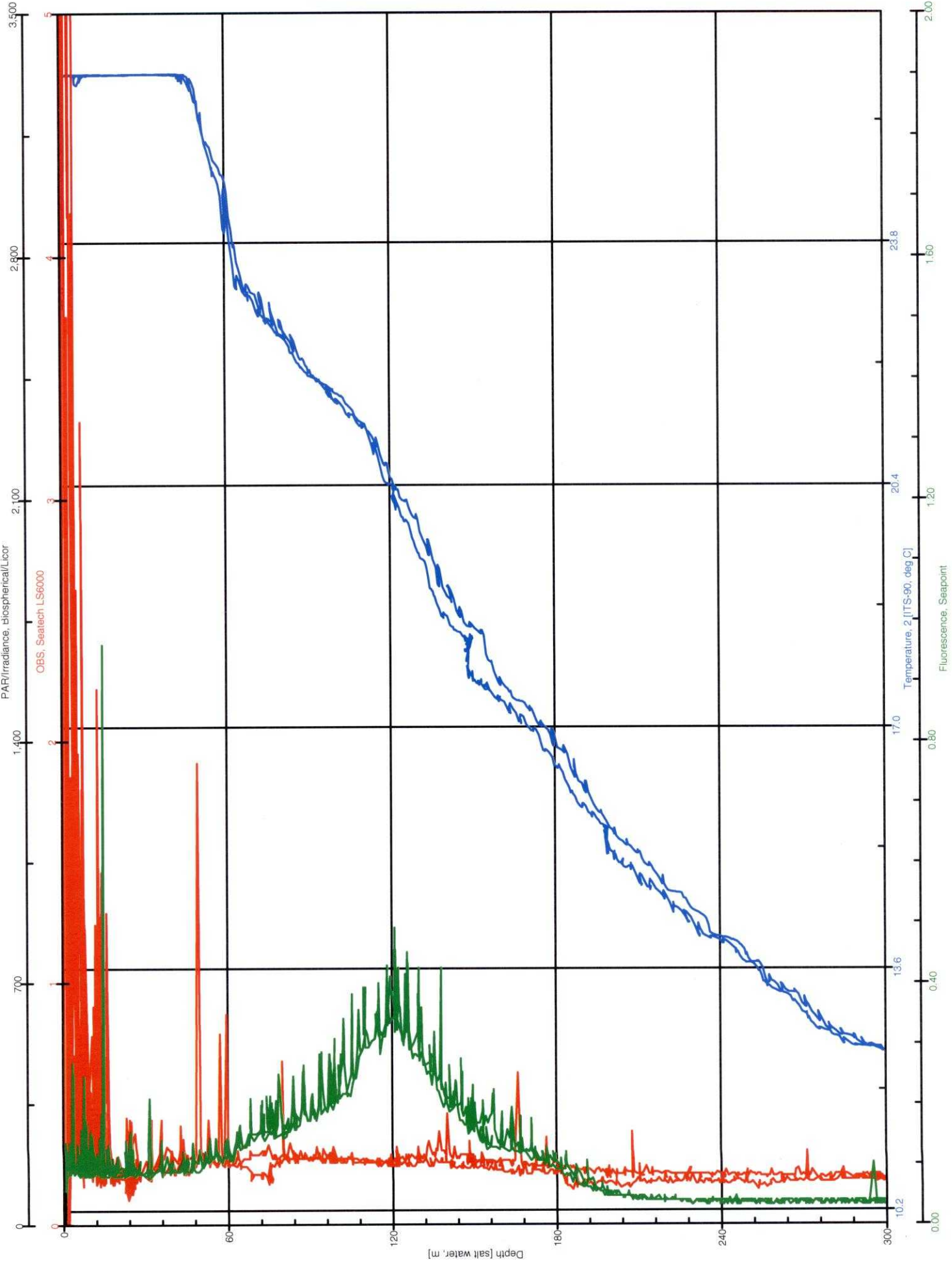
KM0814 di .1_S37_c1



KM0814_u_i_s37_c1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



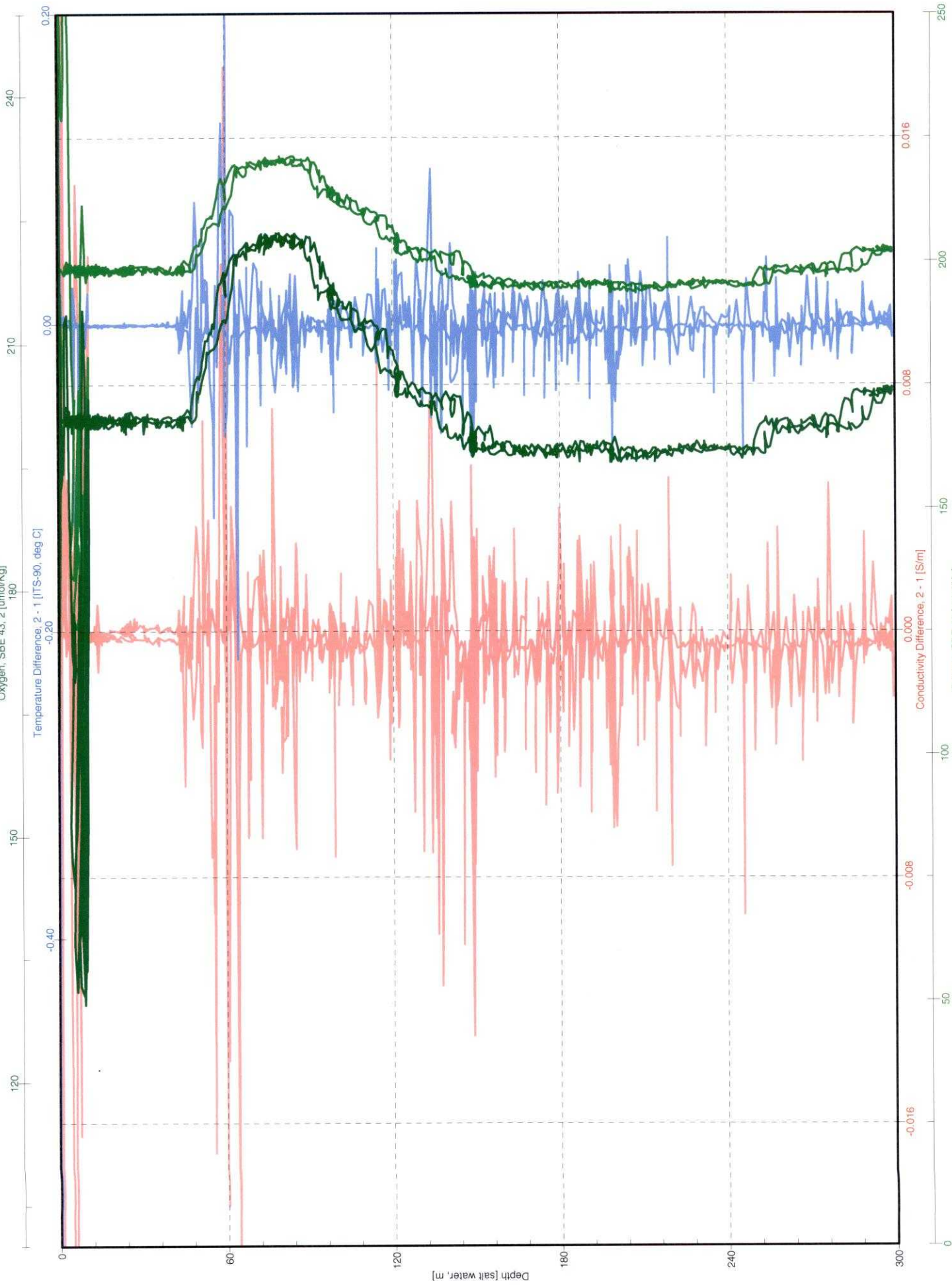
KM0814_L_S37_c1

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
		26.2	Calil

Station: 38	Cast: 1
Latitude start: 25d 27.649'N end: 25d 27.646'N	Longitude start: 156d 52.561'W end: 156d 52.557'W
Depth of water: 4965 meters	Date (GMT): 2-22 08/09/2008
Pressure on Deck Begin: 0.78 End: 0.39	Time: 10:07:49 Start Log: 10:07:55 In Water: 10:09:49 Out of Water: 10:50:25
Max cast pressure: 300 dbar	

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

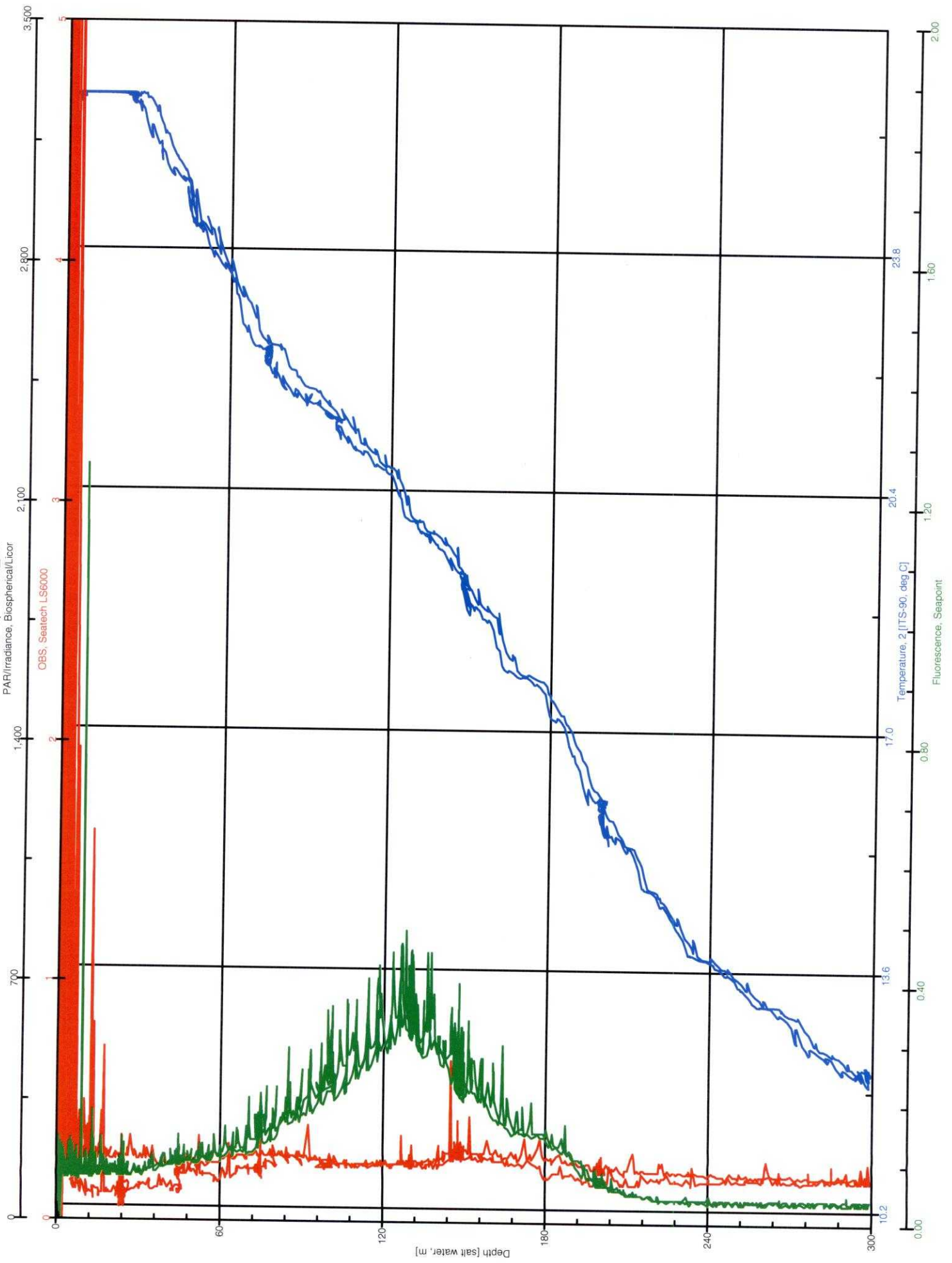
Time-GMT	Comments
	No bottles fired
	UVP humming

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2					
3					
4	10:31:30	10:31:50	149.98	150	
5					
6					
7	10:33:47	10:34:00	130.11 DCM	100	
8					
9					
10	10:35:41	10:36:00	100.20	100	
11					
12					
13	10:37:27	10:37:50	74.54	75	
14					
15					
16	10:39:29	10:39:50	45.15	45	
17					
18					
19	10:41:04	10:41:25	23.52	25	
20					
21					
22	10:44:29	10:44:50	6.25	5	-> 3 m of wire out
23					
24					

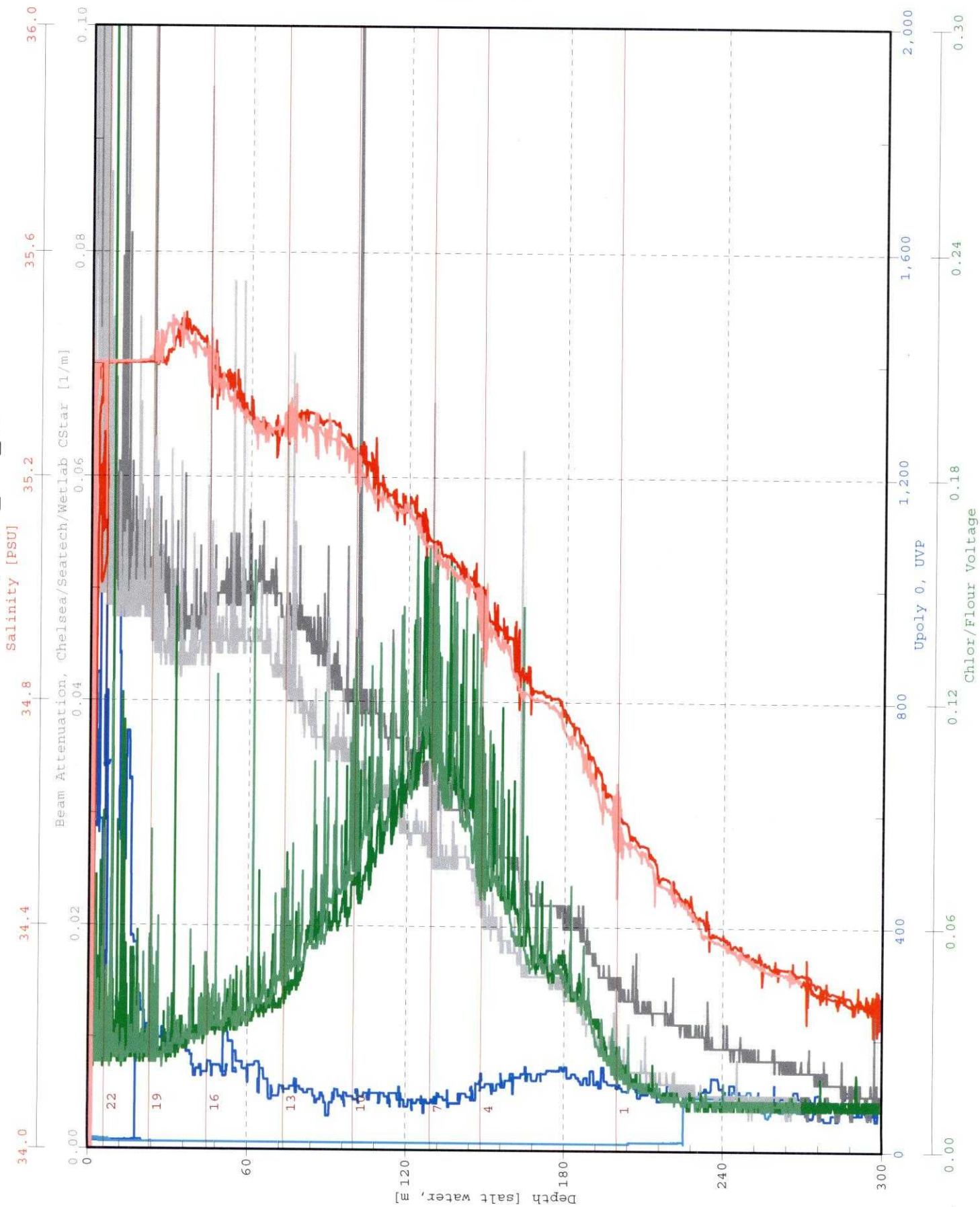
KM0814_dis_yr_s38_c1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



KM0814_disp1_s38_c1



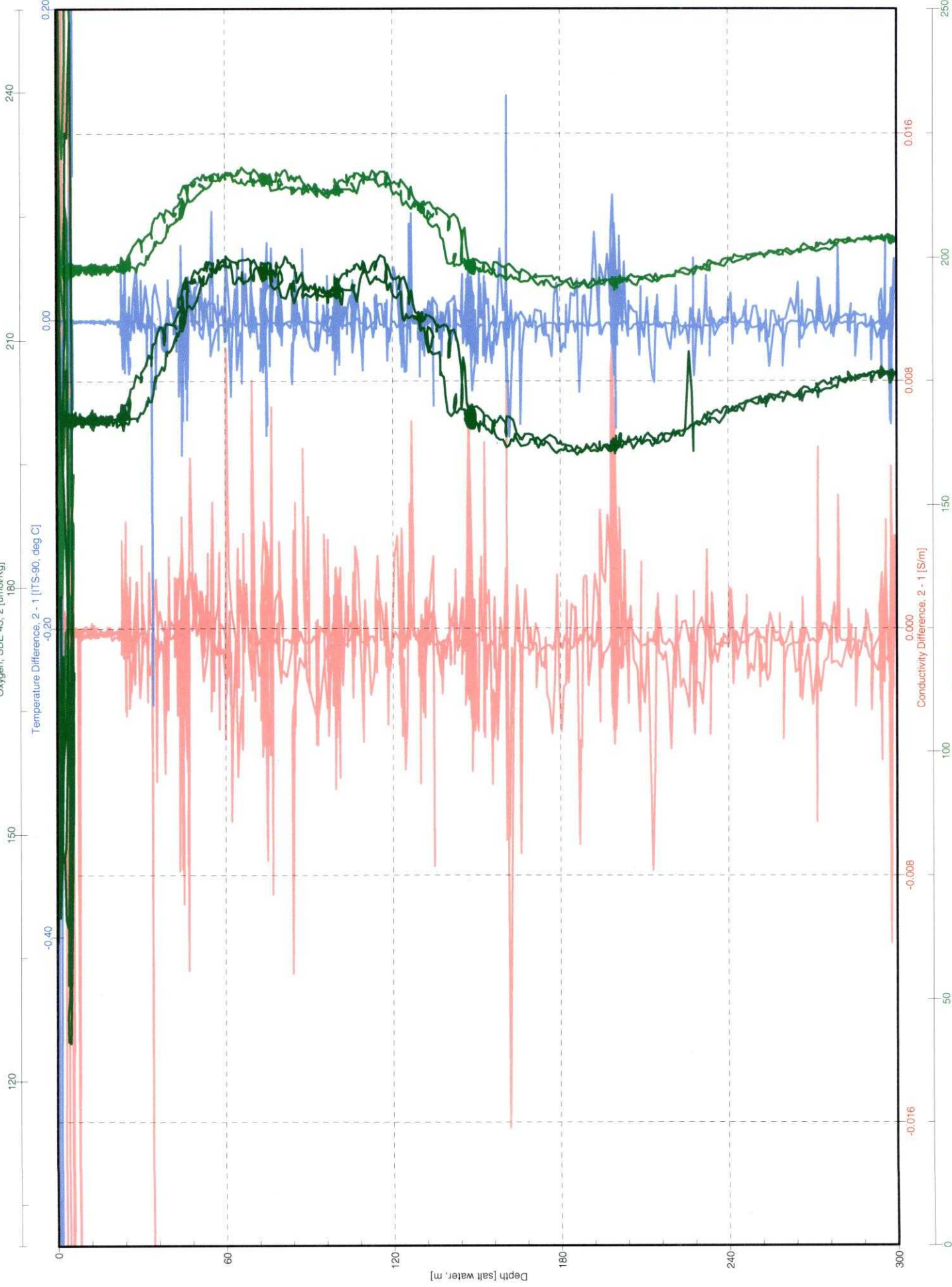
KM0814_dis_1_S38_c1

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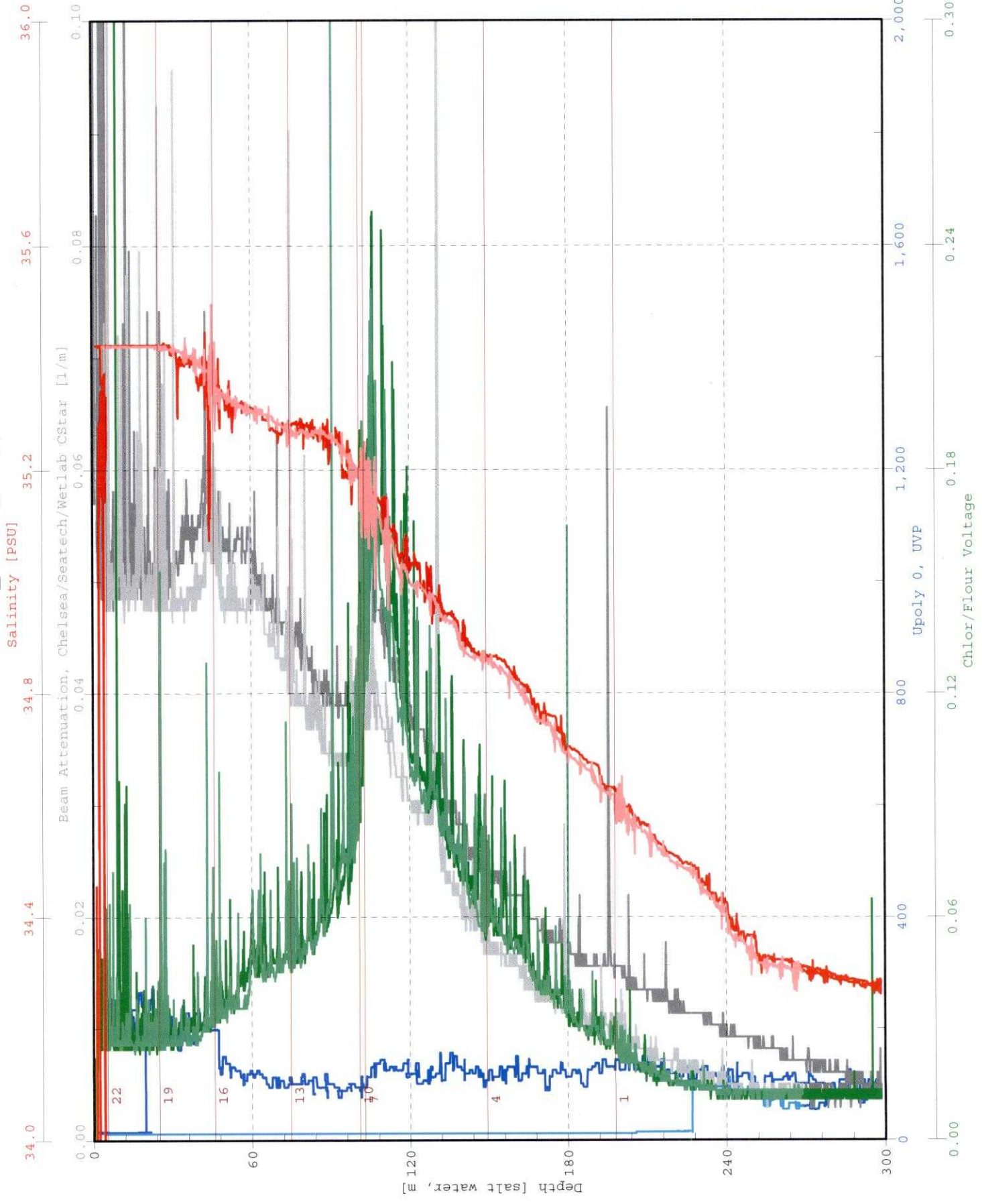
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 39	Cast: 1
Latitude start: 25d 19.557'N end:	Longitude start: 157d 6.562'W end:
Depth of water: 4891 meters	Date (GMT): 222 08/09/2008
Pressure on Deck Begin: 0.81 End: 0.29	Time: 12:33:05 Start Log: 12:34:07 In Water: 12:36:51 Out of Water:
Max cast pressure: 300 dbar	13:10:58

Trip/Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	12:54:33	12:54:45	199.88	200	DCM = 105 dbar
2					
3					
4	12:56:56	12:57:15	150.64	150	↓ DCM was actually at 2 109 dbar
5					
6					
7	12:59:03	12:59:25	103.10	DCM	
8					
9					
10	13:00:10	13:00:25	101.67	100	
11					
12					
13	13:01:51	13:02:10	74.88	75	
14					
15					
16	13:03:43	13:04:00	45.97	45	
17					
18					
19	13:05:23	13:05:45	26.59	25	
20					
21					
22	13:08:48	13:09:10	6.00	5	3 m of wire out
23					
24					

KM0814_disp1_S39_c1

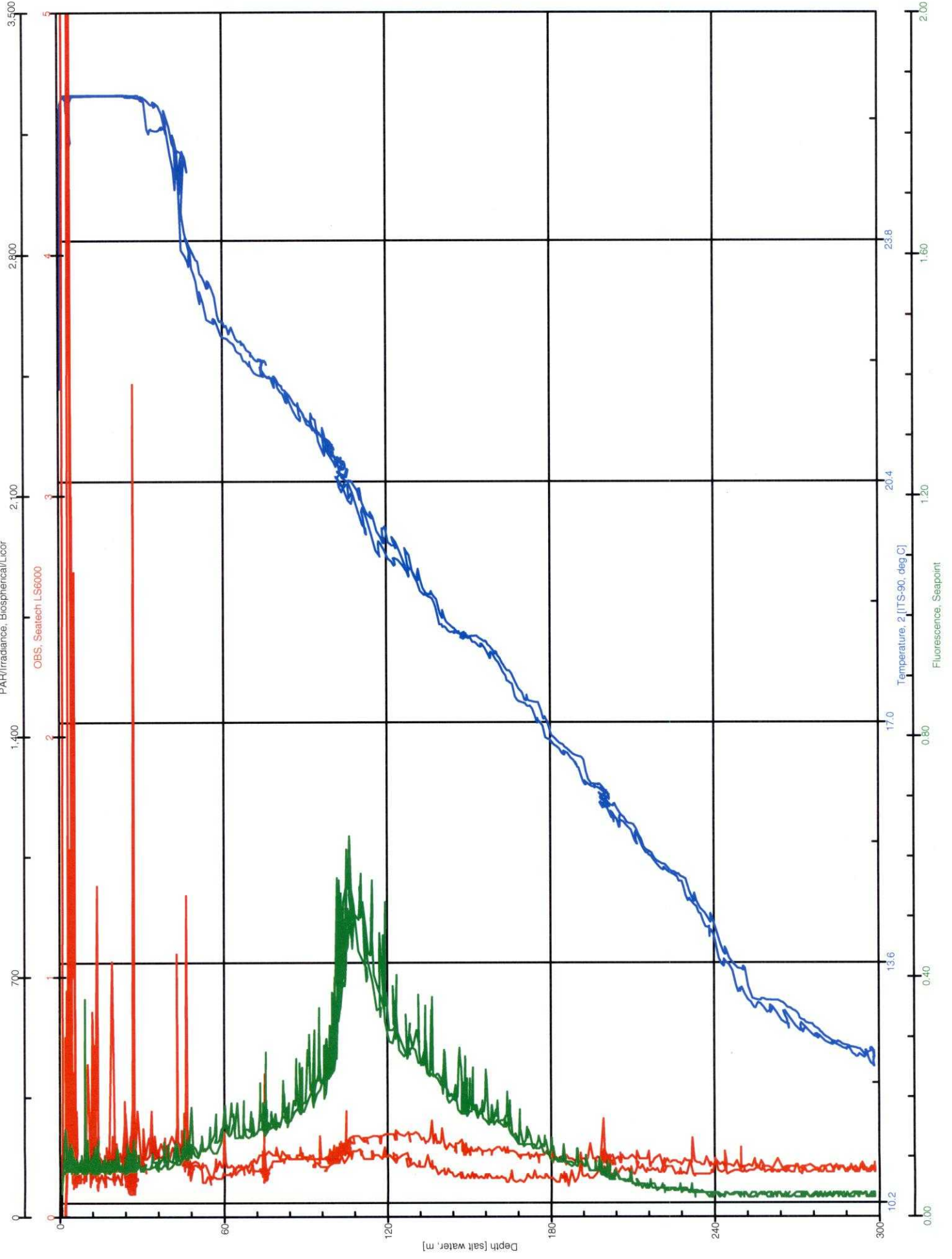


Bottle Firing Sequence
1 4 7
10 13 16
19 22

KM0814_d1, _s39_c1

PAP/Irradiance, Biospherical/Loor

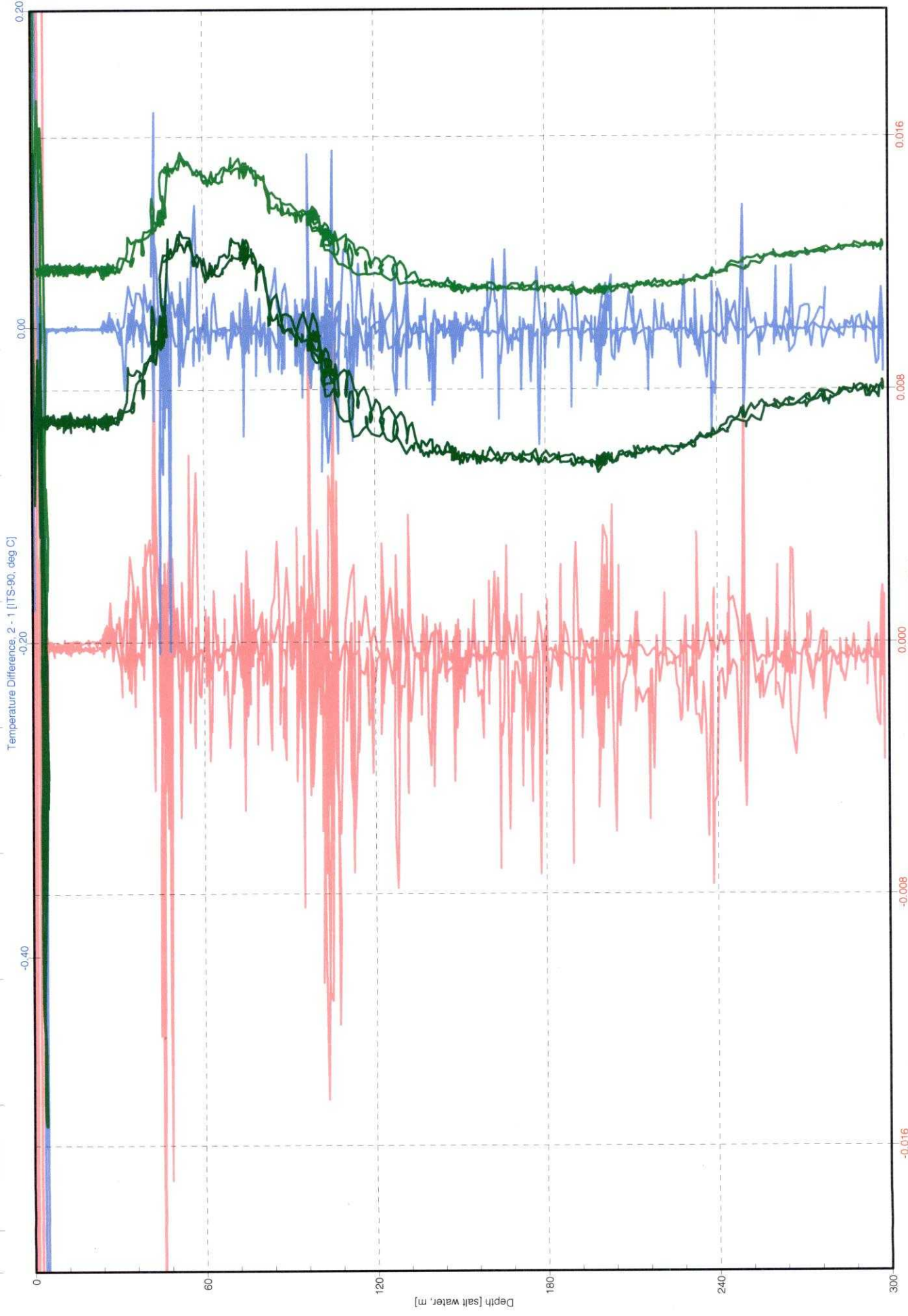
OBS, Seatech LS6000



KM0814_dis_...S39_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
		25.9	calil

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

Time-GMT	Comments
	Had to restart CTD
	software (no logging)

Station: 40	Cast: 1
Latitude start: 25d 9.515'N end: 25d 9.519'N	Longitude start: 157d 27.439'W end: 157d 27.438'W
Depth of water: 4719 meters	Date (GMT): 222 081091 2008
Pressure on Deck	Time: 17:01:39
Begin:	Start Log: 17:01:57
End: 0.42	In Water: 17:06:27
Max cast pressure: 500 dbar	Out of Water: 17:57:58

Trip/Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	17:37:15	17:37:35	201.04	200	DCM = 122 dbar
2		17:37:55	200.62	200	
3		17:38:15	200.56	200	
4	17:40:23	17:40:40	150.18	150	
5		17:41:00	149.83	150	
6		17:41:20	150.72	150	
7	17:42:39	17:42:55	121.54	DCM	
8		17:43:15	122.53	DCM	
9		17:43:35	122.83	DCM	
10	17:44:48	17:45:05	99.65	100	
11		17:45:25	100.67	100	
12		17:45:45	100.47	100	
13	17:46:51	17:47:10	75.25	75	
14		17:47:30	74.75	75	
15		17:47:50	75.18	75	
16	17:49:11	17:49:30	45.92	45	
17		17:49:50	45.48	45	
18		17:50:10	44.98	45	
19	17:51:20	17:51:40	25.61	25	
20		52:00	25.59	25	
21		52:20	25.53	25	
22	17:54:22	17:54:35	16.05	15	
23	17:55:40	17:56:00	6.47	5	}
24		17:56:20	4.92	5	

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

8.9.08

Station Number: 40 Date: 8/7/2008 (220) (GMT)

Cast Number: 1 Time: 1703 (GMT)

Operators: AF, PC, LS, JB, MNC, JH Position:

Target Depth 50

Rosette Position	Desired Depth	Nuts	DOC	LLNut	Chl a	FCM	FRRF	Hilton	LAV	Kolber
1	200	X	X	X	X	342 X 343	X	1L		1L
2	200									
3	200								1ZL	
4	150	X	X	X	X	344 X 345	X	1L		1L
5	150									
6	150									
7	DCM	X	X	X	X	346 X 347	X	1L		1L
8	DCM									
9	DCM								LAV	
10	100	X	X	X	X	348 X 349	X	1L		1L
11	100									
12	100									
13	75	X	X	X	X	350 X 351	X	1L		1L
14	75									
15	75									
16	45	X	X	X	X	352 X 353	X	1L		1L
17	45									
18	45									
19	25	X	X	X	X	354 X 355	X	1L		1L
20	25									
21	25									
22	15									
23	5	X	X	X	X	356 X 357	X	1L		1L
24	5									

NOTES:

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

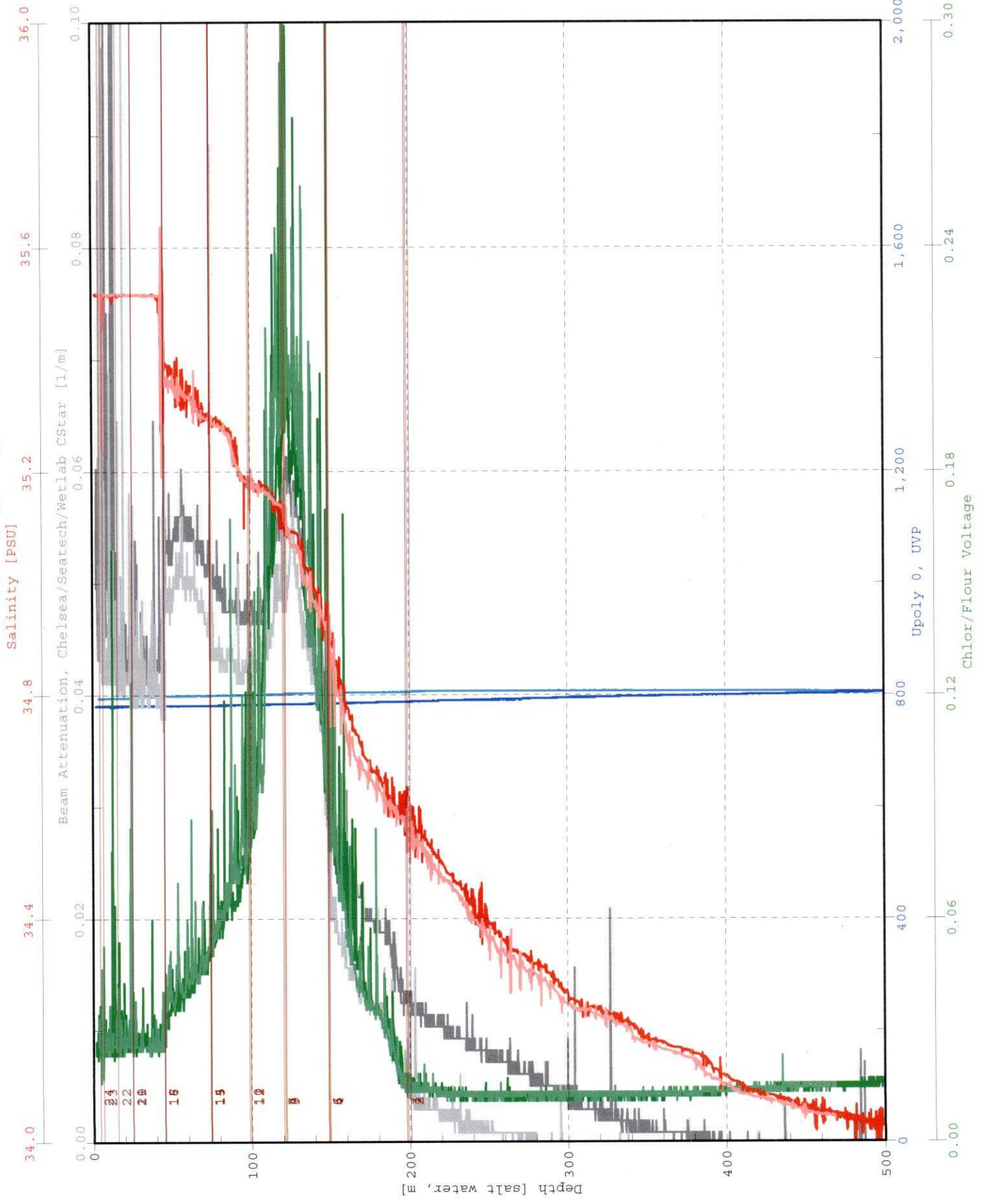
Station Number: 40 Date: (GMT)
 Cast Number: 1 Time: (GMT)
 Operators: AF, PC, JB, MNC, JH, LS Position:

Target depth = 500 dba 31P

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

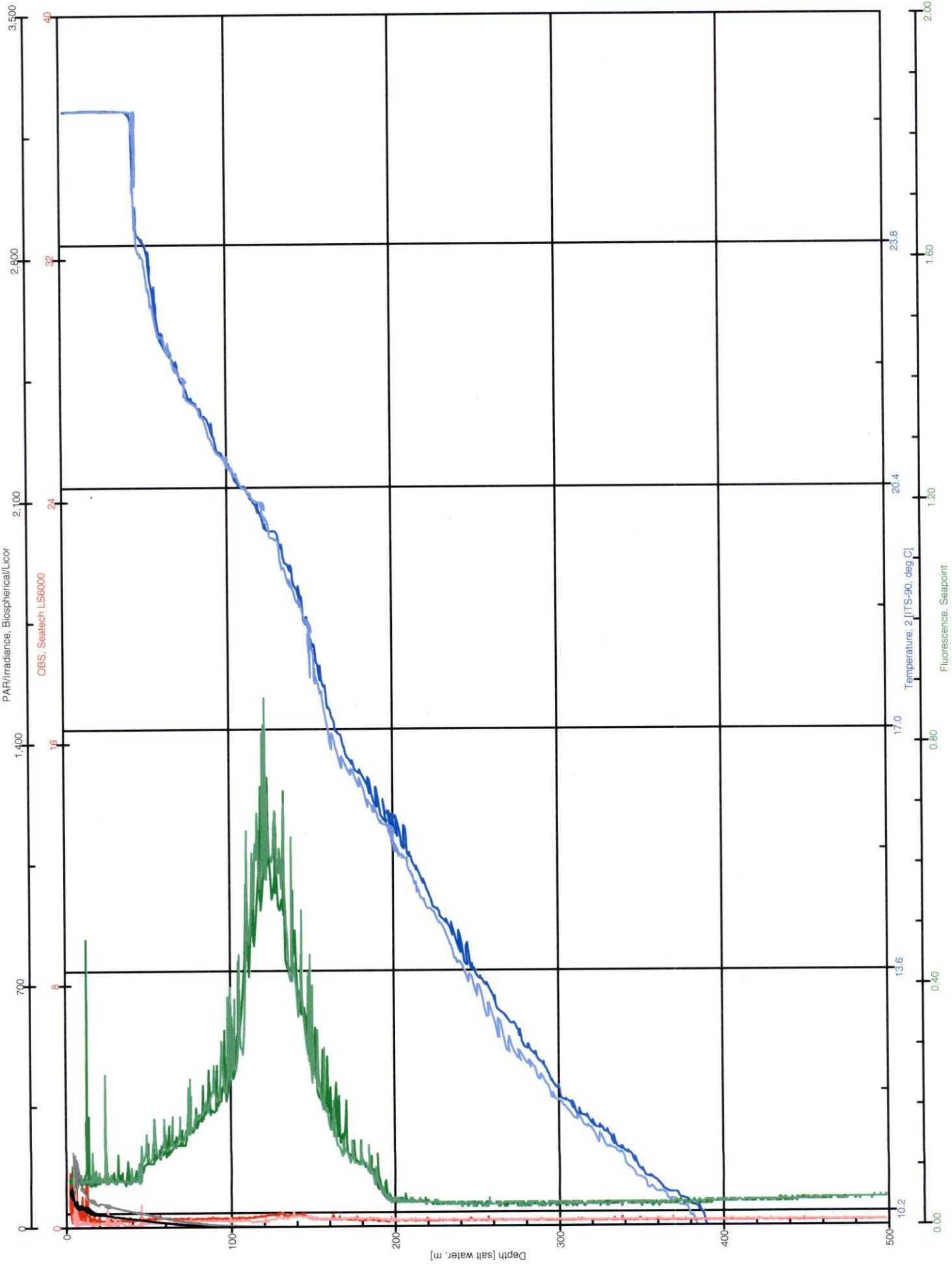
NOTES:

KM0814_disp1_S40_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_dis_r__S40_C1
PAR/Irradiance, Biospherical/Licor



OBS, Seatech LS6000

Temperature, 2 [ITS-90, deg C]

Fluorescence, Seapoint

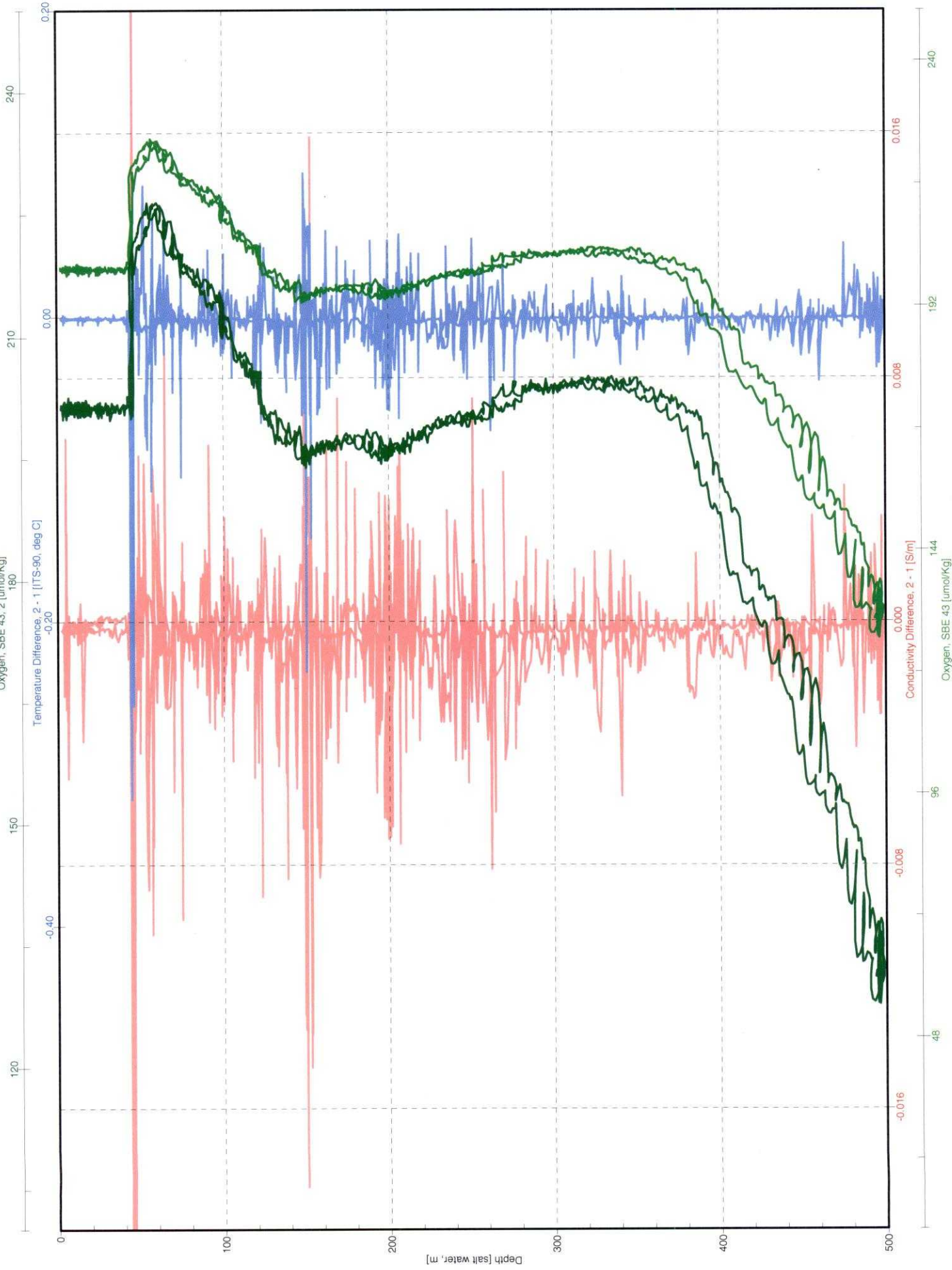
KM0814_disp3_S40_C1

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

Time-GMT	Comments

Station: 40	Cast: 2
Latitude start: 25° 9.518' N end: 25° 9.518' N	Longitude start: 157° 27.437' W end: 157° 27.435' W
Depth of water: 4719 meters	Date (GMT): (222) 08 109 / 2008
Pressure on Deck	Time: 19:00:00 Z
Begin: 0.70 dbar	Start Log: 19:01:00 Z
End: 0.15 dbar	In Water: 19:03:06 Z
Max cast pressure: 1000 dbar	Out of Water: 20:24:28

Trip/ Niskin	Time GMT	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	19:32:10	19:32:30	1000.0	1000	10 m @ 19:05:35
2	19:36:15	19:36:30	901.0	900	
3	19:38:48	19:39:00	850.5	850	
4	19:41:26	19:41:45	800.7	800	
5	19:45:43	19:46:00	699.9	700	
6	19:48:20	19:48:45	652.0	650	
7	19:50:48	19:51:00	602.1	600	
8	19:54:38	19:55:00	500.8	500	
9	19:57:52	19:57:15	451.1	450	
10	20:00:20	20:00:45	401.5	400	
11	20:04:28	20:04:45	300.6	300	
12	20:06:44	20:07:00	250.8	250	
13	20:09:05	20:09:30	201.8	200	
14	20:12:15	20:12:30	115.9	DEM	117 dbar
15	20:13:40	20:14:00	100.9	100	
16	20:15:13	20:15:30	74.8	75	
17		20:15:45	74.3	75	
18		20:16:00	74.9	75	
19		20:16:15	74.8	75	
20		20:16:30	73.9	75	
21		20:16:45	76.3	75	
22		20:17:00	75.8	75	
23	20:18:03	20:19:00	44.3	45	
24	20:22:19	20:22:30	4.9	5	3 m wire out

C-MORE CRUISE LOG

OPEREX

Station Data Sheet

*8-9-08
1903*

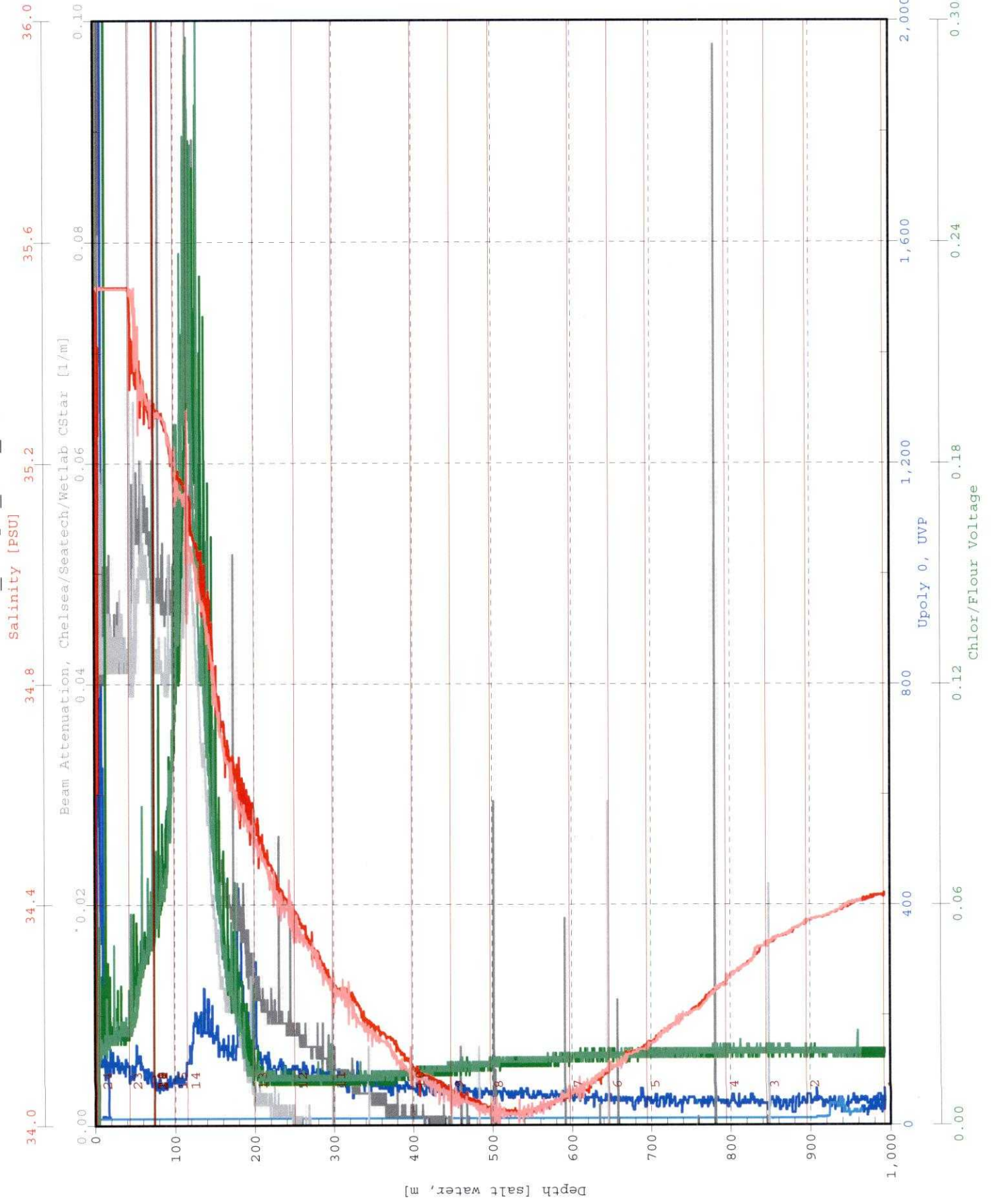
Station Number: 40
 Cast Number: 2
 Operators: AF, SP, ZK, LG

Date: 8/7/2008 (220) (GMT)
 Time: _____ (GMT)
 Position: _____

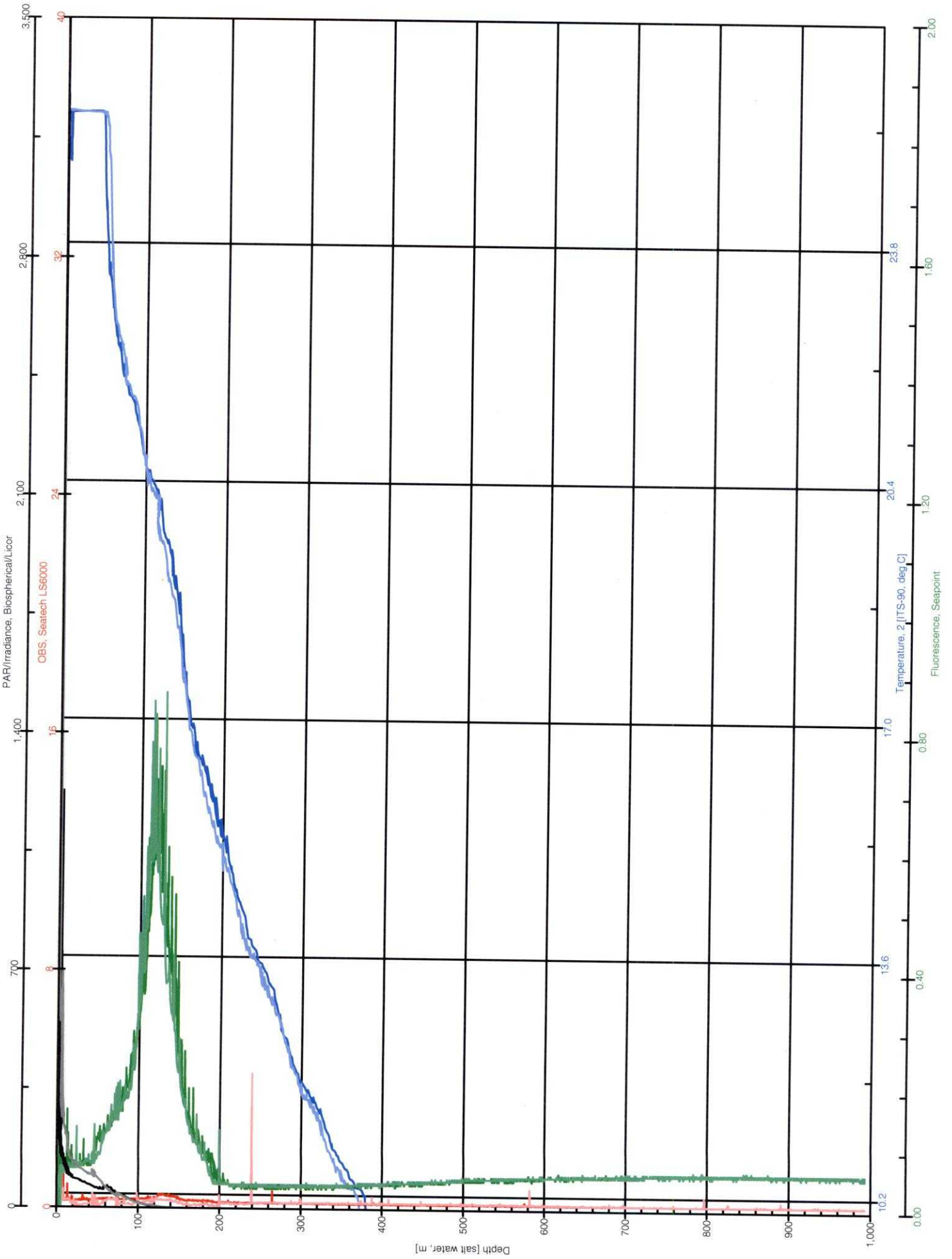
Rosette Position	Desired Depth	Krey	Ventouras						
1	1000	1L							
2	900	1L							
3	850	1L							
4	800	1L							
5	700	1L							
6	650	1L							
7	600	1L							
8	500	1L							
9	450	1L							
10	400	1L							
11	300	1L							
12	250	1L							
13	200	1L							
14	DCM	1L							
15	100	1L							
16	75		12L						
17	75		12L						
18	75		12L						
19	75		12L						
20	75		12L						
21	75		12L						
22	75		12L						
23	45	12L							
24	5	12L							

NOTES:

KM0814_disp1_S40_C2



KM0814_d1c, _S40_C2



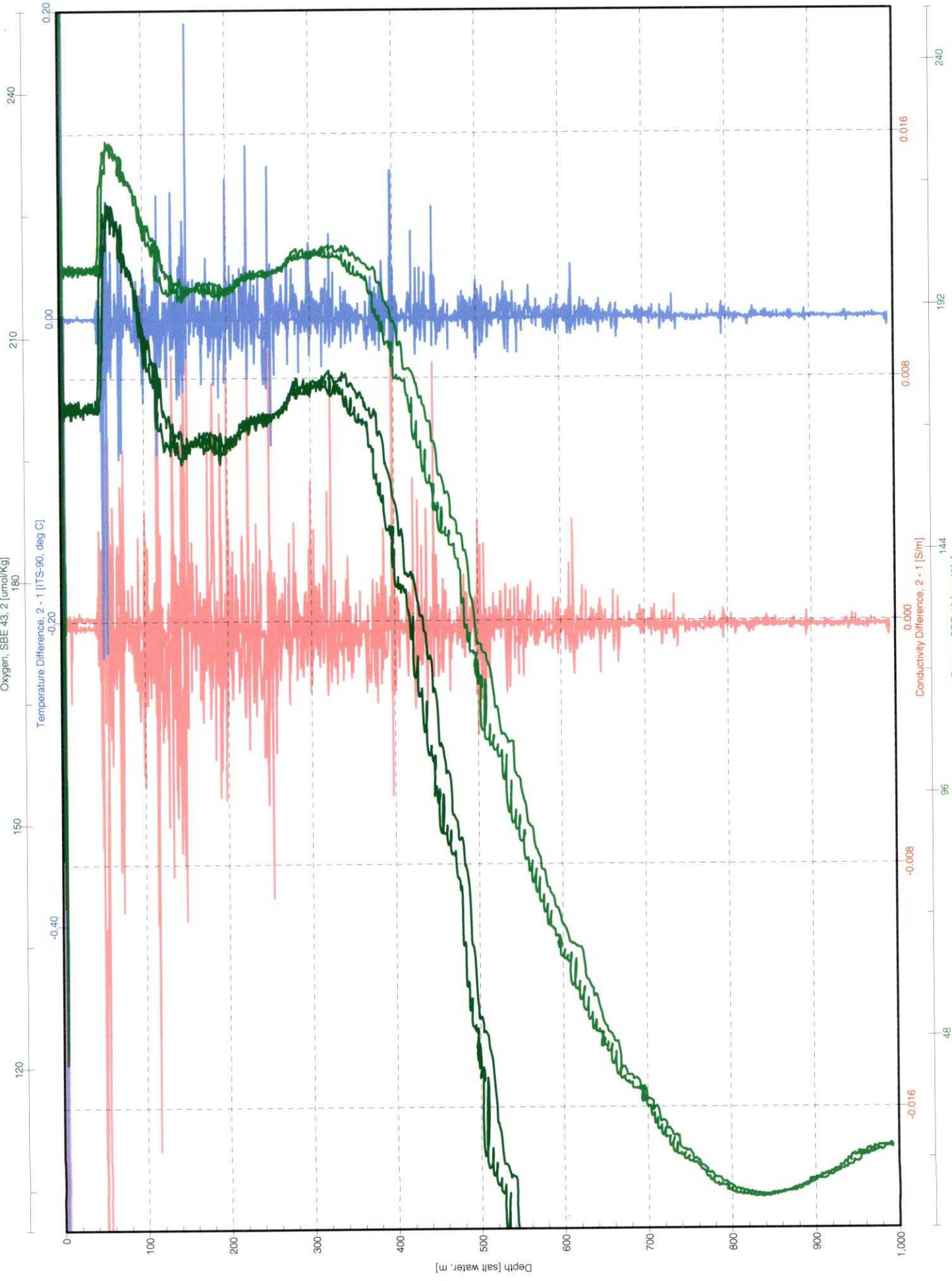
KM0814_d1..._S40_C2

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

Time-GMT	Comments

Station: 41	Cast: 1
Latitude start: 24 10.044' N	Longitude start: 157 45.024' W
end:	end:
Depth of water: 4428 meters	Date (GMT): (223) 08/10/2008
Pressure on Deck	Time: 02:58:00Z
Begin: 494	Start Log: 02:59:52Z
End:	In Water: 03:04:22Z
Max cast pressure: 300 dbar	Out of Water: 03:43:23Z

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
2 (223)	03:27:22	03:27:30	151.6	200 150	03:06:09 @10m
3		03:27:50	150.6	150	
4 (223)	03:29:11	03:29:30	117.7	DCM	118 dbar
5		03:29:50	118.3	DCM	118 dbar
6 (223)	03:30:38	03:30:50	100.2	100	
7 (223)	03:31:50	03:32:10	73.9	75	
8		03:32:25	74.7	75	
9 (223)	03:33:30	03:33:50	45.1	45	
10		03:34:10	43.9	45	
11		03:34:25	45.3	45	
12		03:34:40	45.4	45	
13		03:34:55	44.5	45	
14		03:35:10	44.4	45	
15		03:35:30	44.2	45	
16	03:36:33	03:36:50	24.5	25	
17		03:37:10	25.0	25	
18		03:37:30	25.9	25	
19		03:37:50	24.9	25	
20		03:38:10	24.9	25	
21		03:38:30	25.2	25	
22		03:38:50	25.5	25	
23 (223)	03:40:30	03:40:45	6.0	5	
24		03:41:00	7.0	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

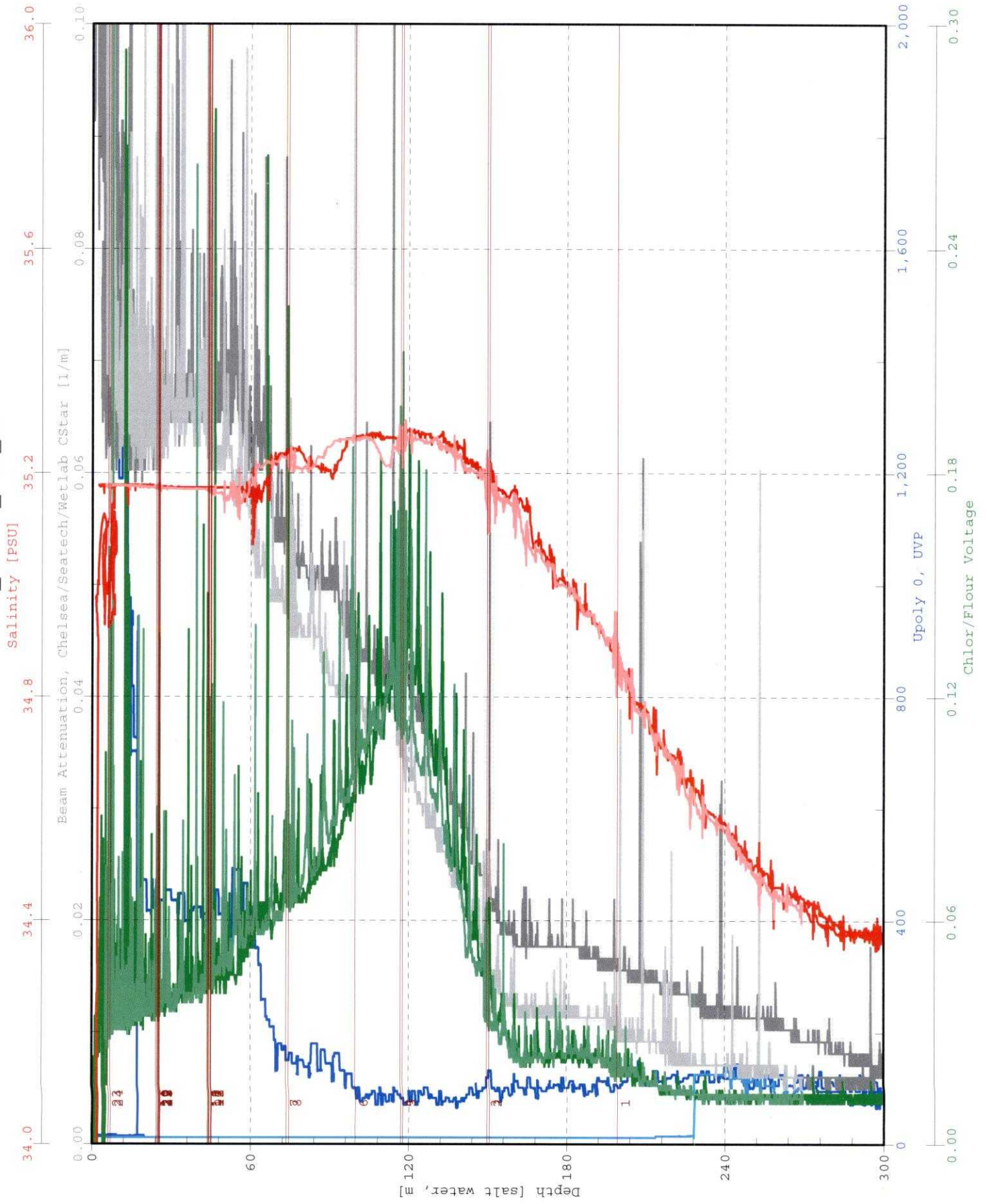
Station Number: 41
Cast Number: 1
Operators: AF, PC, LS, JH, MNC, JB

10
Date: 8/1/2008 (223) (GMT)
Time: 02:58:2008 (GMT)
Position: 24° 10.044' N 157° 45.029' W
Watkins Watkins Watkins

Rosette Position	Desired Depth	HPLC	CHL	NUTS	FRRF	P-FRACT/DNA-P	AR	15N/13C		
1	200	X	X	X	X					
2	200 150									
3	150	X	X	X	X					
4	DCM	X	X	X	X					
5	DCM					12				
6	100	X	X	X	X					
7	75	X	X	X	X					
8	75					12				
9	45	X	X	X	X					
10	45							12		
11	45							12		
12	45							12		
13	45					12				
14	45					12				
15	45						12			
16	25	X	X	X	X					
17	25							12		
18	25							12		
19	25							12		
20	25					12				
21	25					12				
22	25					12				
23	5									
24	5	X	X	X	X					

NOTES:

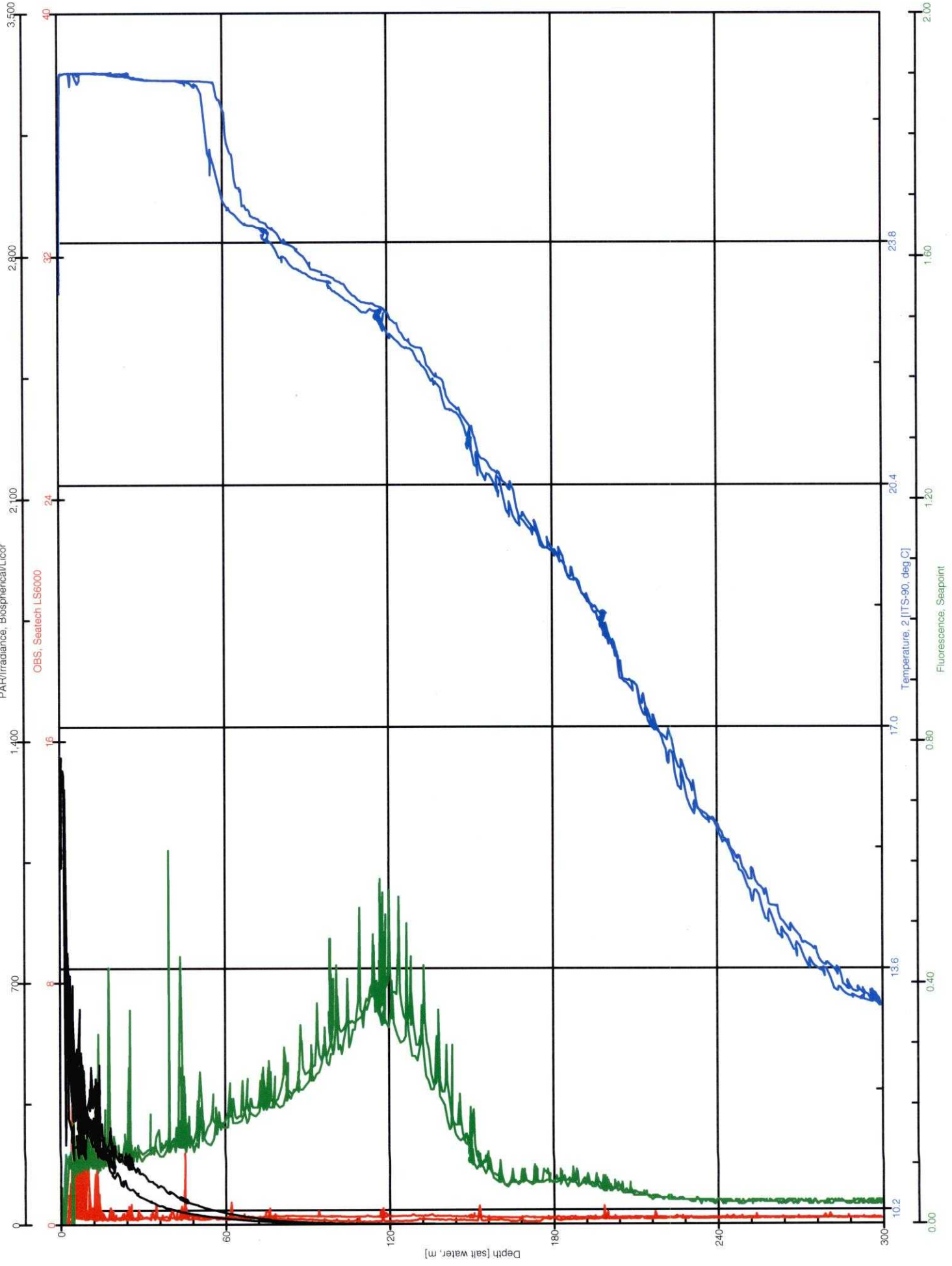
KM0814_d1_1_S41_C1



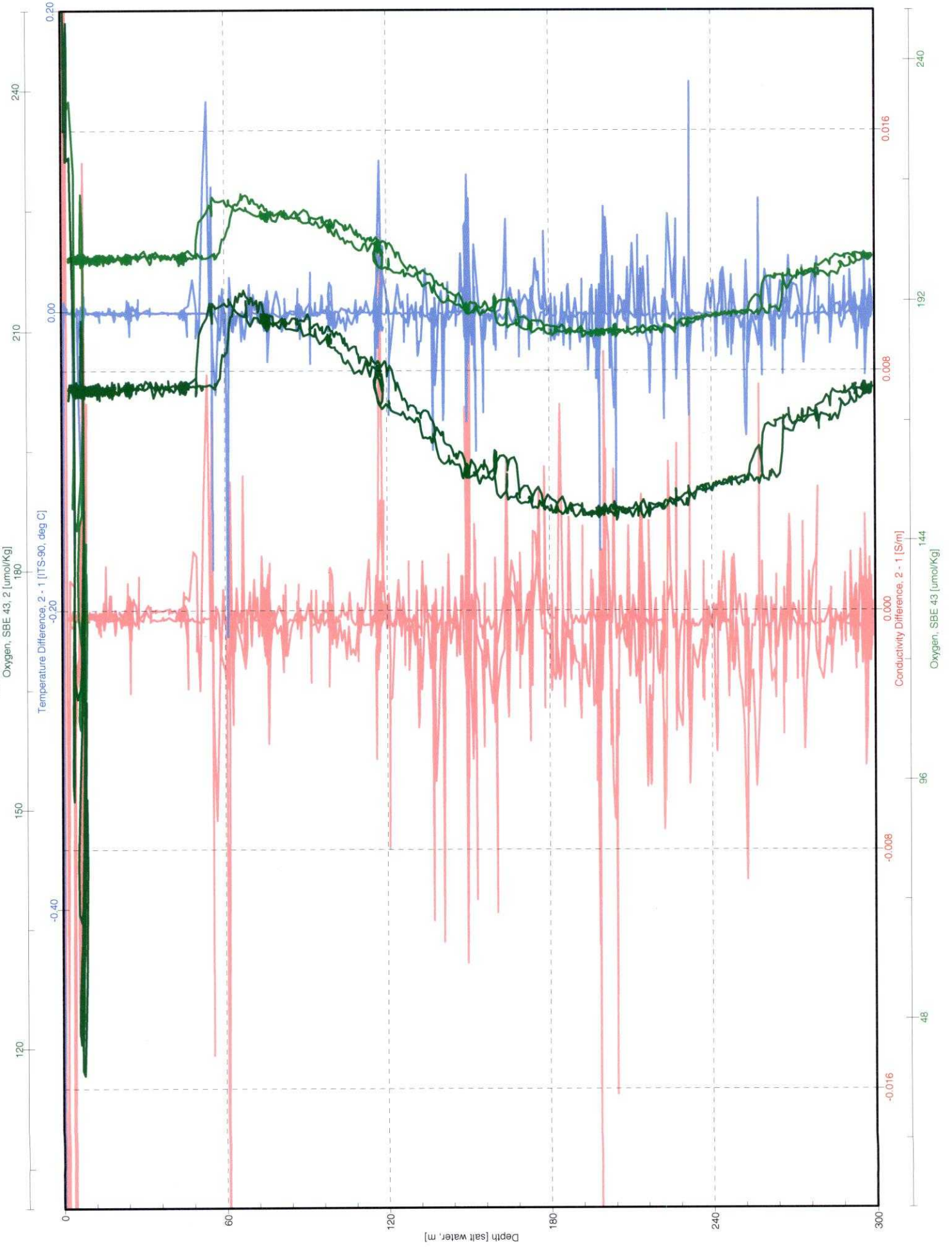
KM0814_1_S41_c1

PAR/Irradiance, Biospherical/Licor

OBS. Seatech LS6000



KM0814_3_S41_C



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.4	Operator
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 42	Cast: 1
Latitude start: 24° 7.730' N end: 24° 7.714' N	Longitude start: 158° 5.984' W end: 158° 5.827' W
Depth of water: 4503 meters	Date (GMT): (223) 08/10/2008
Pressure on Deck	Time: 05:35:00Z
Begin: .810 dbar End: .524	Start Log: 05:50:30Z In Water: 05:54:20Z
Max cast pressure: 200 dbar	Out of Water: 06:25:46Z

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
2 (223) 06:09:41	06:09:50	151.6	150		
3 (223) 06:12:00	06:12:10	116.6	DCM	116 dbar	
4 (223) 06:13:11	06:13:30	101.0	100		
5 (223) 06:14:50	06:15:10	75.5	75		
6 (223) 06:16:33	06:16:50	46.7	45		
7 (223) 06:17:43	06:17:50	30.4	30		
8	06:18:10	29.9	30		
9	06:18:25	30.1	30		
10	06:18:40	31.1	30		
11	06:18:55	30.3	30		
12	06:19:10	28.8	30		
13 (223) 06:20:05	06:20:20	23.2	25		
14 (223) 06:23:00	06:23:10	6.3	5		
15					
16				06:27:30 CTD on deck	
17					
18					
19					
20					
21					
22					
23					
24					

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

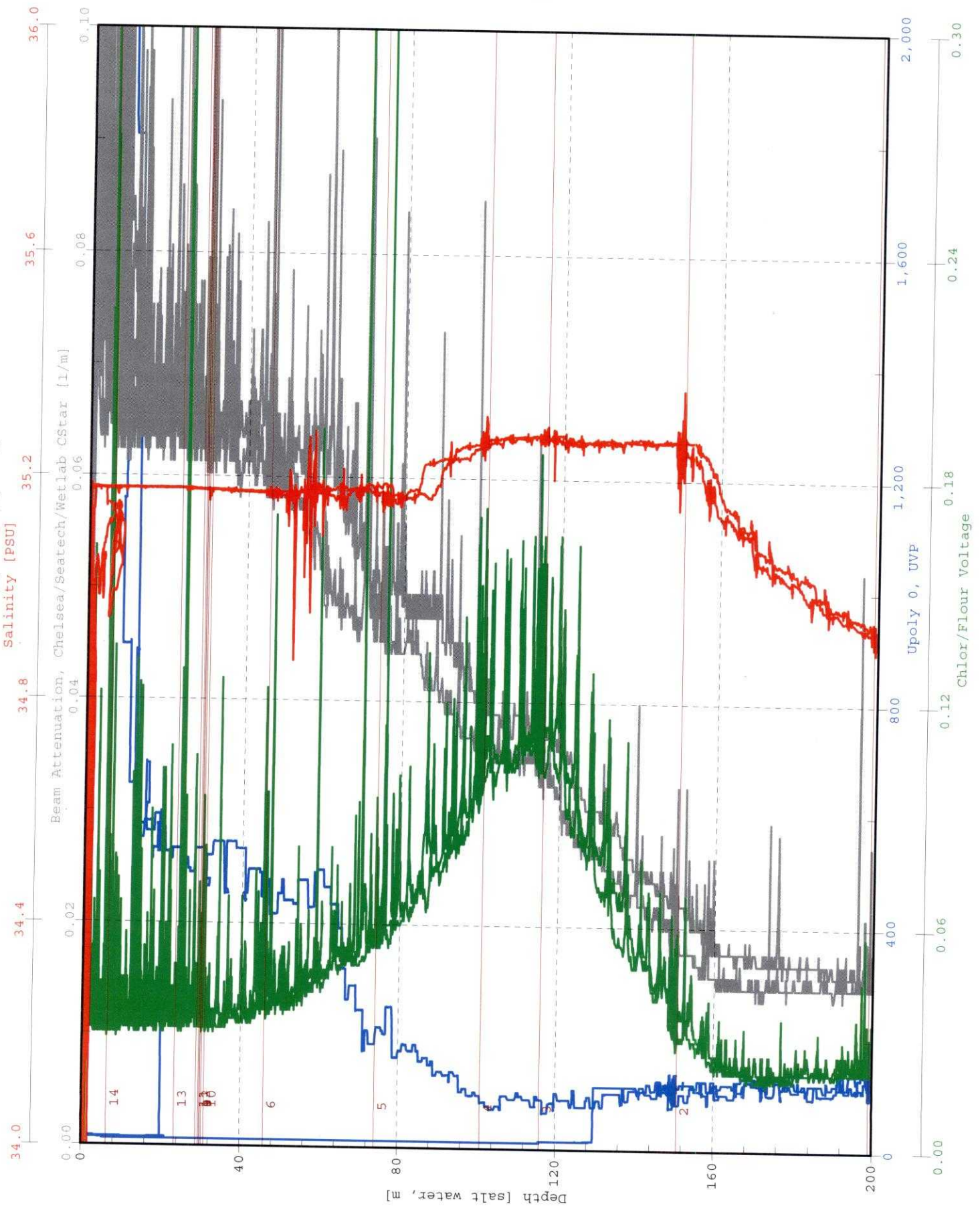
Station Number: 42, Cast 1
 Cast Number: 1
 Operators: AF, PC, LS, JH, MNC, JB

Date: 8/
 Time: 05:35:00Z
 Position: 24.7.030'N 158 5.954'W
 Watkins Watkins

Rosette Position	Desired Depth	Becker	Don				
1	200		X				
2	150		X				
3	DCM		X				
4	100		X				
5	75		X				
6	45		X				
7	30	X	X				
8	30	X	X				
9	30	X					
10	30	X					
11	30	X					
12	30	X					
13	25		X				
14	5		X				
15							
16							
17							
18							
19							
20							
21							
22							
23							

NOTES:

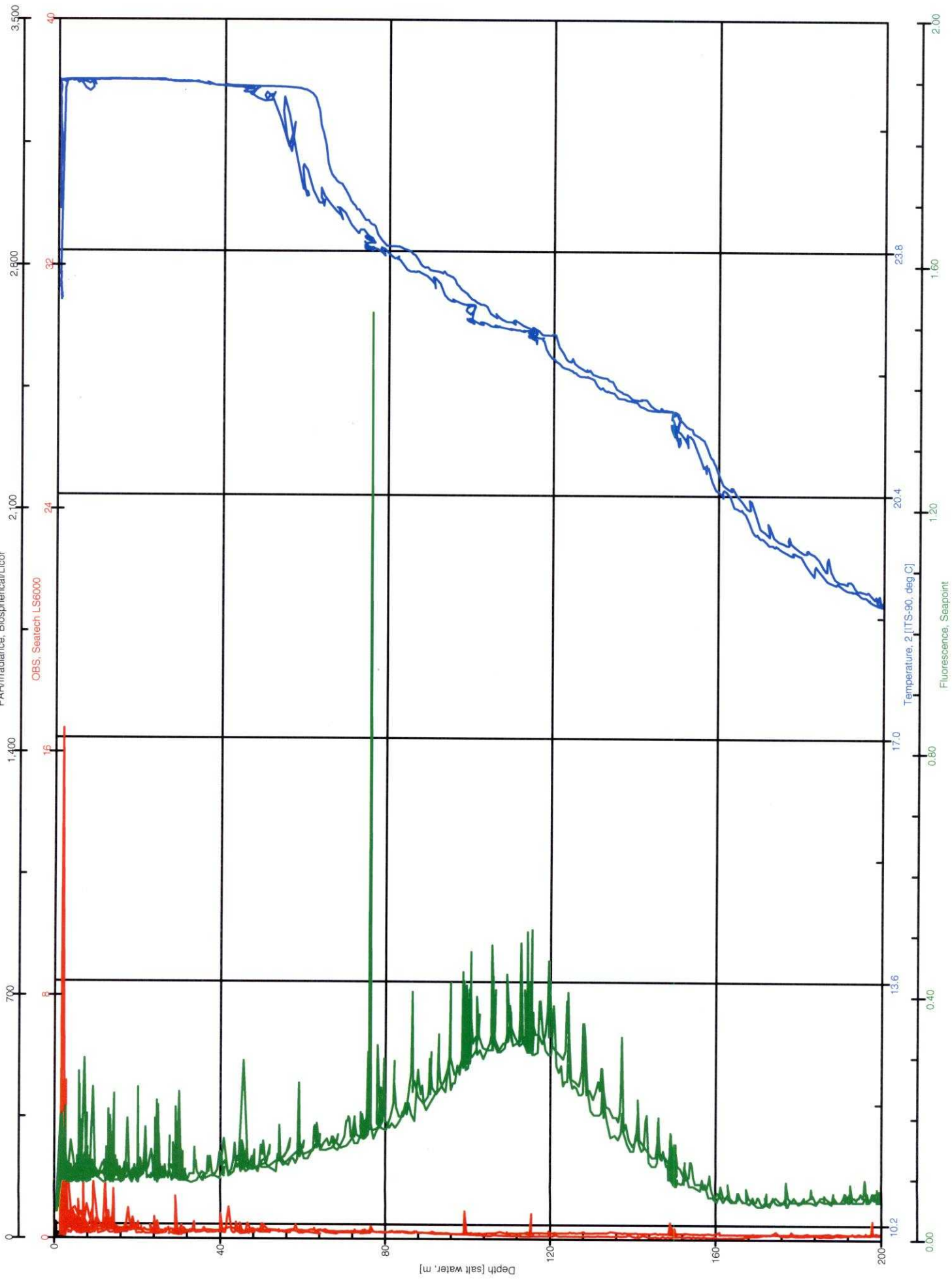
KM0814_displ_S42_C1



Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14

KM0814_disr_-_S42_c1

PAR/Irradiance, Biospherical/Lcor



OBS, Seatech LS6000

Temperature, 2 [ITS-90, deg.C]

Fluorescence, Seapoint

Depth [salt water, m]

km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
	12L	26.4	JK

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

Time-GMT	Comments

Station: 42	Cast: 2
Latitude start: 24 7.014'	Longitude start: 158 5.827'W
Latitude end: 24 6.996'N	Longitude end: 158 5.684'W
Depth of water: 4504 meters	Date (GMT): (223) 08/10/2008
Pressure on Deck	Time: 06:44:07Z
Begin: 0.881	Start Log: 06:59:47Z
End: 0.563	In Water: 07:01:59Z
Max cast pressure: 300 dbar	Out of Water: (223) 07:41:51Z

Trip/Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1 (223)	07:20:53	07:21:10	199.1	200	Wind ~14kts Tive 90.8°
2 (223)	07:23:23	07:23:45	150.3	150	07:02:04
3 (223)	07:25:52	07:26:10	108.1	DCM	108 dbar
4		07:26:30	107.6	DCM	108
5 (223)	07:27:19	07:27:30	99.8	100	
6	07:28:59	07:29:10	74.2	75	
7		07:29:30	74.6	75	
8 (223)	07:30:47	07:31:10	44.5	45	
9		07:31:30	44.2	45	
10		07:31:50	45.7	45	
11		07:32:10	45.5	45	
12		07:32:30	43.4	45	
13		07:32:50	42.4	45	
14		07:33:10	45.3	45	
15 (223)	07:34:10	07:34:30	25.0	25	
16		07:34:50	23.5	25	
17		07:35:10	23.5	25	
18		07:35:30	24.6	25	
19		07:35:50	24.8	25	
20		07:36:10	24.0	25	
21		07:36:30	23.7	25	
22 (223)	07:37:43	07:38:00	6.1	5	
23		07:38:30	6.4	5	
24		07:38:50	5.7	5	07 43 26Z on Deck

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 42 Cast 2
 Cast Number: 1
 Operators: AF, PC, LS, JH, MNC, JB

Date: 8/7/2008 (223) (GMT)
 Time: 06:44:07 Z (GMT)
 Position: 24 7.014' N 158 5.827' W
 Watkins Watkins Watkins

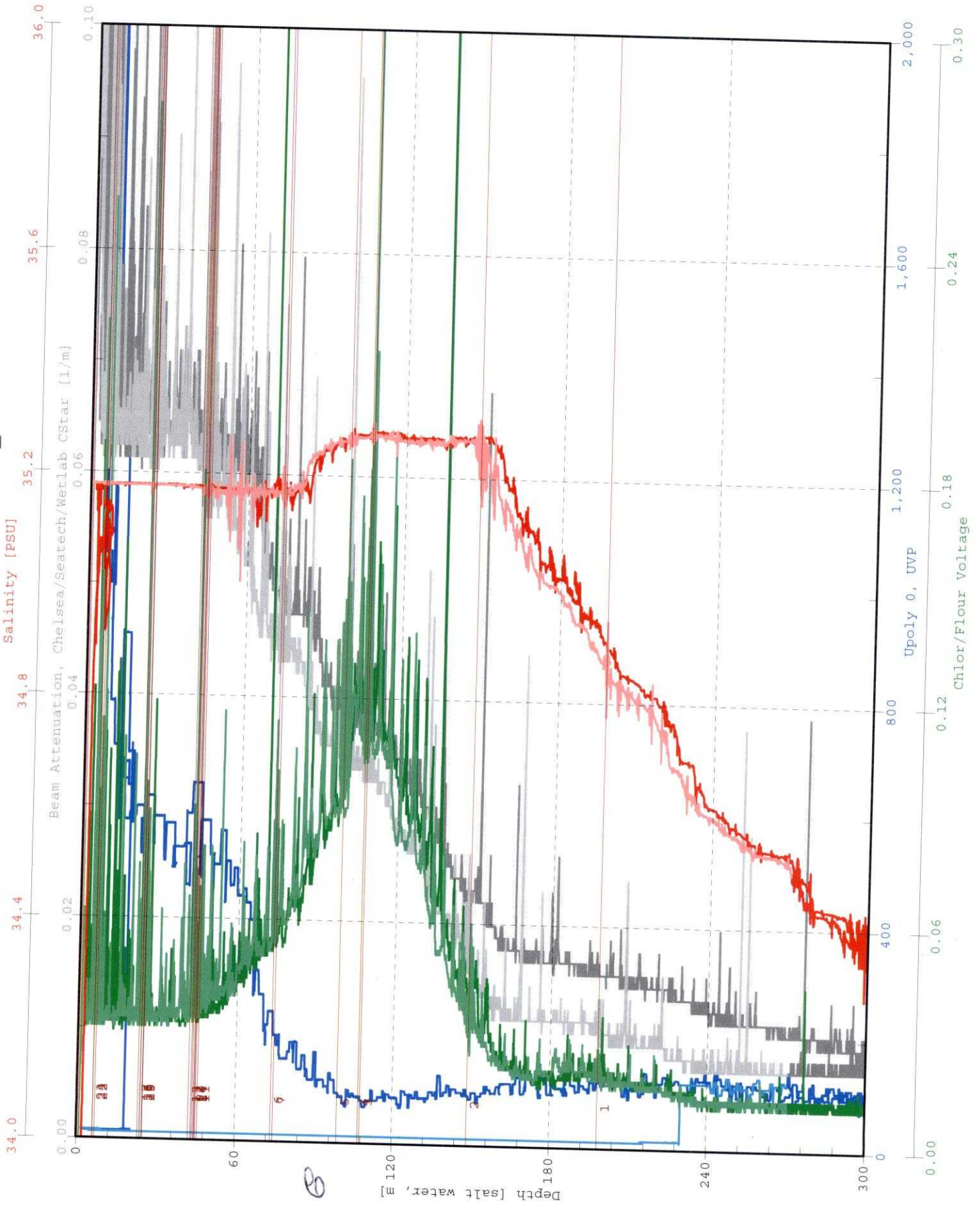
Target 300

Rosette Position	Desired Depth	HPLC	CHL	NUTS	FRRF	P-FRACT/DNA-P	AR	15N/13C		
1	200	X	X	X	X					
2	150	X	X	X	X					
3	DCM	X	X	X	X					
4	DCM					12				
5	100	X	X	X	X					
6	75	X	X	X	X					
7	75					12				
8	45	X	X	X	X					
9	45							12		
10	45							12		
11	45							12		
12	45					12				
13	45					12				
14	45						12			
15	25	X	X	X	X					
16	25							12		
17	25							12		
18	25							12		
19	25					12				
20	25					12				
21	25					12				
22	5									
23	5	X	X	X	X					

24
 NOTES:

No chl to be sampled

KM0814_disp1_S42_C2



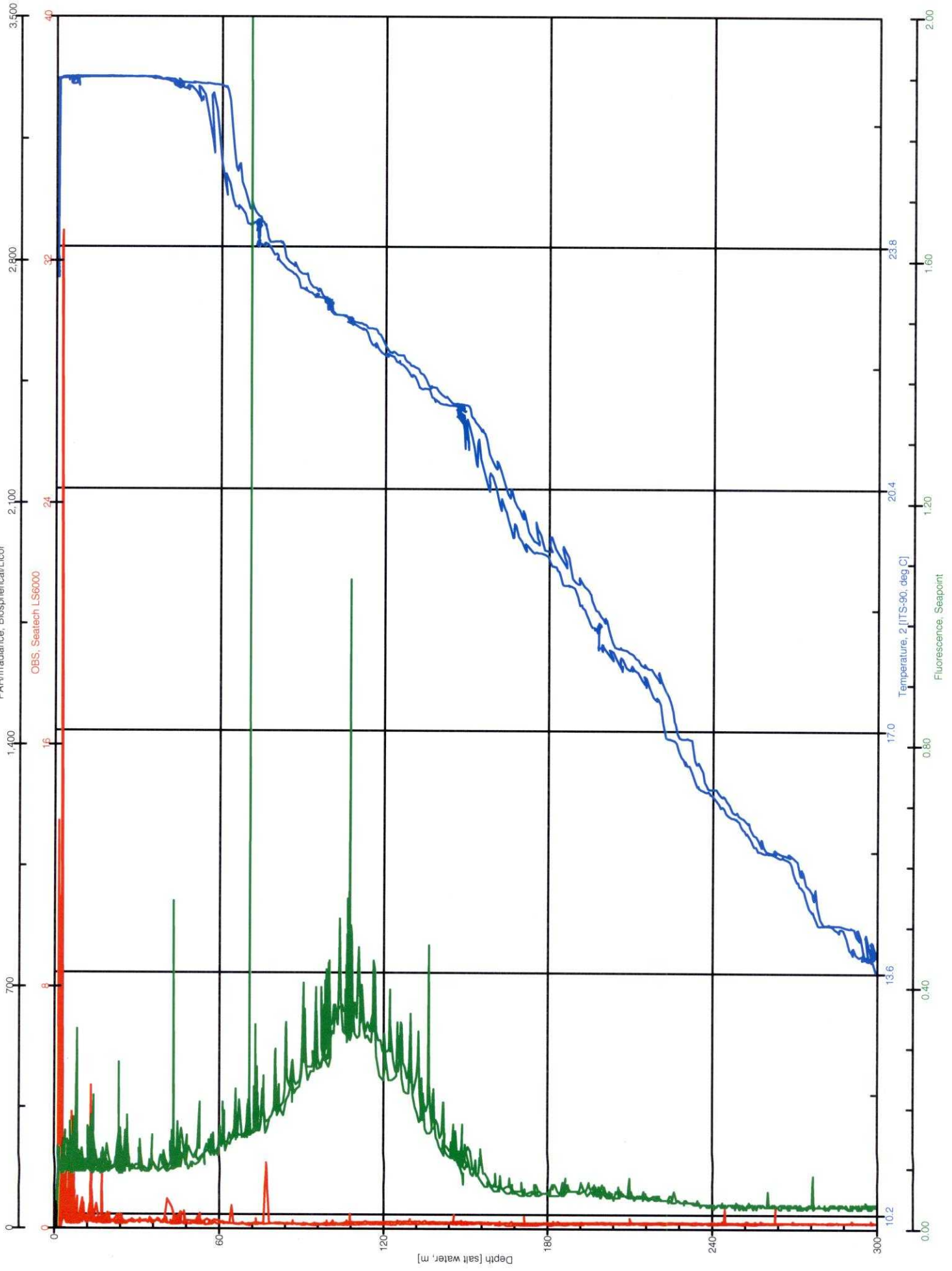
Bottle Firing Sequence

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

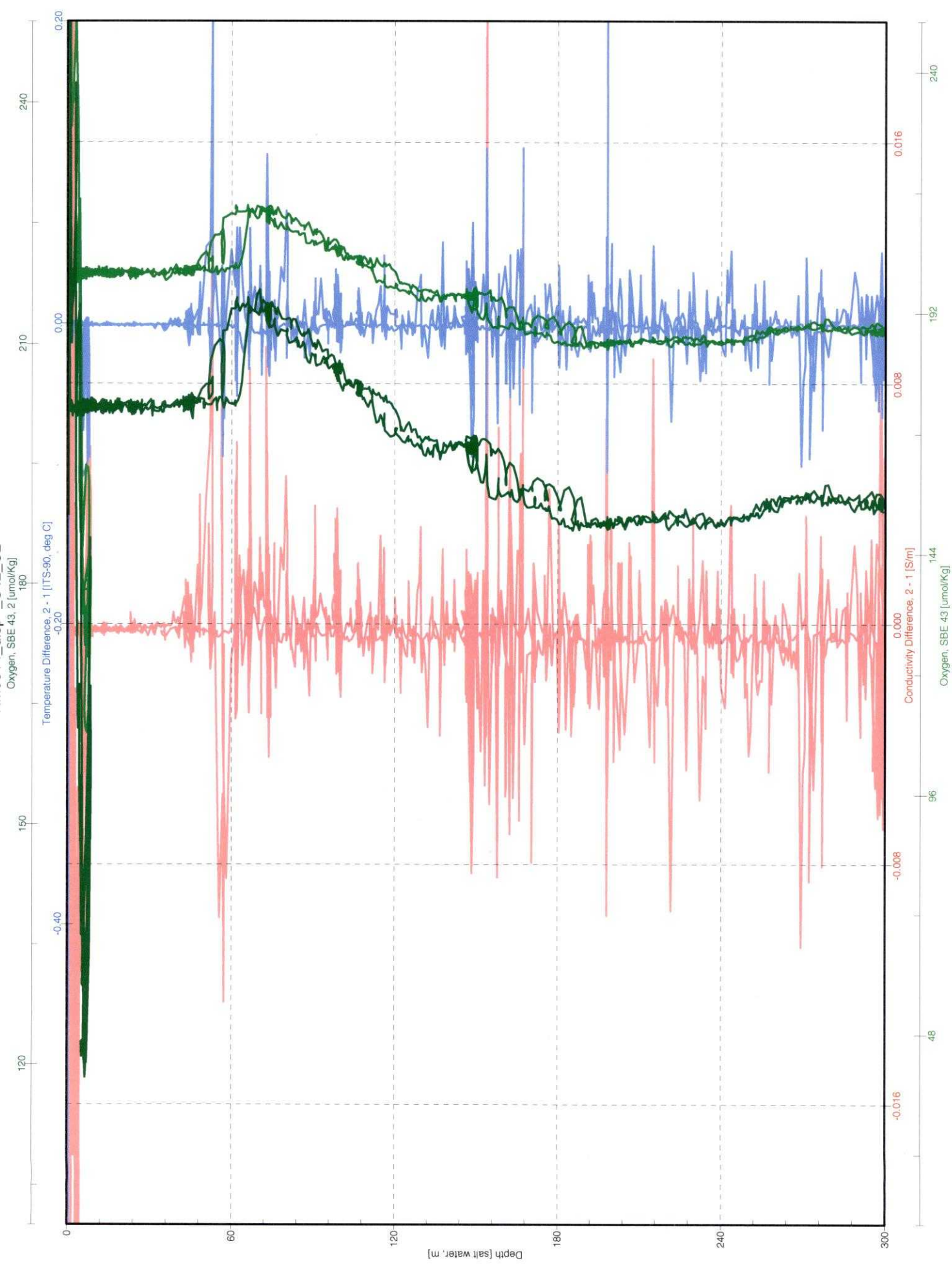
KM0814_disr_-_S42_c2

PAR/radiance, Biospherical/Licor

OBS, Seatech LS6000



KM0814_dis_S42_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.5	Calil

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

Time-GMT	Comments

Station: 43	Cast: 1
Latitude start: 24d 3.977' W	Longitude start: 158d 27.964' W
end: 24d 3.981	end: 158d 27.968' W
Depth of water: 4634 meters	Date (GMT): 223 0811012008
Pressure on Deck	Time: 09:58:28Z
Begin: 0.61	Start Log: 10:02:08
End: 0.53	In Water: 10:06:16
Max cast pressure: 300 dbar	Out of Water: 10:45:19

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
2	10:26:24	10:26:55	149.31	150	
3	10:28:44	10:29:00	109.81	DCU	
4		10:29:20	109.02	DCU	
5	10:30:30	10:30:50	101.86	100	
6	10:32:12	10:32:30	75.48	75	
7		10:32:50	75.50	75	
8	10:34:19	10:34:40	44.85	45	
9		10:35:00	44.00	45	
10		10:35:20	44.94	45	
11		10:35:40	45.26	45	
12		10:36:00	46.30	45	
13		10:36:20	45.95	45	
14		10:36:40	44.74	45	
15	10:37:55	10:38:20	25.98	25	
16		38:40	25.46	25	
17		39:00	24.71	25	
18		40:00	25.21	25	
19		40:20	26.63	25	
20		40:40	26.06	25	
21		41:00	26.29	25	
22		41:20	25.87	25	
23		41:40	25.81	25	
24	10:42:57	10:43:15	5.94	5	→ 3 m of wire out

C-MORE CRUISE LOG

OPEREX

Station Data Sheet

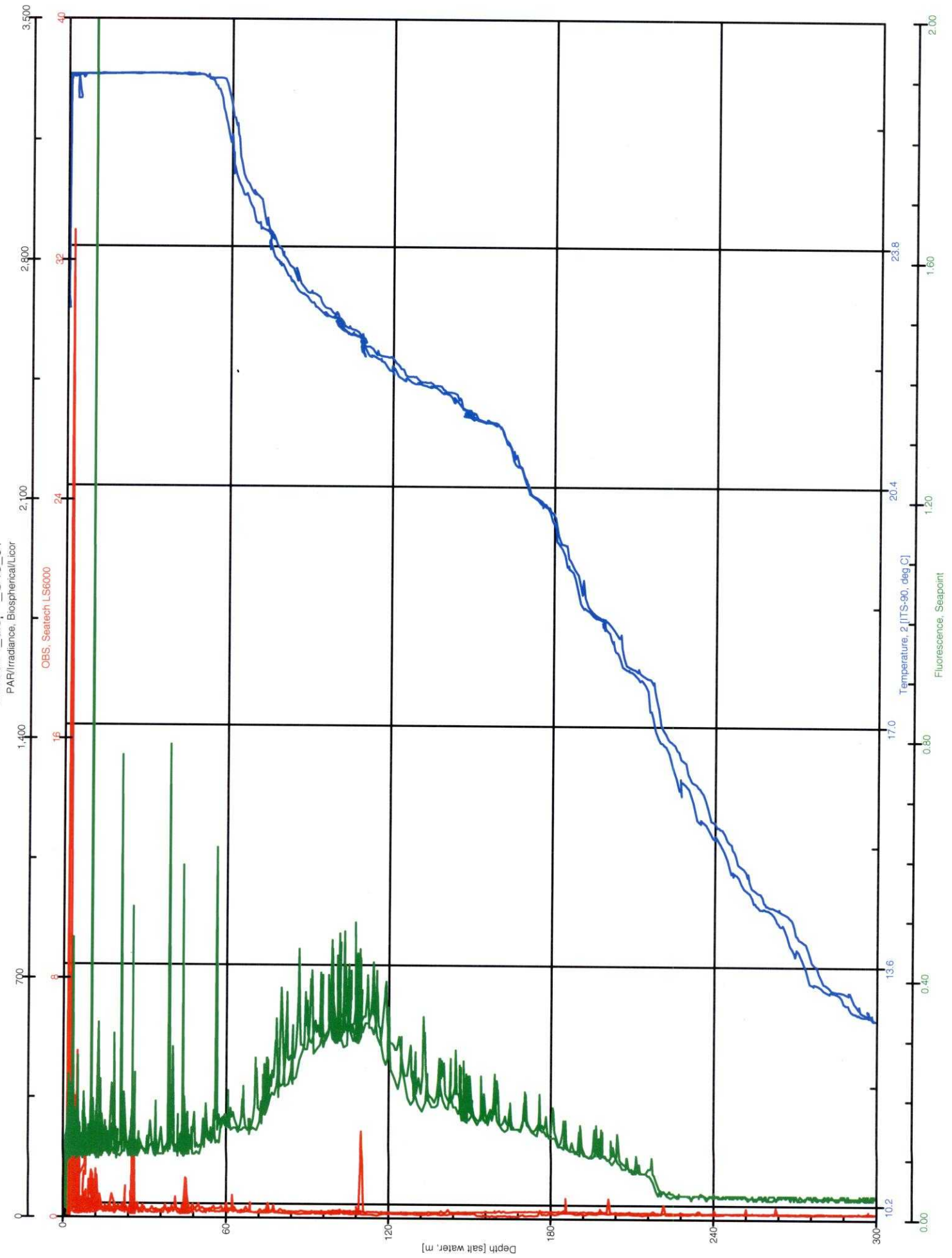
Station Number: 43
 Cast Number: 1
 Operators: AF, PC, LS, JH, MNC, JB

Date: 8/9/2008 (223) (GMT)
 Time: _____ (GMT)
 Position: _____
 Watkins Watkins Watkins

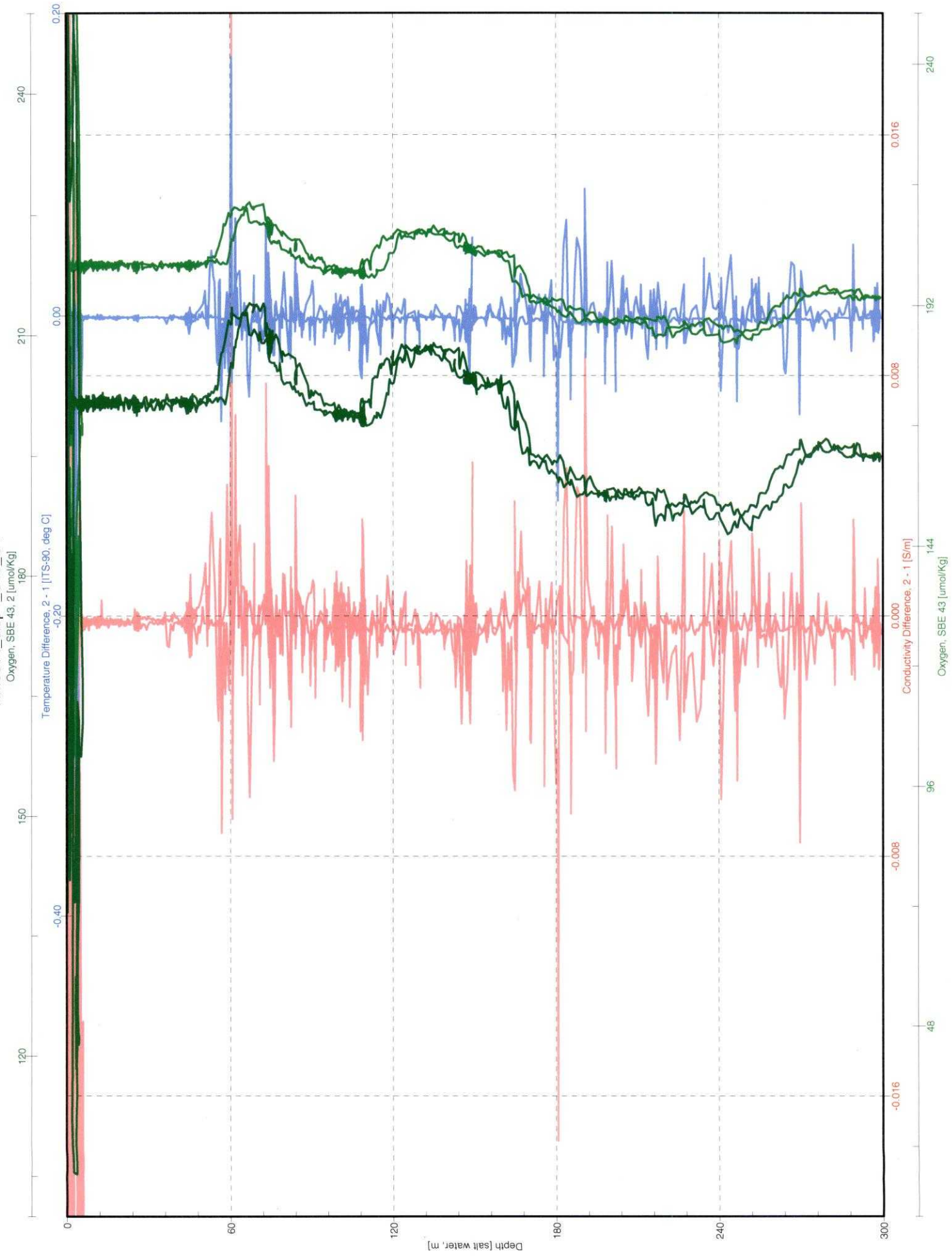
Rosette Position	Desired Depth	HPLC	CHL	NUTS	FRRF	P-FRACT/DNA-P	AR	15N/13C	Paerl 15N2
1	200	X	X	X	X				
2	150	X	X	X	X				
3	DCM	X	X	X	X				
4	DCM					12			
5	100	X	X	X	X				
6	75	X	X	X	X				
7	75					12			
8	45	X	X	X	X				
9	45							12	
10	45							12	
11	45							12	
12	45					12			
13	45					12			
14	45						12		
15	25	X	X	X	X				8
16	25							12	
17	25							12	
18	25							12	
19	25					12			
20	25					12			
21	25					12			
22	25								12
23	25								12
24	5	X	X	X	X				

NOTES:

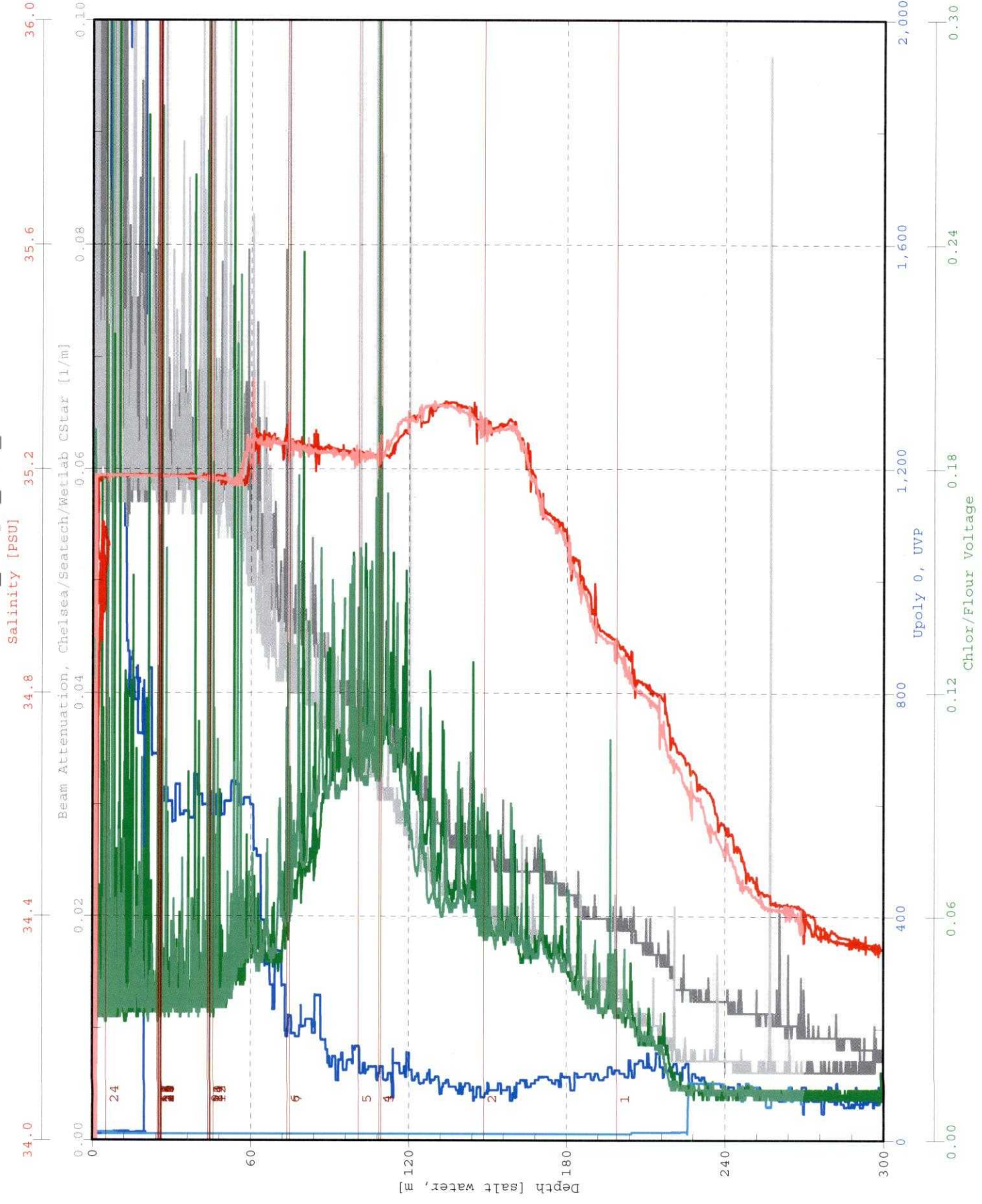
KM0814_d1c, _S43_c1



KM0814_dis_S43_C1



KM0814_disp1_S43_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 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.4	Calil

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

Time-GMT	Comments

Station: 45	Cast: 1
Latitude start: 23d 56.995'N end: 23d 56.998'N	Longitude start: 159d 10.950'W end: 159d 10.958'W
Depth of water: 4712 meters	Date (GMT): 223 08/10/2008
Pressure on Deck	Time: 15:36:43
Begin: 0.74	Start Log: 15:37:33
End: 0.36	In Water: 15:42:26
Max cast pressure: 300 dbar	Out of Water: 16:25:07

Trip/Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1	16:04:00	16:04:20	199.10	200	DCM = 105 dbar
2	16:06:14	16:06:30	150.71	150	
3	16:08:35	16:09:00	105.29	DCM	
4		16:09:20	105.38	DCM	
5	16:10:07	16:10:30	100.46	100	
6	16:12:03	16:12:20	75.18	75	
7		16:12:40	75.56	75	
8	16:14:05	16:14:20	43.93	45	
9		16:14:40	43.78	45	
10		16:15:00	44.48	45	
11		16:15:20	44.85	45	
12		16:15:40	45.27	45	
13		16:16:00	44.41	45	
14		16:16:20	43.84	45	
15	16:17:41	16:18:00	24.71	25	
16		16:18:20	25.18	25	
17		16:18:40	25.08	25	
18		16:19:00	25.41	25	
19		16:19:20	25.40	25	
20		16:19:40	25.03	25	
21		16:20:00	25.58	25	
22		16:20:20	24.55	25	
23		16:20:40	24.81	25	
24	16:22:49	16:23:10	7.15	5	3 m of wire out

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 44
 Cast Number: 1
 Operators: AF, PC, LS, JH, MNC, JB

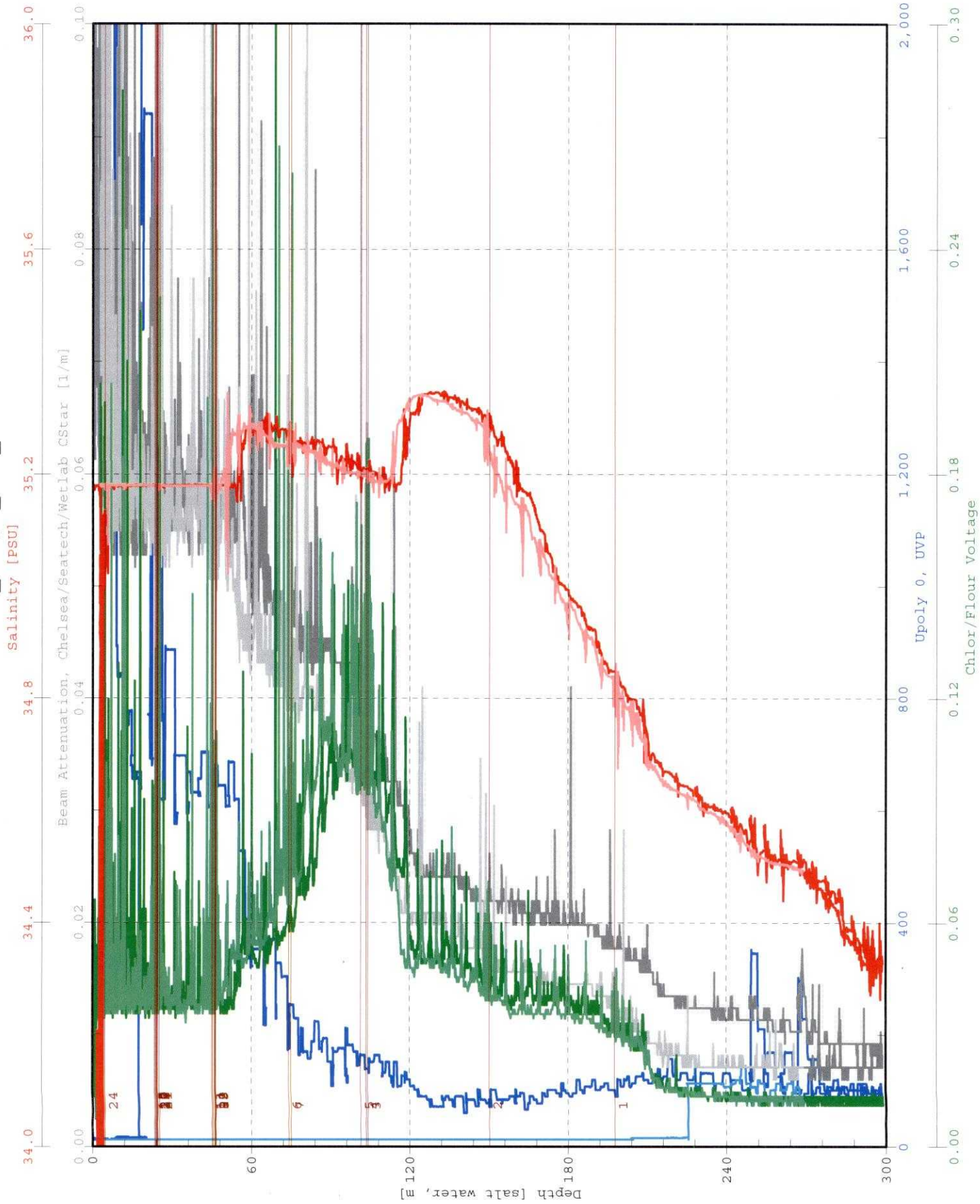
Date: 8/9/2008 (223) (GMT)
 Time: _____ (GMT)
 Position: _____

Watkins Watkins Watkins

Rosette Position	Desired Depth	HPLC	CHL	NUTS	FRRF	FRACT/DNA-P	AR	15N/13C	Paerl 15N2	Hilton
1	200	X	X	X	X					
2	150	X	X	X	X					
3	DCM	X	X	X	X					5L
4	DCM					12				
5	100	X	X	X	X					
6	75	X	X	X	X					
7	75					12				
8	45	X	X	X	X					
9	45							12		
10	45							12		
11	45							12		
12	45					12				
13	45					12				
14	45						12			
15	25	X	X	X	X				5	
16	25							12		
17	25							12		
18	25							12		
19	25					12				
20	25					12				
21	25					12				
22	25								12	
23	25								12	
24	5	X	X	X	X					5L

NOTES:

KM0814_dis_r1_S44_C1



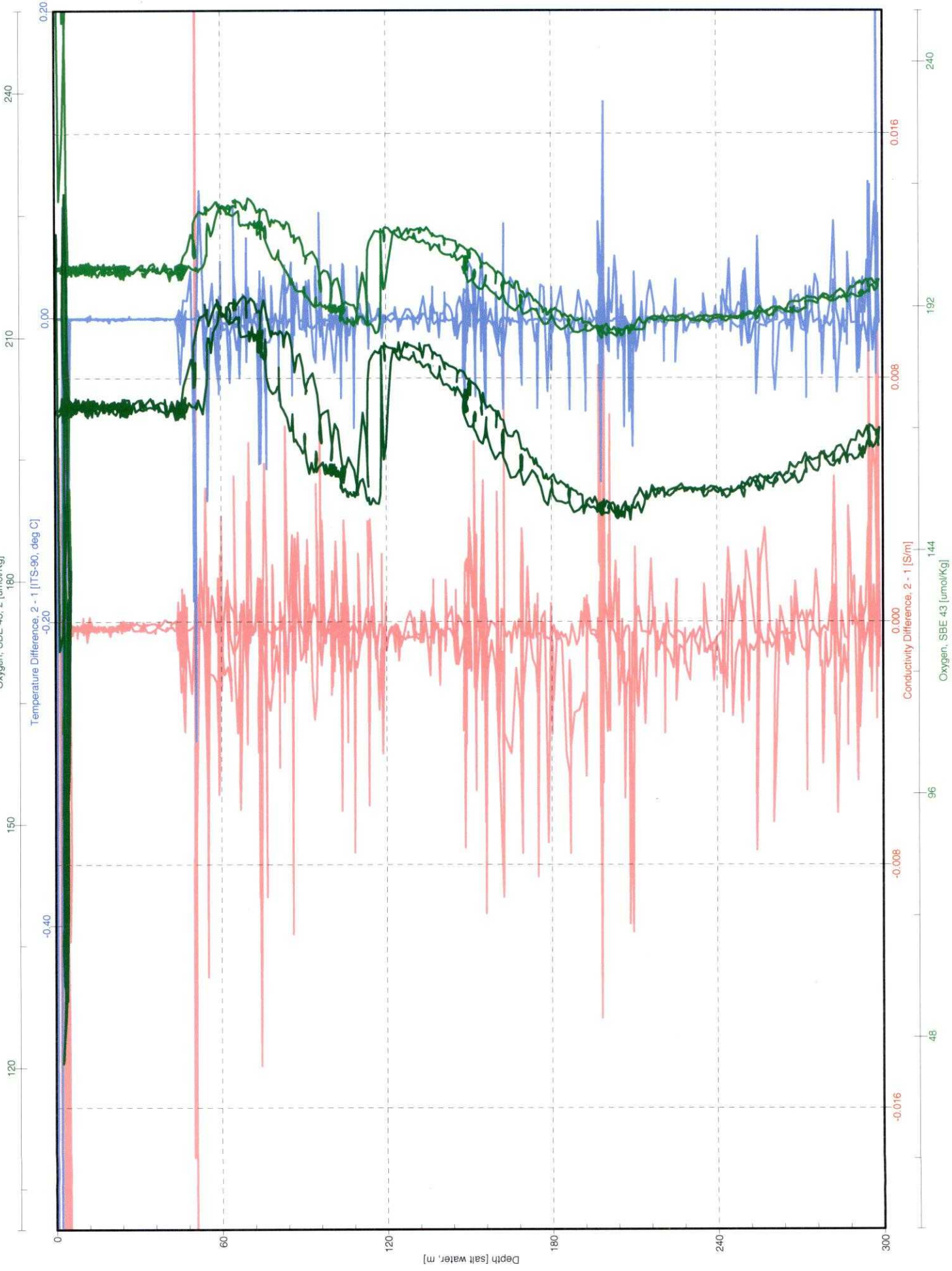
KM0814_disj_S44_C1

Oxygen, SBE 43, 2 [umol/Kg]

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

Conductivity Difference, 2 - 1 [S/m]

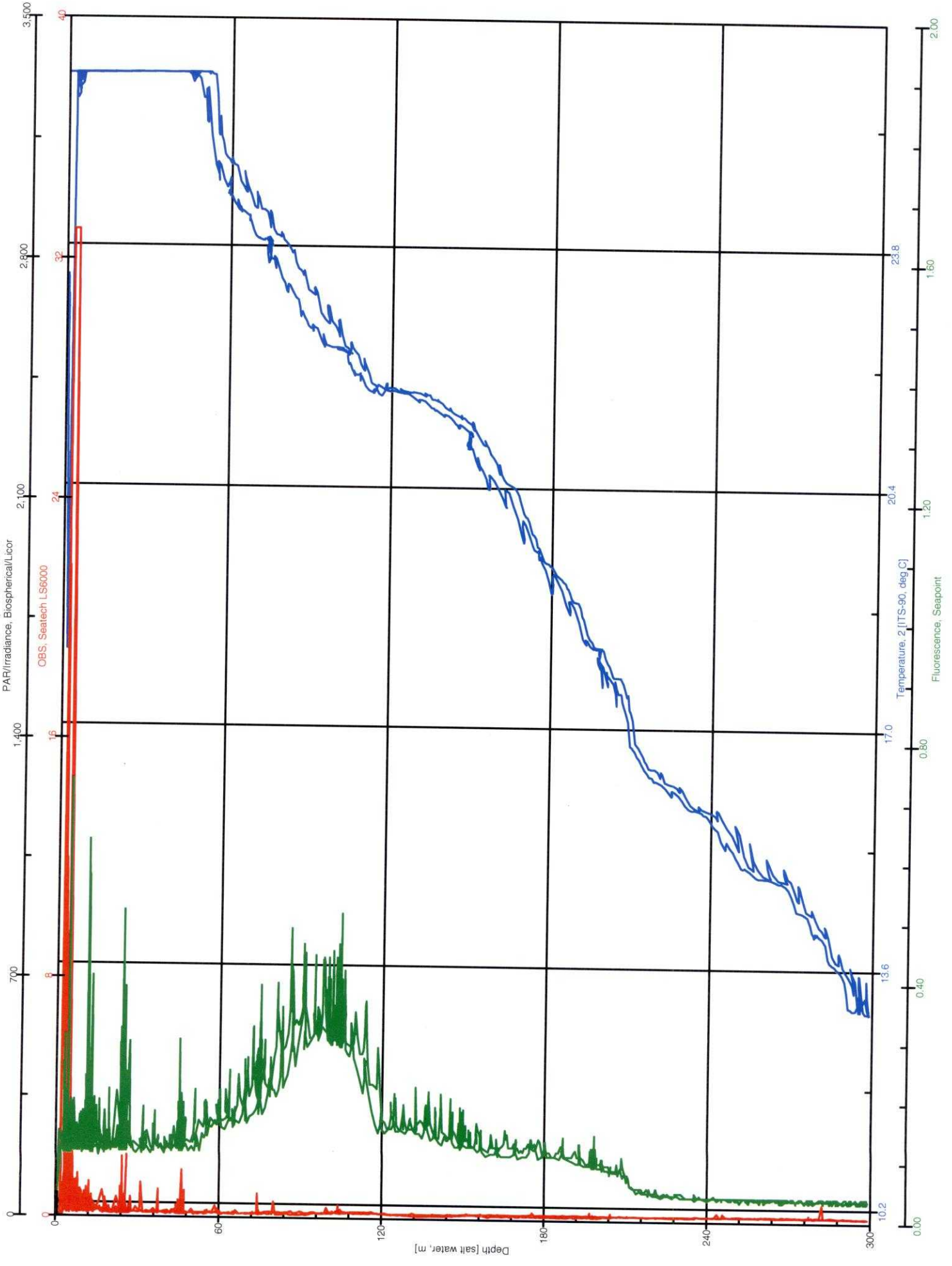
Oxygen, SBE 43 [umol/Kg]



KM0814_dis_r_S44_c1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.5	Calil

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

Time-GMT	Comments

Station: 44	Cast: 1
Latitude start: 24d 1.034'N	Longitude start: 158d 50.020' W
end:	end:
Depth of water: 4677 meters	Date (GMT): 223 08/10/2008
Pressure on Deck	Time: 12:53:19
Begin: 0.87	Start Log: 12:54:03
End:	In Water: 12:56:21
Max cast pressure: 300 dbar	Out of Water: 13:34:31

Trip/Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1	13:14:06	13:14:25	199.25	200	DCM = 104 dbar
2	13:16:07	13:16:25	150.72	150	
3	13:28:24	13:28:45	104.57	DCM	
4		13:29:05	103.62	DCM	
5	13:19:55	13:20:15	102.04	100	
6	13:21:40	13:22:00	74.53	75	
7		13:22:20	75.39	75	
8	13:24:01	13:24:20	46.07	45	
9		13:24:40	46.53	45	
10		13:25:00	46.53	45	
11		13:25:20	45.25	45	
12		13:25:40	47.03	45	
13		13:26:00	46.70	45	
14		13:26:20	45.38	45	
15	12:27:37	13:28:00	23.47	25	
16		13:28:20	24.64	25	
17		13:28:40	24.49	25	
18		13:29:00	24.16	25	
19		13:29:20	24.11	25	
20		13:29:40	23.69	25	
21		13:30:00	25.28	25	
22		13:30:20	24.43	25	
23		13:30:40	24.47	25	
24	13:32:35	13:32:55	4.73	5	3 m of wire out

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 45
 Cast Number: 1
 Operators: AF, PC, LS, JH, MNC, JB

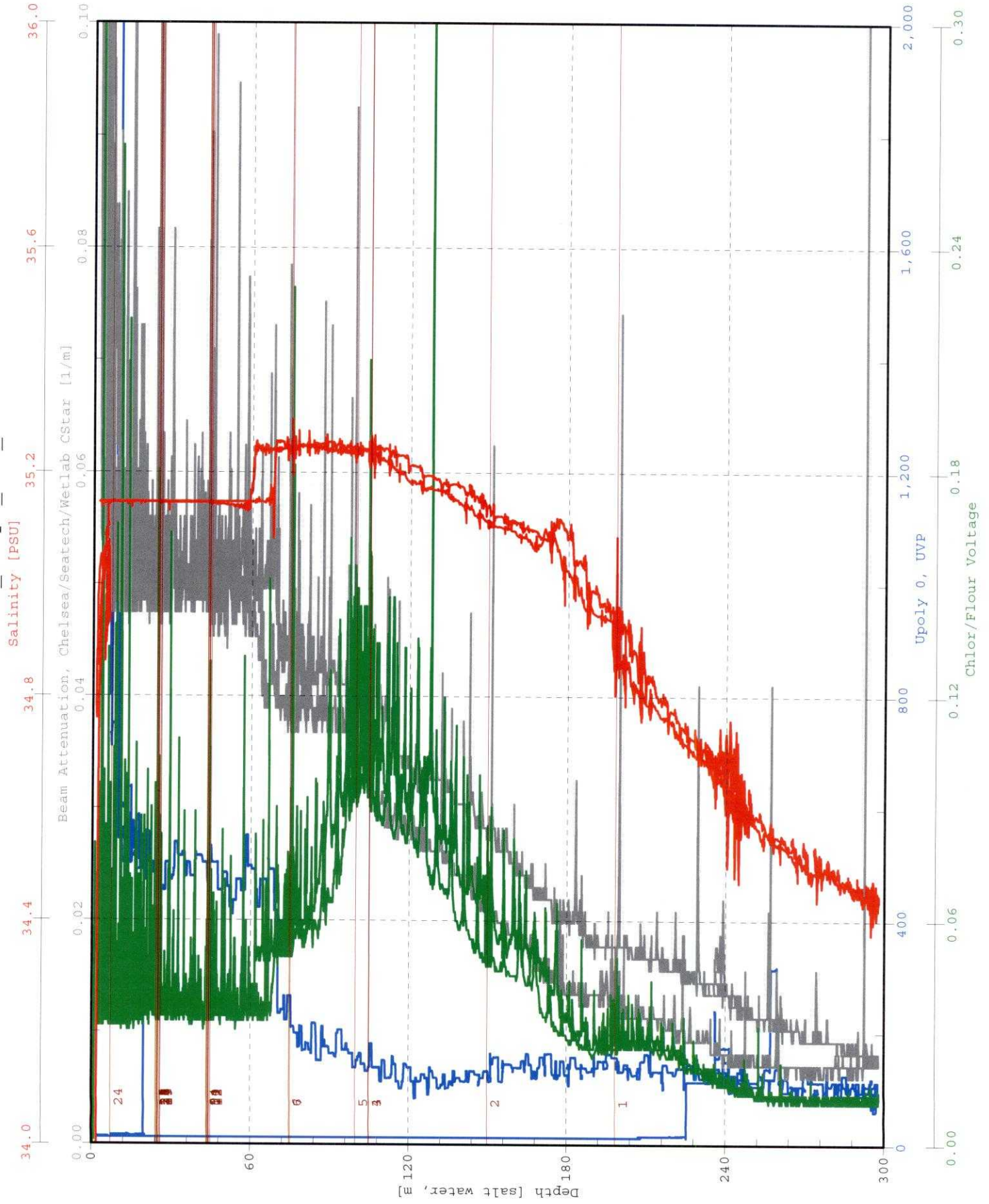
Date: 8/10/2008 (223) (GMT)
 Time: _____ (GMT)
 Position: _____

Watkins Watkins Watkins

Rosette Position	Desired Depth	HPLC	CHL	NUTS	FRRF	P-FRACT/DNA-P	AR	15N/13C	Paerl 15N2	Other
1	200	X	X	X	X					
2	150	X	X	X	X					
3	DCM	X	X	X	X					5L
4	DCM					12				
5	100	X	X	X	X					
6	75	X	X	X	X					
7	75					12				
8	45	X	X	X	X					
9	45							12		
10	45							12		
11	45							12		
12	45					12				
13	45					12				
14	45						12			
15	25	X	X	X	X				5	
16	25							12		
17	25							12		
18	25							12		
19	25					12				
20	25					12				
21	25					12				
22	25								12	
23	25								12	
24	5	X	X	X	X					5L

NOTES:

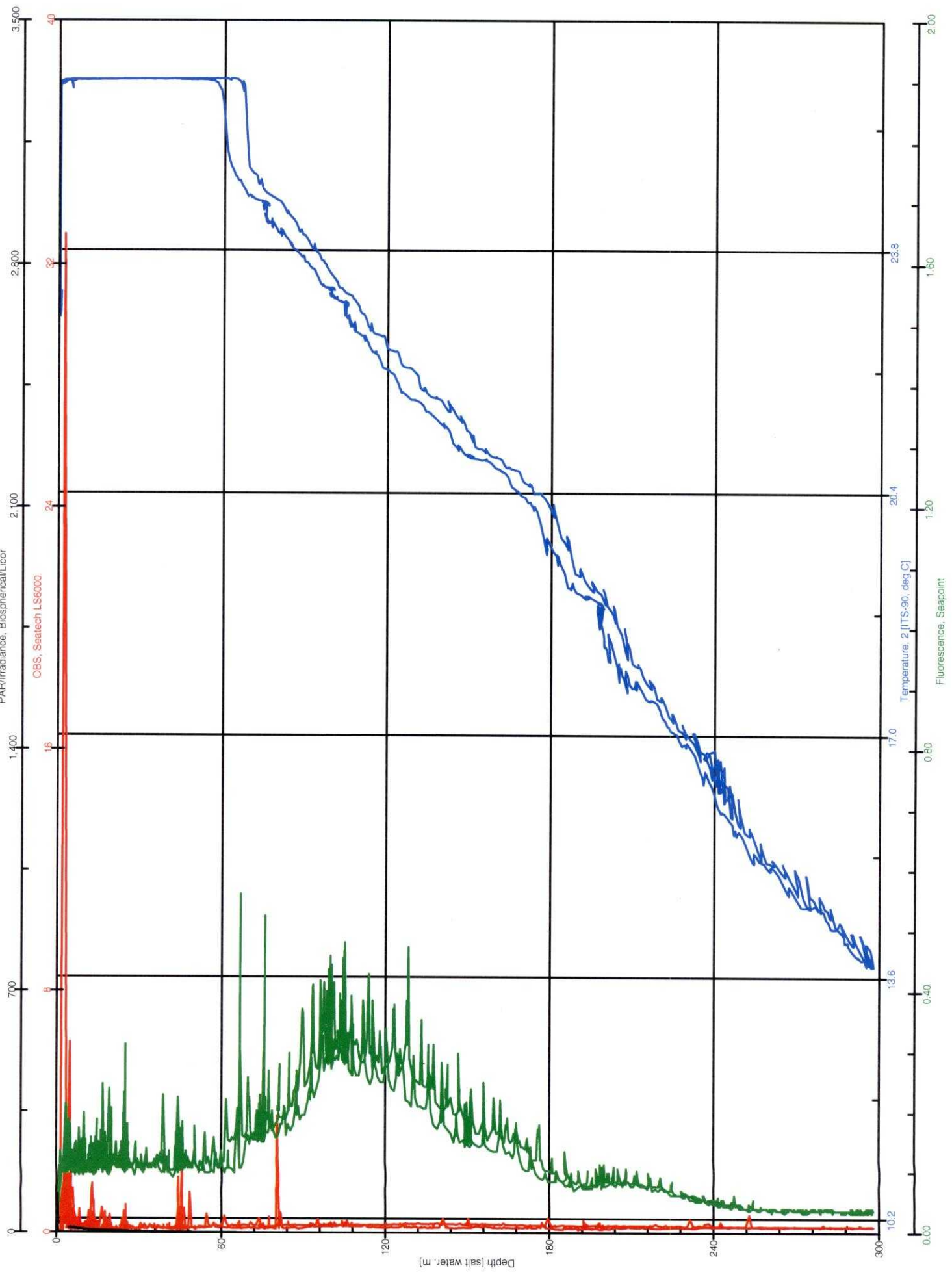
KM0814_displ_S45_C1



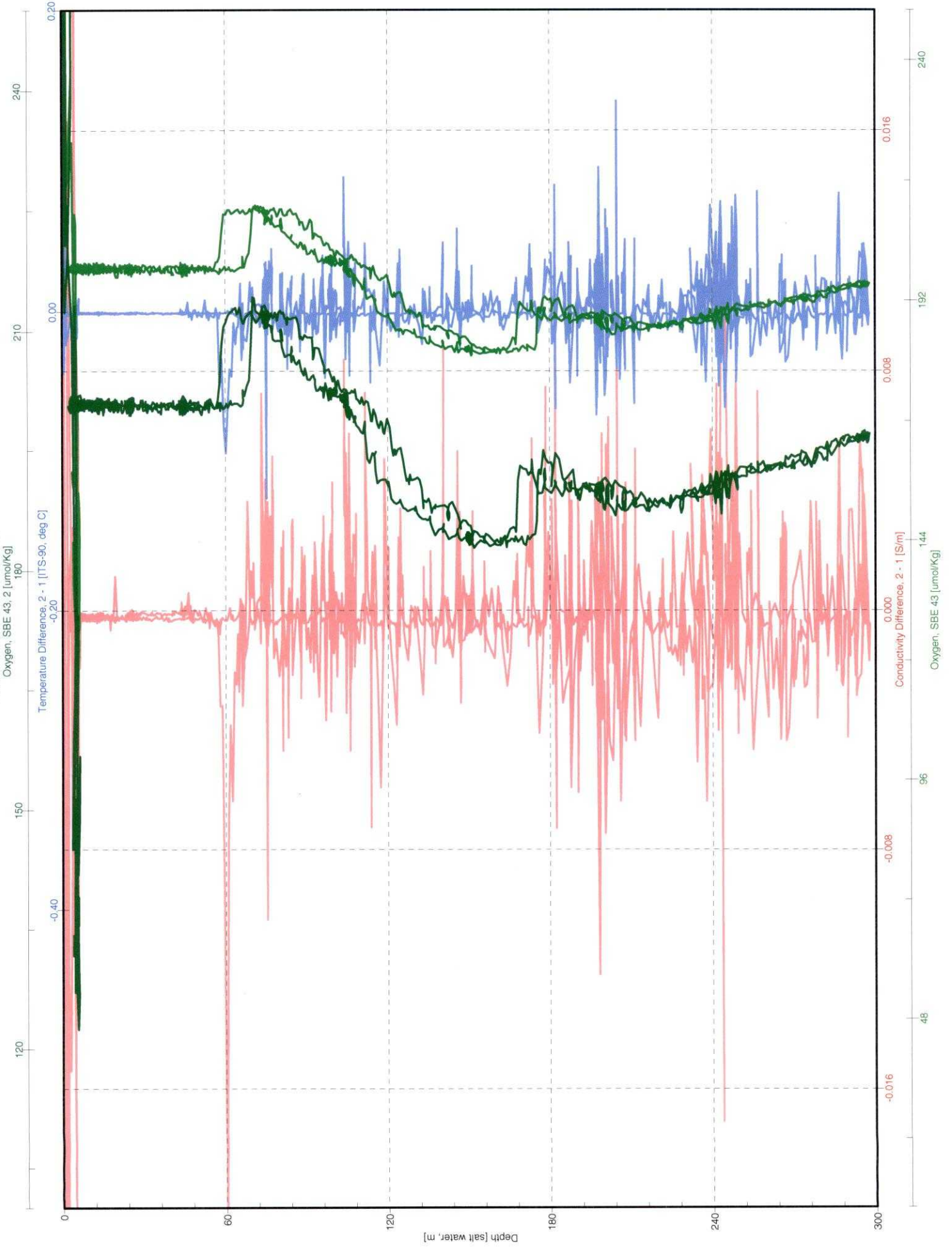
Bottle Firing Sequence
 1 2 3
 4 5 6
 7 8 9
 10 11 12
 13 14 15
 16 17 18
 19 20 21
 22 23 24

KM0814_disr--S45_c1

PAR/Irradiance, Biospherical/Licor



KM0814_dist_S45_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.5	Operator updyke
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 46	Cast: 1
Latitude start: 23° 55.019' N end: 23° 55.019' N	Longitude start: 159° 29.993' W end: 159° 29.993' W
Depth of water: 4752 meters	Date (GMT): (223) 08 / 10 / 2008
Pressure on Deck Begin: 0.90 dbar End: 0.46 dbar	Time: 18:10:00 Start Log: 18:17:00 In Water: 18:18:10 Out of Water: 18:55:10
Max cast pressure: 300 dbar	

Trip/ Niskin	Time -GMT	Confirm	Pressure dbar	Target Depth-dbar	Comments
	stopped	tripped			
1	18:35:55	18:36:15	200.2	200	10m @ 18:20:30
2		18:36:30	201.5	200	
3		18:36:45	199.9	200	
4		18:37:00	200.9	200	
5	18:38:50	18:39:15	199.5	150	
6		18:39:30	150.9	150	
7		18:39:45	150.3	150	
8	18:41:00	18:41:15	130.5	DCM	125 dbar 130 dbar
9		18:41:30	131.2	DCM	
10		18:41:45	130.9	DCM	
11	18:43:05	18:43:30	100.2	100	
12		18:43:45	98.7	100	
13		18:44:00	98.4	100	
14	18:45:18	18:45:45	75.6	75	
15		18:46:00	75.1	75	
16		18:46:15	74.8	75	
17	18:47:32	18:48:00	45.6	45	
18		18:48:15	46.3	45	
19	18:49:35	18:50:00	24.7	25	
20		18:50:15	24.2	25	
21		18:50:30	24.9	25	
22	18:52:25	18:52:45	5.2	5	3m wire out
23		18:53:00	4.9	5	
24		18:53:15	4.8	5	

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

Station Number: 46
Cast Number: 1
Operators: AF, SW, BU, KB, KD

Date: 8/10/2008 (223) (GMT)
Time: _____ (GMT)
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	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:

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

Station Number: 46
Cast Number: 1
Operators: AF, SW, BU, KB, KD

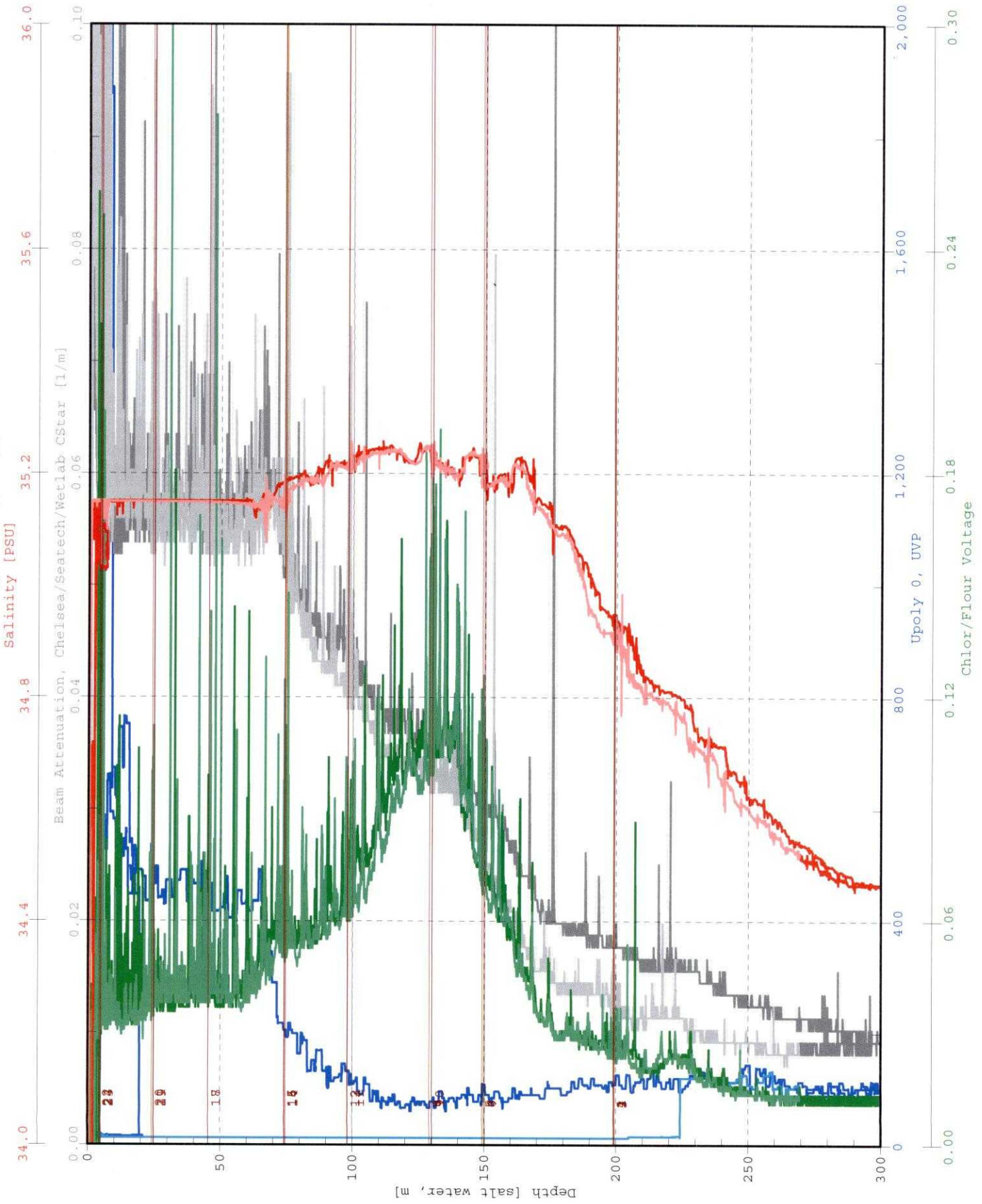
Date: 8/10/2008 (223) (GMT)
Time: _____ (GMT)
Position: _____

Rosette Position	Desired Depth	Oxygen	Temp	pH	DIC	Nuts	DOC	LLNuts	Chl a	FCM
1	200	17	19.3	1	X	X	X	X	X	X
2	200									
3	200									
4	200									
5	150	18, 19, 20	22.0	1	X	X	X	X	X	X
6	150									
7	150									
8	DCM	21	22.7	2	X	X	X	X	X	X
9	DCM									
10	DCM									
11	100	22	23.7	3	X	X	X	X	X	X
12	100									
13	100									
14	75	23, 24, 25	24.7	4	X	X	X	X	X	X
15	75									
16	75									
17	45	26	25.9	5	X	X	X	X	X	X
18	45									
19	25	27	25.8	6	X	X	X	X	X	X
20	25									
21	25									
22	5	28, 29, 30	25.9	7	X	X	X	X	X	X
23	5									
24	5									

NOTES: mskin 14 is leaking

★ All samples labeled 46-6 ★

KM0814_dis_1_S46_C1



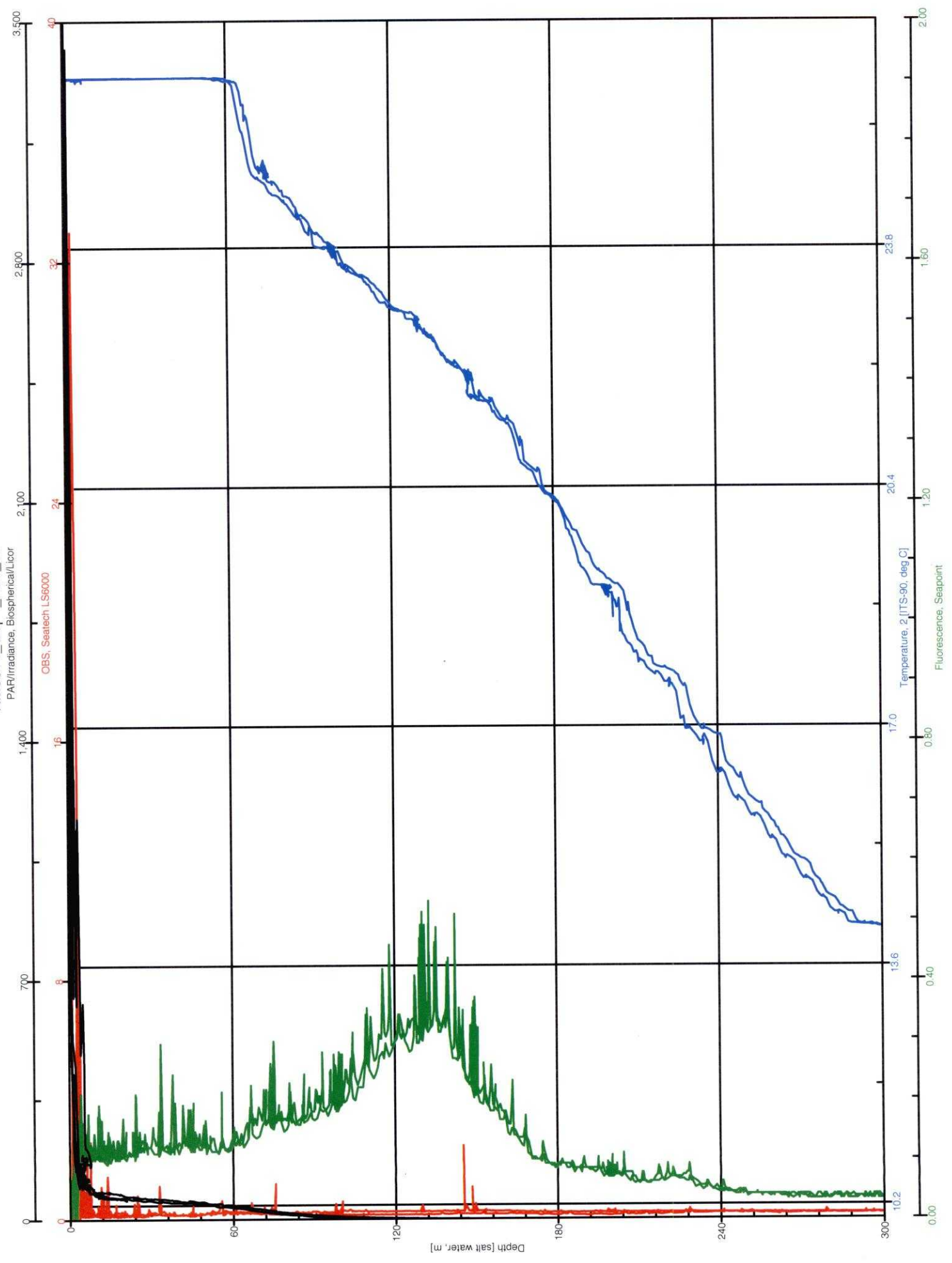
Bottle Firing Sequence

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_dis, _S46_c1

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



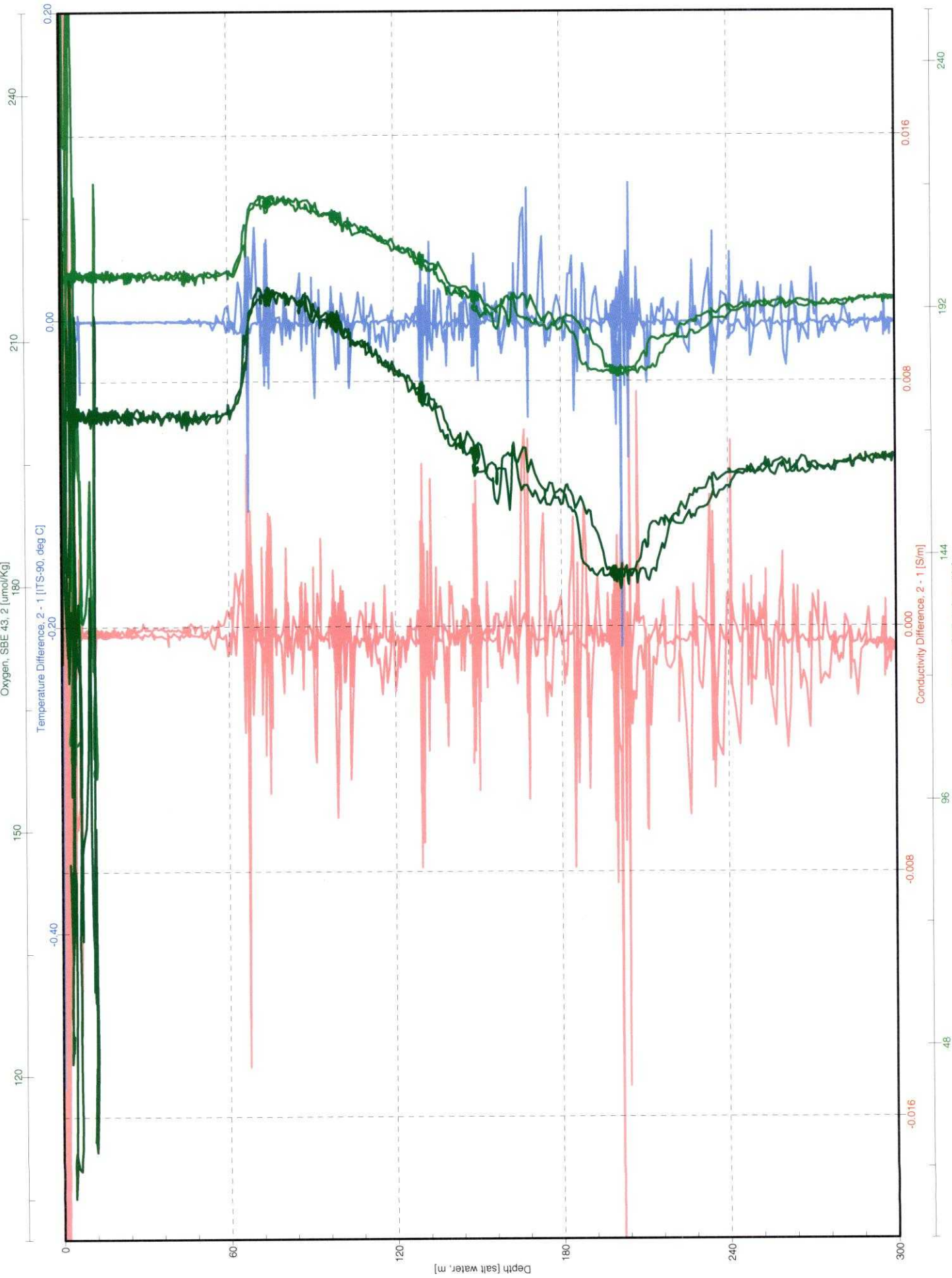
KM0814_disr_S46_C1

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

Time-GMT	Comments

Station: 46	Cast: 2
Latitude start: 23° 55.019' N end: 23 23° 55.018' N	Longitude start: 159° 29.993' W end: 159° 29.992' W
Depth of water: 4751 meters	Date (GMT): (223) 08 / 10 / 2008
Pressure on Deck	Time: 20:15:00 Z
Begin: 0.70 dbar	Start Log: 20:17:00 Z
End: 0.45 dbar	In Water: 20:19:45
Max cast pressure: 300 dbar	Out of Water: 20:56:00

Trip/ Niskin	Time -GMT	Confirm	Pressure dbar	Target Depth-dbar	Comments
	stopped	tripped			
1	20:38:12	20:38:30	199.9	200	
2		20:38:45	199.7	200	
3		20:39:00	200.6	200	
4	20:40:41	20:41:00	148.7	150	
5	20:42:10	20:42:30	125.9	DCM	125 dbar
6		20:42:45	126.1	DCM	
7		20:43:00	126.7	DCM	
8	20:44:11	20:44:30	98.9	100	
9		20:44:45	100.0	100	
10	20:47:55	20:47:15	75.3	75	
11		20:47:30	76.1	75	
12	20:47:50	20:48:15	44.7	45	
13		20:48:30	46.3	45	
14		20:48:45	44.9	45	
15		20:49:00	45.2	45	
16		20:49:15	45.9	45	
17	20:50:20	20:50:45	25.8	25	
18		20:51:00	26.4	25	
19		20:51:15	25.4	25	
20		20:51:30	26.6	25	
21		20:51:45	25.5	25	
22	20:53:10	20:53:30	7.1	5	3 m wire out
23		20:53:45	4.9	5	
24		20:54:00	5.0	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

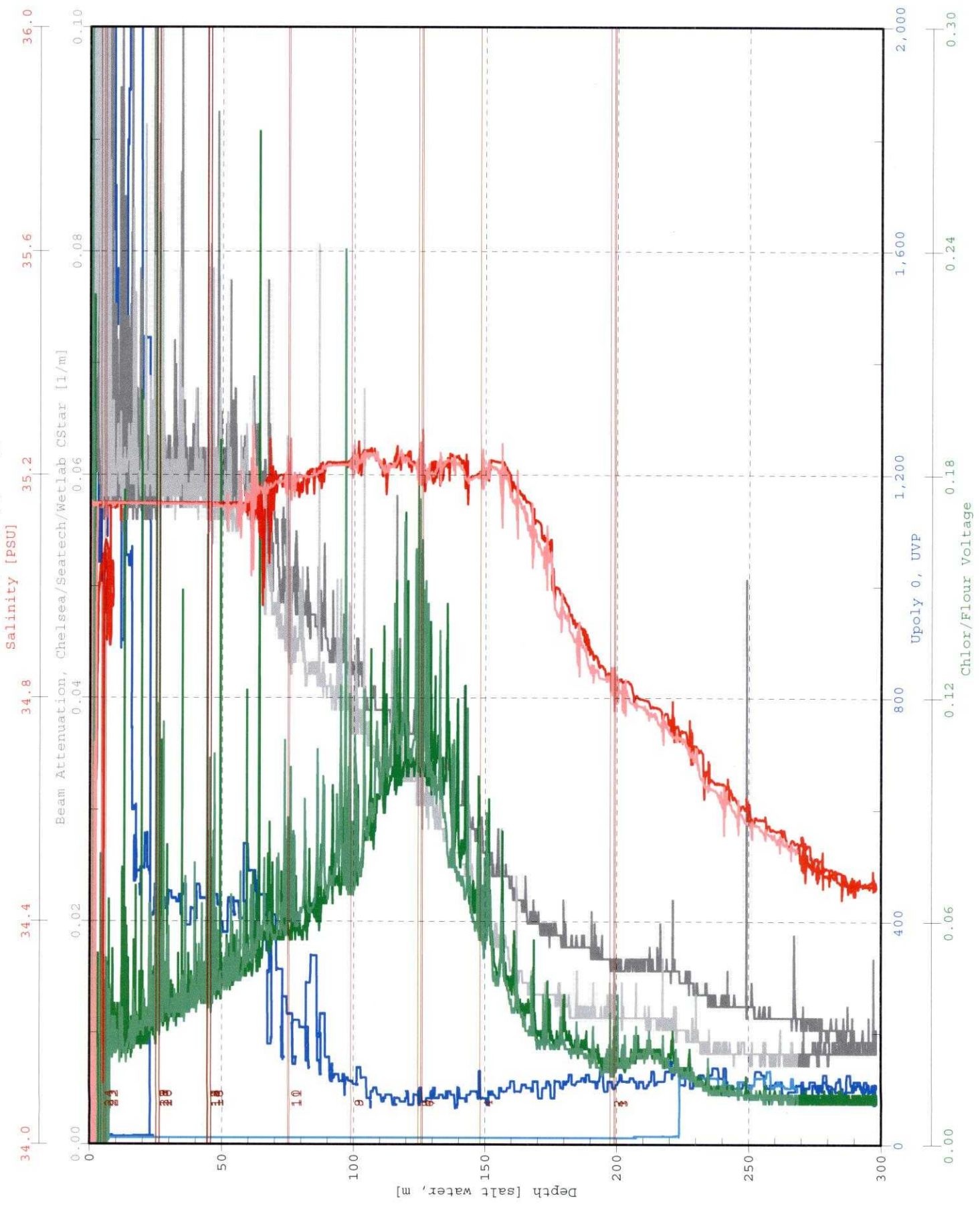
Station Number: 46
Cast Number: 2
Operators: BU, SW, MNC, JB, JH

Date: 8/10/2008 (223)
Time: _____
Position: _____

Rosette Position	Desired Depth	HILTON	WATKINS	DUHAMEL	LAV/KREY	WILSON	KREY	BJORKMAN
1	200	1L				2L*		
2	200				12L			
3	200						1L*	
4	150	1L				2L*		
5	DCM	1L		2L			1L*	
6	DCM					2L*		
7	DCM				12L			
8	100	1L		2L			1L*	
9	100					2L*		
10	75			2L		2L*		
11	75	1L					1L*	
12	45		12L					
13	45		12L					
14	45		10L				1L*	
15	45	1L		2L		2L*		
16	45				12L			
17	25		8L			2L*		
18	25		10L				1L*	
19	25		12L					
20	25			4 12L				
21	25	1L						10L
22	5			2L			1L*	
23	5	1L				2L*		
24	5				12L			

NOTES:

KM0814_displ_S46_C2



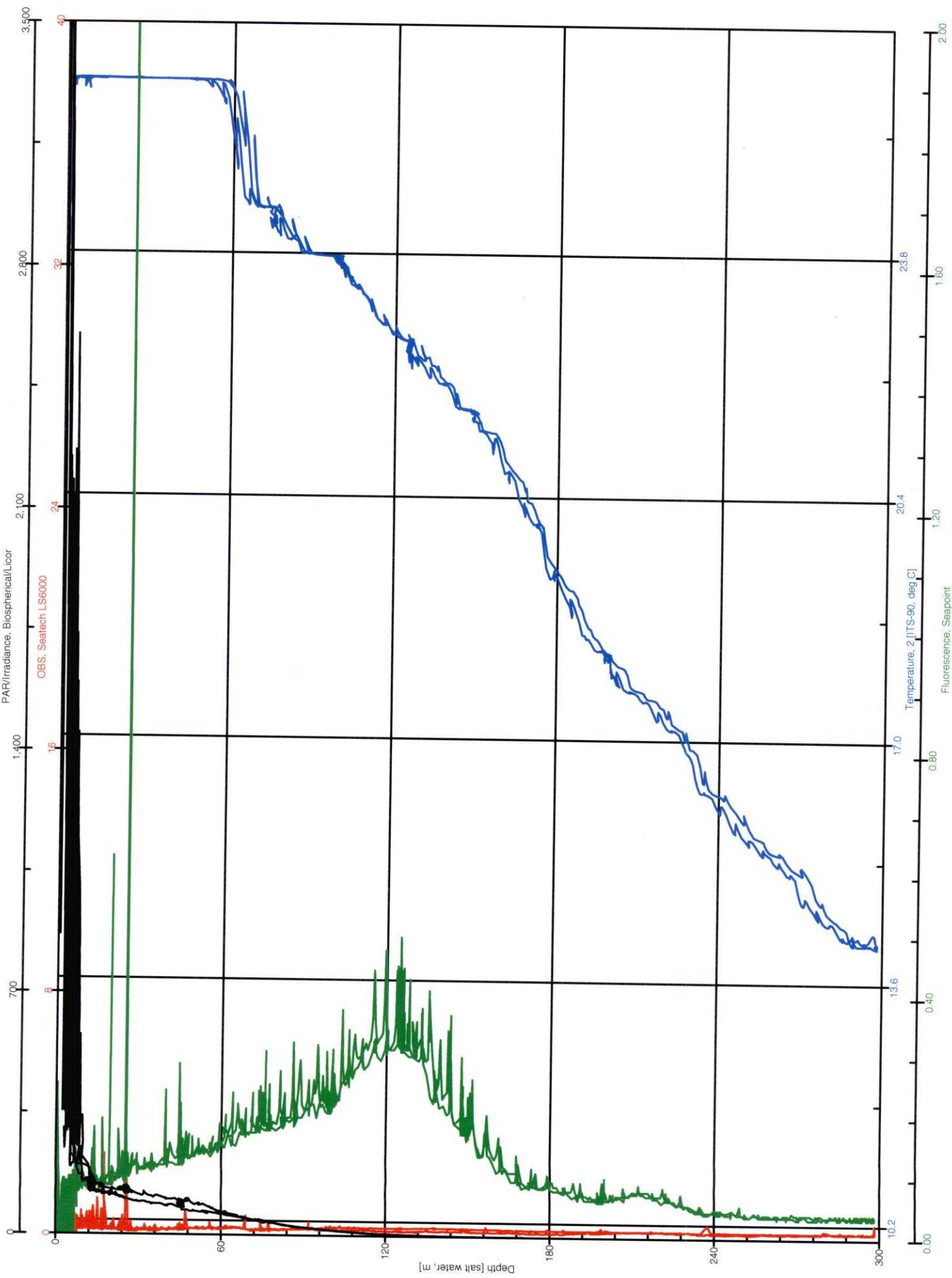
Bottle Firing Sequence

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

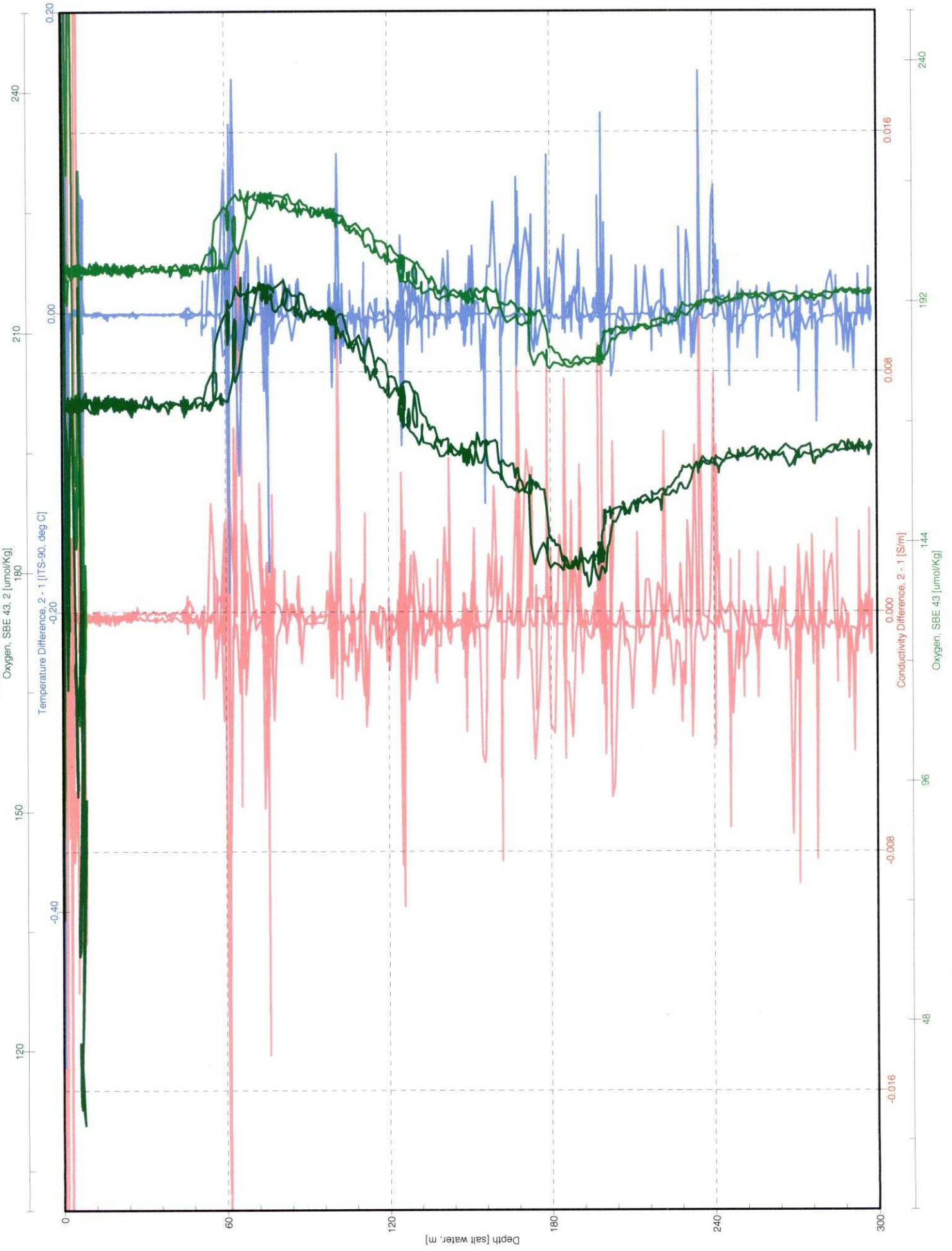
KM0814_dis_r_--S46_c2

PAR/Irradiance, Biospherical/Lloor

OBS: Seatech LS6000



KM0814_dis_--S46_C2



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.5	Operator updyke
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 46	Cast: 3
Latitude start: 23° 55.019' N end: 23° 55.019' N	Longitude start: 159° 29.879' W end: 159° 29.879' W
Depth of water: 4753 meters	Date (GMT): (223) 08 / 10 / 2008
Pressure on Deck	Time: 21:50:00Z
Begin: 0.60 dbar	Start Log: 21:52:00
End: 0.45 dbar	In Water: 21:57:19
Max cast pressure: 300 dbar	Out of Water: 22:33:26

Trip/ Niskin	Time -GMT	Confirm	Pressure dbar	Target Depth-dbar	Comments
	stopped	tripped			
1	22:16:46	22:17:00	150.8	150	
2		22:17:15	149.3	150	
3		22:17:30	150.4	150	
4	22:19:00	22:19:15	120.5	DCM	120 dbar
5		22:19:30	120.4	DCM	120 dbar
6		22:19:45	121.8	DCM	120 dbar
7		22:20:00	122.0	DCM	120 dbar
8	22:21:20	22:21:30	100.6	100	
9	22:22:52	22:22:10	73.1	75	
10		22:22:20	74.2	75	
11		22:22:30	75.0	75	
12		22:22:40	75.0	75	
13	22:25:00	22:25:10	46.9	45	
14		22:25:20	46.7	45	
15		22:25:30	47.1	45	
16		22:25:40	46.7	45	
17	22:26:50	22:26:00	25.6	25	
18		22:26:10	25.7	25	
19		22:26:20	25.3	25	
20		22:26:30	25.1	25	
21	22:30:12	22:30:30	6.0	5	
22		22:30:40	6.0	5	
23		22:30:50	6.5	5	
24		22:31:00	7.0	5	

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

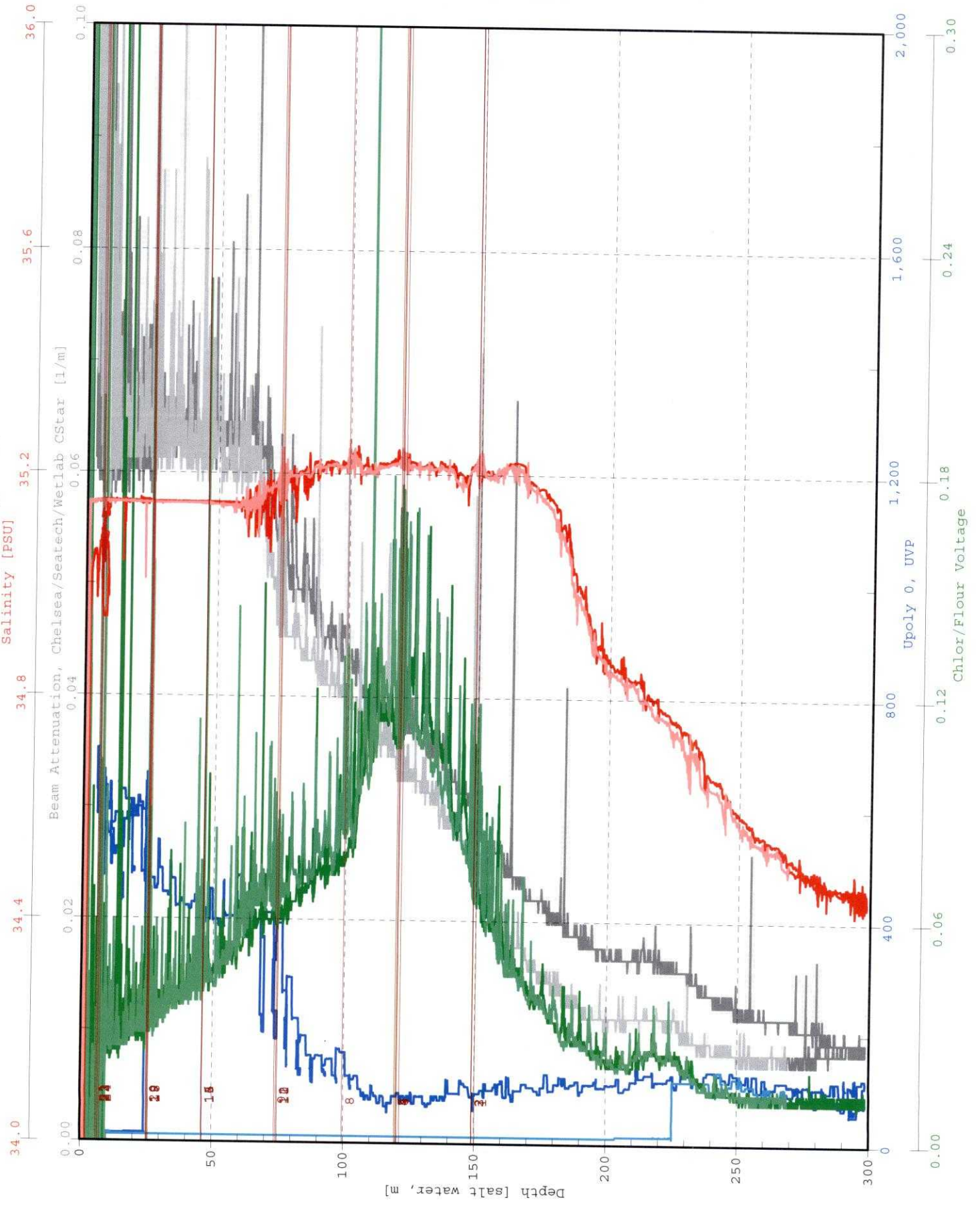
Station Number: 46
 Cast Number: 3
 Operators: BU, SW, JH, JB, MNC

Date: 8/10/2008 (223) (GMT)
 Time: (GMT)
 Position:

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

NOTES:

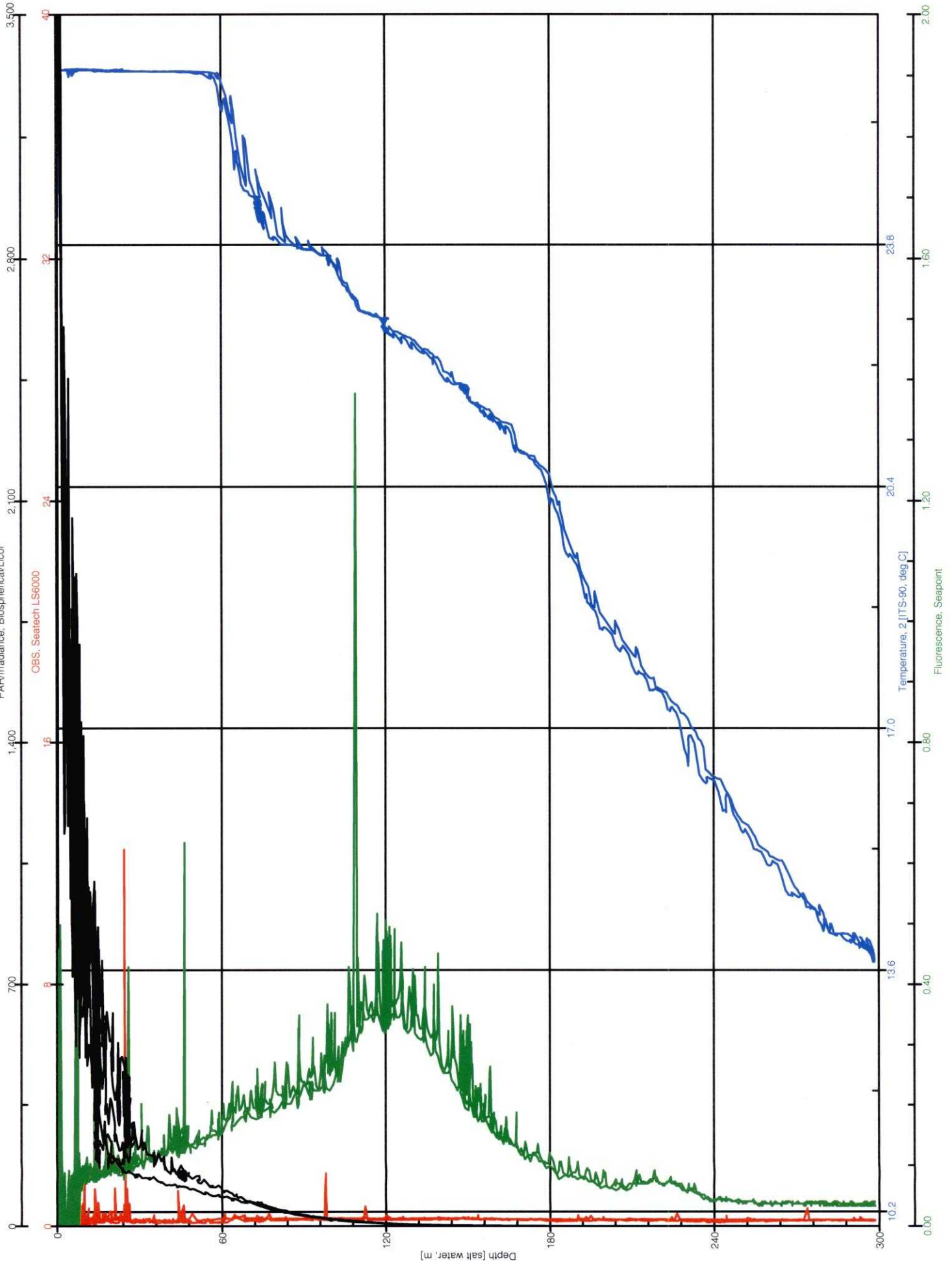
KM0814_disp1_S46_C3



KM0814_dis, _S46_c3

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



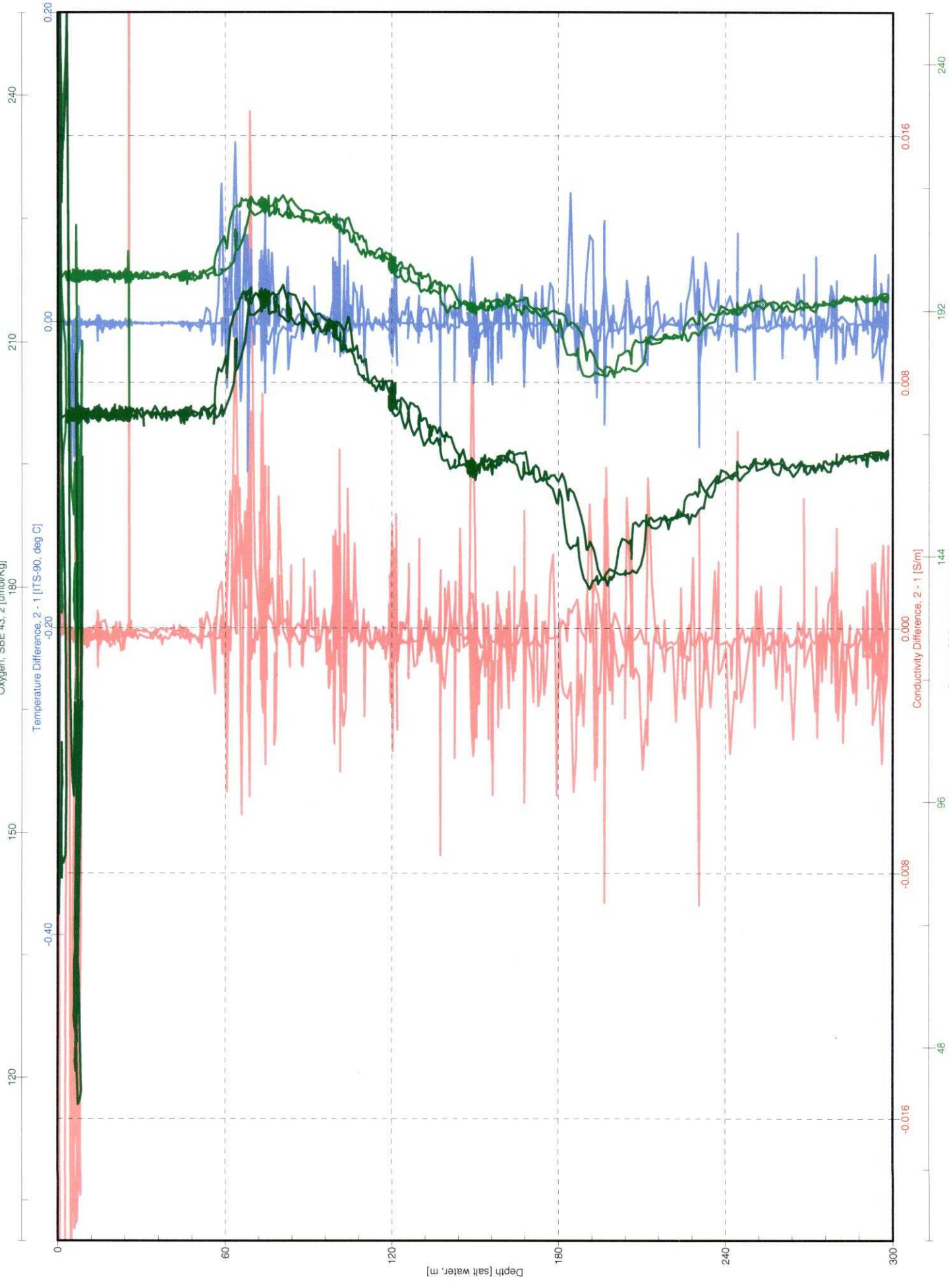
KM0814_dis_ -- S46_C3

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

Time-GMT	Comments

Station: 46	Cast: 4
Latitude start: 23° 54.981' N end: 23° 54.978' N	Longitude start: 159° 30.013' W end: 159° 30.011' W
Depth of water: 4754 meters	Date (GMT): (224) 08 / 11 / 2008
Pressure on Deck	Time: 00:00:00Z
Begin: 0.75 dbar	Start Log: 23:59:00Z
End: 0.50 dbar	In Water: 00:02:50
Max cast pressure: 300 dbar	Out of Water: 00:37:37

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1	00:20:10	00:20:30	149.2	150	
2		00:20:40	149.9	150	
3	00:22:04	00:22:20	170.3	DCM	120 dbar
4		00:22:30	119.8	DCM	
5		00:22:40	119.2	DCM	
6	00:24:08	00:24:20	99.1	100	
7		00:24:30	99.4	100	
8		00:24:40	99.2		
9		00:24:50	98.8		
10		00:25:00	98.9		
11		00:25:10	99.7		
12		00:25:20	98.8		
13		00:25:30	99.3		
14		00:25:40	99.0		
15		00:25:50	99.6		
16		00:26:00	99.5		
17		00:26:10	100.4		
18		00:26:20	100.1		
19	00:27:37	00:27:50	74.3	75	
20		00:28:00	75.6	75	
21	00:29:25	00:29:40	46.0	45	
22		00:29:50	46.1	45	
23	00:34:00	00:34:10	5.9	5	3 m wire out
24		00:34:20	6.1	5	

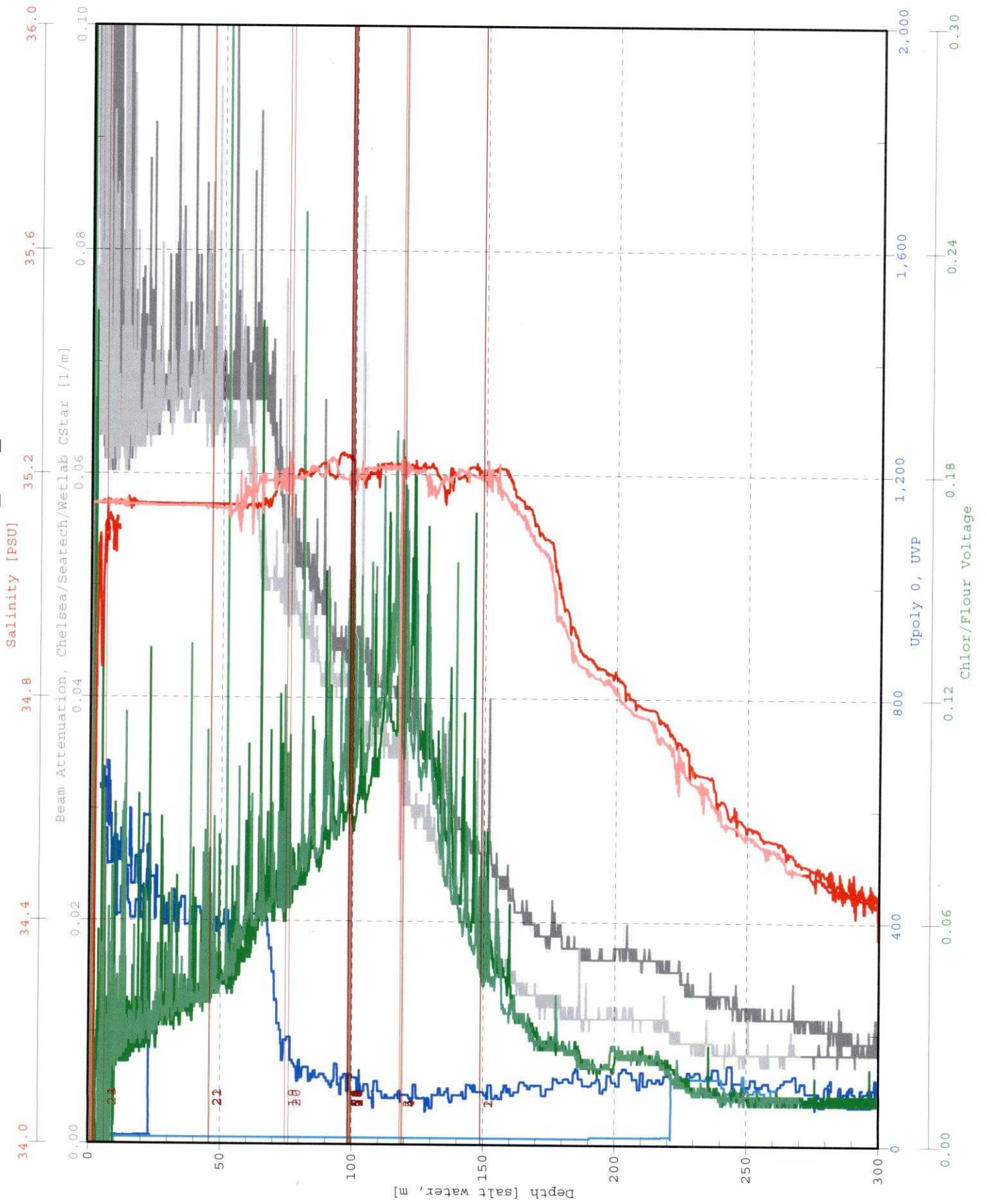
C-MORE CRUISE LOG
OPEREX
Station Data Sheet

Station Number: 46 Date: 8/11/2008 (224)
 Cast Number: 4 Time: 0:00:00
 Operators: BU, MNC, JB, JH, RP Position: 23 54.981'N, 159 30.013'W

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

NOTES:

KM0814_disp1_S46_C4



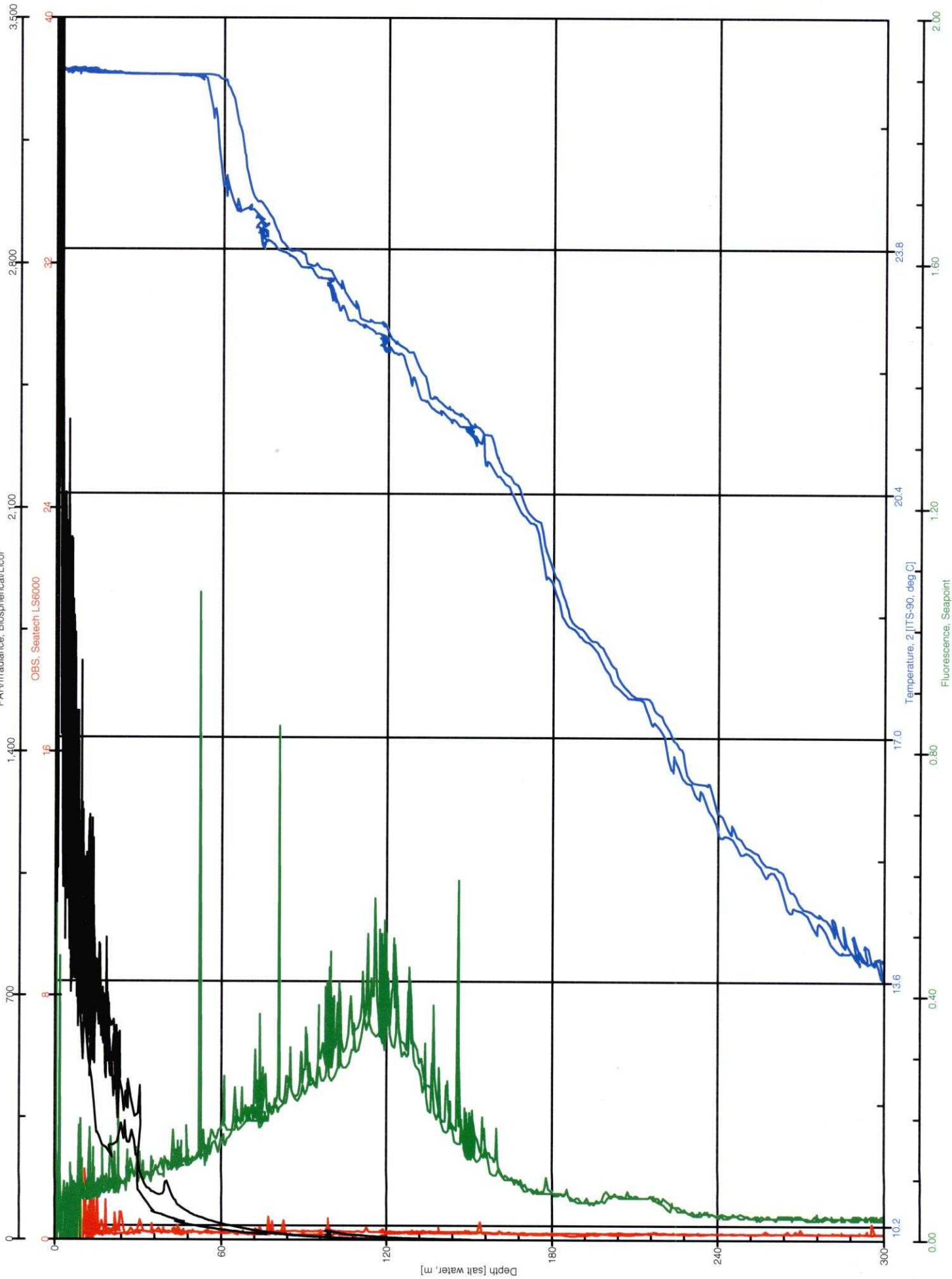
Bottle Firing Sequence

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_dis_r_--S46_c4

PAR/Irradiance, Biospherical/Licor

OBS, Seatech LS6000



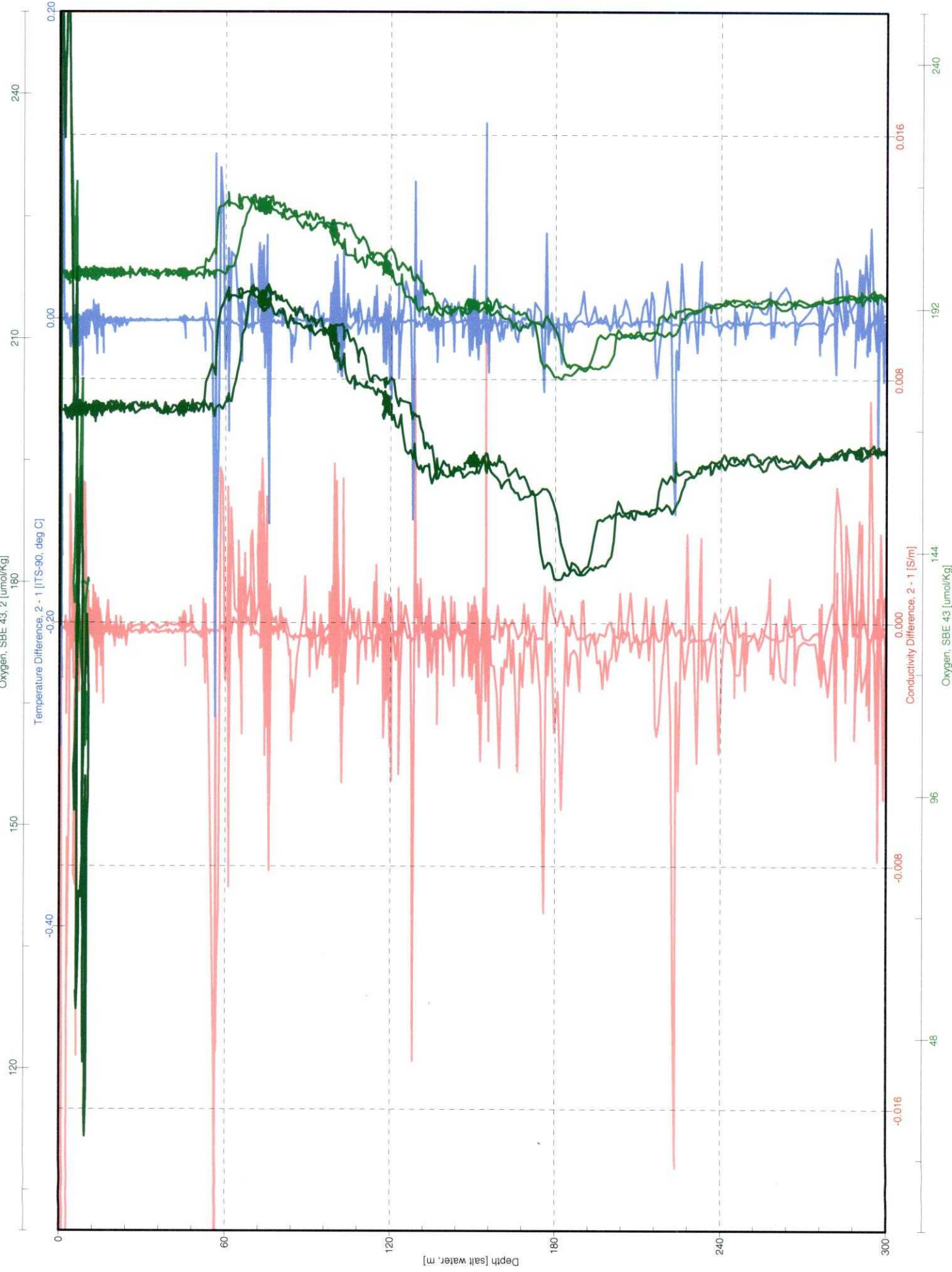
KM0814_dis_r_S46_C4

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	Operator
		26.9	88

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

Time-GMT	Comments

Station: 47	Cast: 1
Latitude start: 23 1.046' N end: 23 1.034' N	Longitude start: 160° 10.370' W end: 160 10.370' W
Depth of water: 4848 meters	Date (GMT): (224) 08 / 11 / 2008
Pressure on Deck	Time: 06:24:30Z
Begin: 0.683 → 556 End: .508	Start Log: (224) 06:30:16Z In Water: 06:33:00Z 06:33:40Z 06:45:00Z Out of Water: back In 06:58:12Z the water
Max cast pressure: 300 dbar	

Trip/Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1 (224)	07:19:06	07:19:30	199.7	200	
2 (224)	07:21:34	07:21:50Z	150.1	150	
3 (224)	07:23:45	07:24:00	104.7	DCM 105	06:36:10Z @10m changing str probh with UVP starting up - recover CTD 06:45Z
4		07:24:20	106.3	DCM 105	overwrite data file -
5		07:25:10	100.2	100	07:01:40 @10m changing str
6 (224)	07:26:26	07:26:40	76.5	75	Back in the water 06:58:12Z
7		07:26:55	76.7	75	(after restarting the cast from Deck)
8 (224)	07:28:20	07:28:30	45.3	45	
9		07:28:50	45.3	45	
10		07:29:10	44.9	45	
11		07:29:30	45.1	45	
12		07:29:50	44.9	45	
13		07:30:10	45.3	45	
14		07:30:30	45.0	45	
15 (224)	07:31:33	07:31:50	24.7	25	
16		07:32:10	24.1	25	
17		07:32:30	25.1	25	
18		07:32:50	25.5	25	
19		07:33:10	24.9	25	
20		07:33:30	25.1	25	
21		07:33:50	24.3	25	out of water 07:38:01Z
22		07:34:10	24.1	25	CTD on Deck 07:39:40Z
23		07:34:30	25.0	25	
24 (224)	07:35:32	07:35:35	6.7	5 db	3m of wire

C-MORE CRUISE LOG

OPREX

Station Data Sheet

Station Number: 47
 Cast Number: 1
 Operators: AF, PC, LS, JH, MNC, JB

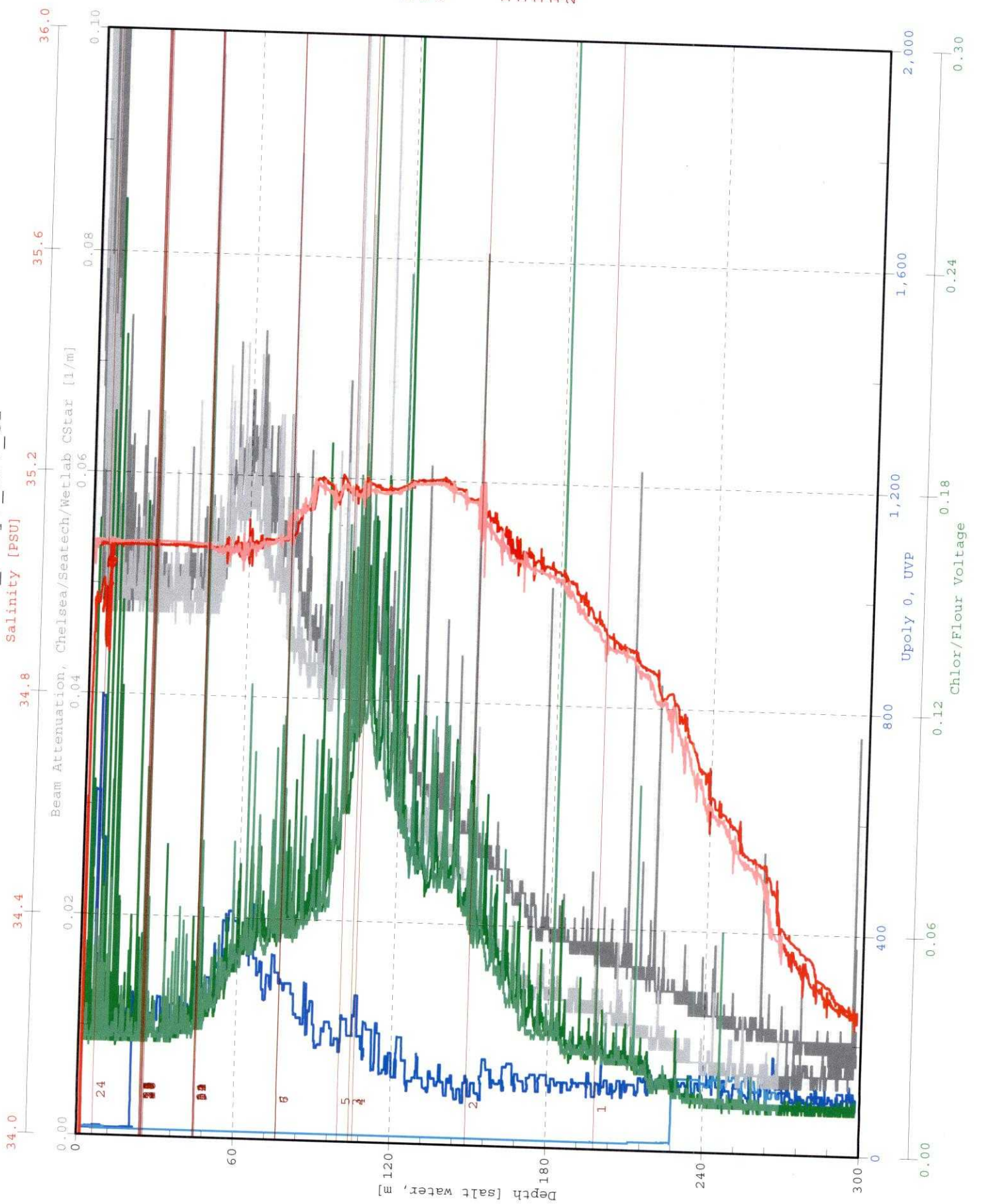
Date: 8/10/2008 (223) (GMT)
 Time: _____ (GMT)
 Position: _____

Watkins Watkins Watkins

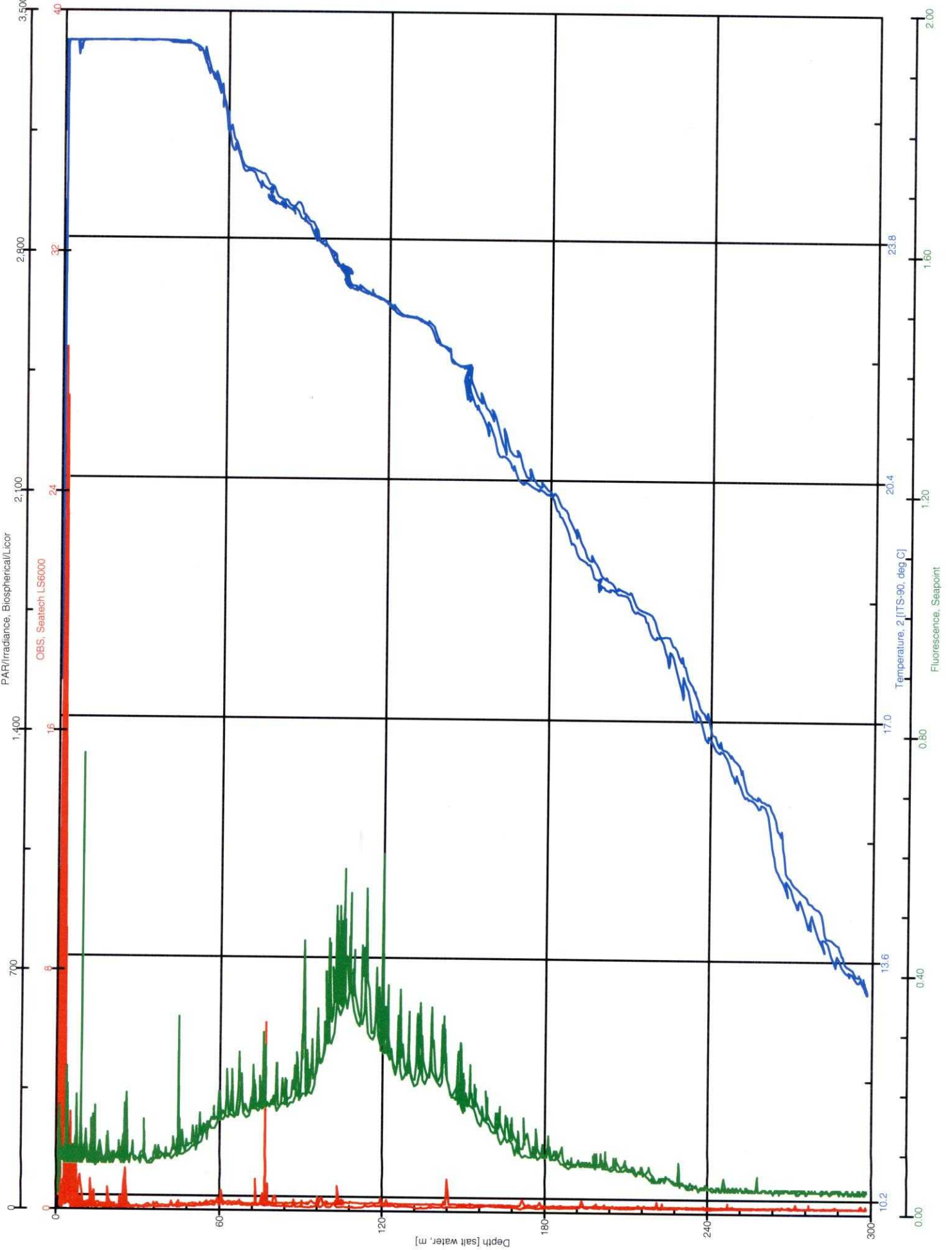
Rosette Position	Desired Depth	HPLC	CHL	NUTS	FRRF	P-FRACT/DNA-P	AR	15N/13C	Paerl 15N2
1	200	X	X	X	X				
2	150	X	X	X	X				
3	DCM	X	X	X	X				
4	DCM					12			
5	100	X	X	X	X				
6	75	X	X	X	X				
7	75					12			
8	45	X	X	X	X				
9	45							12	
10	45							12	
11	45							12	
12	45					12			
13	45					12			
14	45						12		
15	25	X	X	X	X				5
16	25							12	
17	25							12	
18	25							12	
19	25					12			
20	25					12			
21	25					12			
22	25								12
23	25								12
24	5	X	X	X	X				

NOTES:

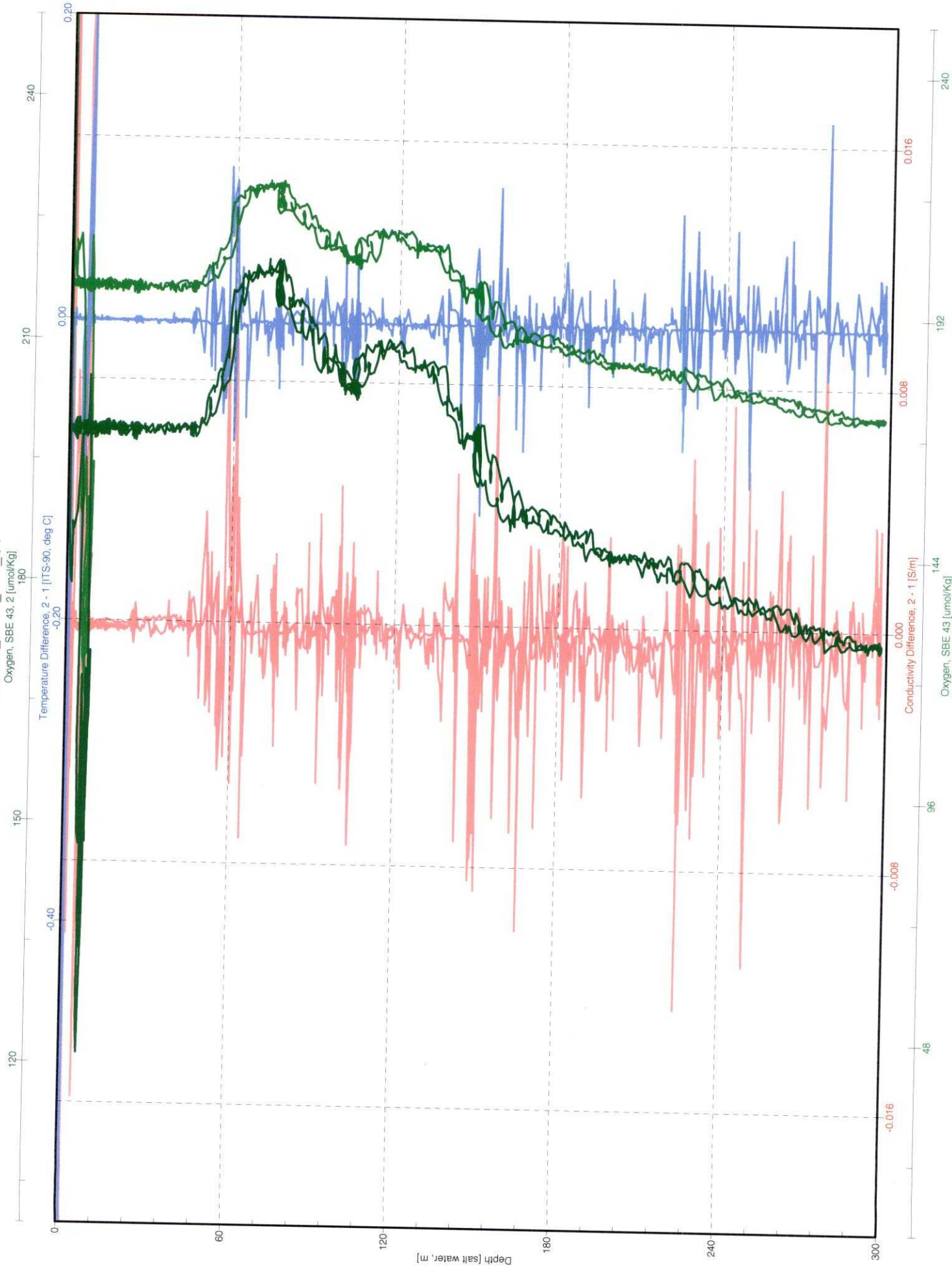
KM0814_di_1_S47_C1



KM0814_2_S47_c1



KM0814_di_S47_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.7	Operator
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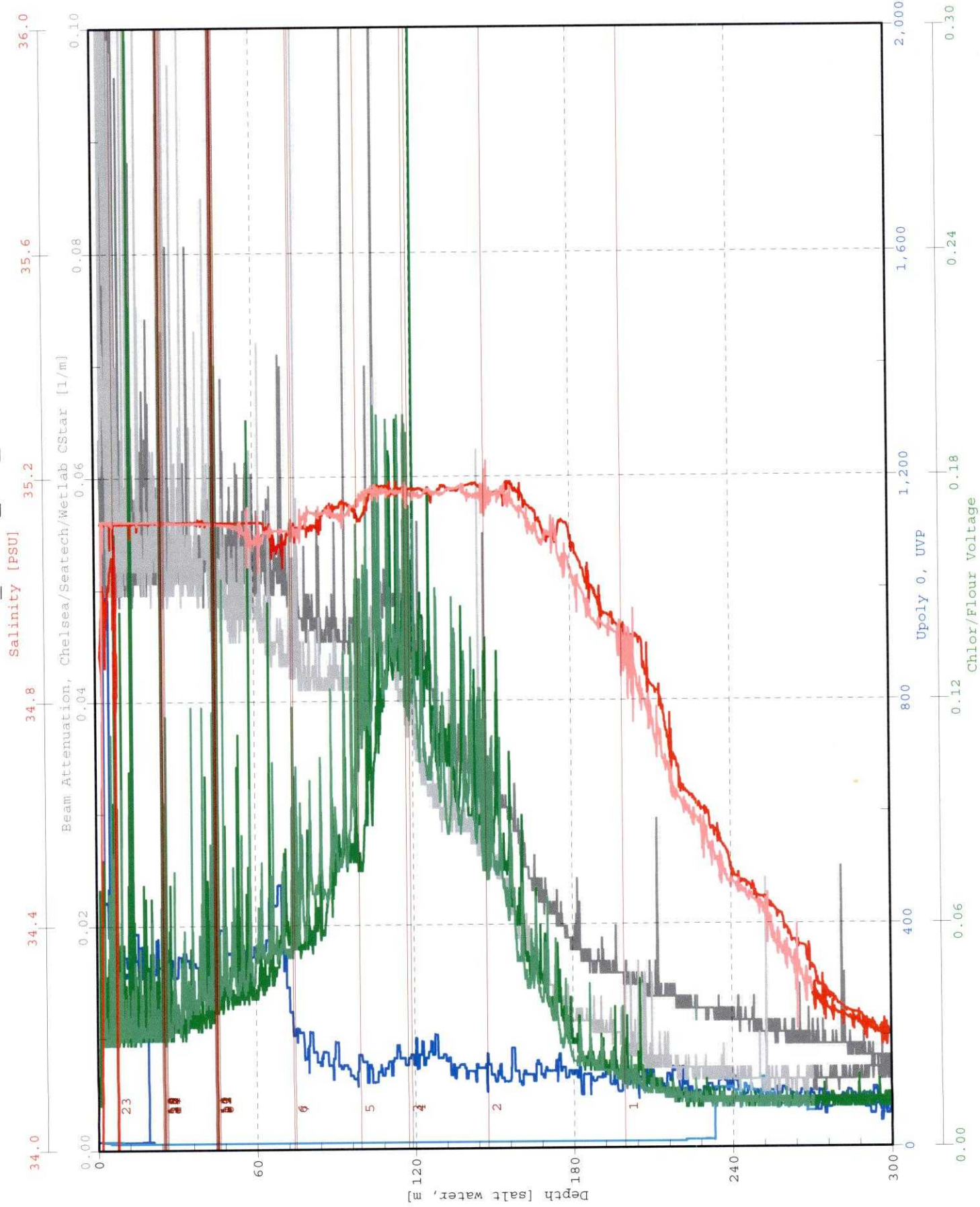
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 48	Cast: 1
Latitude start: 22° 50.002' N end: 22 49.996'	Longitude start: 160° 20.073' W end: 160 20.029' W
Depth of water: 4839 meters	Date (GMT): (224) 8 11 2008
Pressure on Deck	Time: 09:03:18z
Begin: .850	Start Log: 09:17:35z
End: .542	In Water: 09:20:20z
Max cast pressure: 300 dbar	Out of Water: (224) 10:01:34z

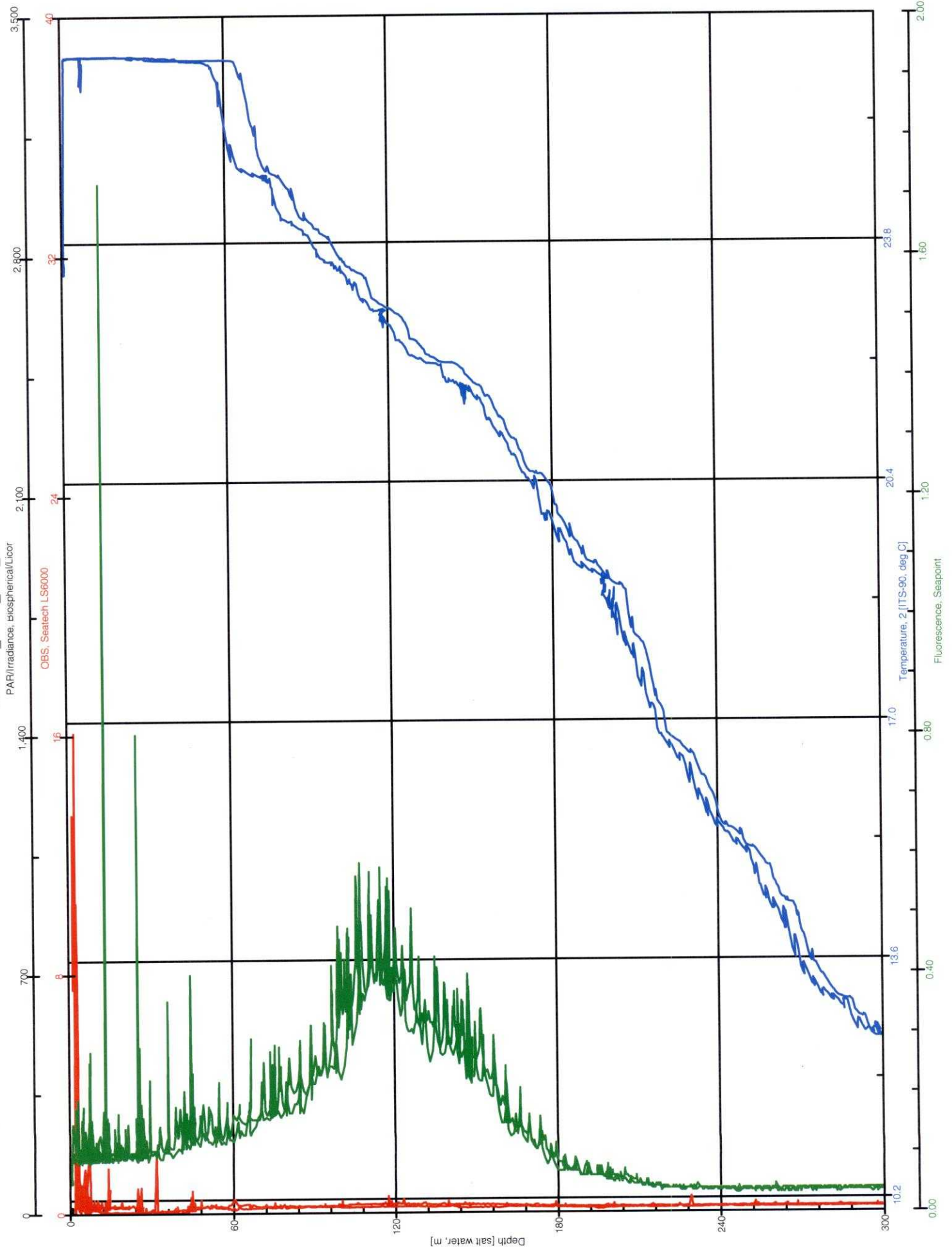
Trip/ Niskin	Time -GMT	Confirm	Pressure dbar	Target Depth-dbar	Comments
	stopped	tripped			
1 (224)	09:41:10	09:41:30	199.9	200	@ 09:22:37 10m
2 (224)	09:43:50	09:43:50	150.1	150	
3 (224)	09:45:35	09:45:50	118.0	DCM 118	
4		09:46:10	119.8	DCM 118	
5 (224)	09:47:40	09:47:50	100.0	100	
6 (224)	09:49:20	09:49:30	79.4	75	
7		09:49:50	75.2	75	
8 (224)	09:51:20	09:51:31	46.4	45	
9		09:51:50	45.6	45	
10		09:52:10	44.5	45	
11		09:52:30z	45.2	45	
12		09:52:50z	45.7	45	
13		09:53:10z	45.4	45	
14		09:53:30z	44.8	45	
15 (224)	09:54:44	09:58:10	25.3	25	
16		09:55:30	25.0	25	
17		09:55:50	26.5	25	
18		09:56:10	25.4	25	
19		09:56:30	24.9	25	
20		09:56:50	25.5	25	
21		09:57:10	25.8	25 db	
22		09:57:30	25.9	25 db	
23		09:57:50	25.5	25 db	10:03:50 CID on Deck
24 (224)	09:59:30	09:59:40	7.1	5 db	3m of wire

KM0814 di. _S48_C1

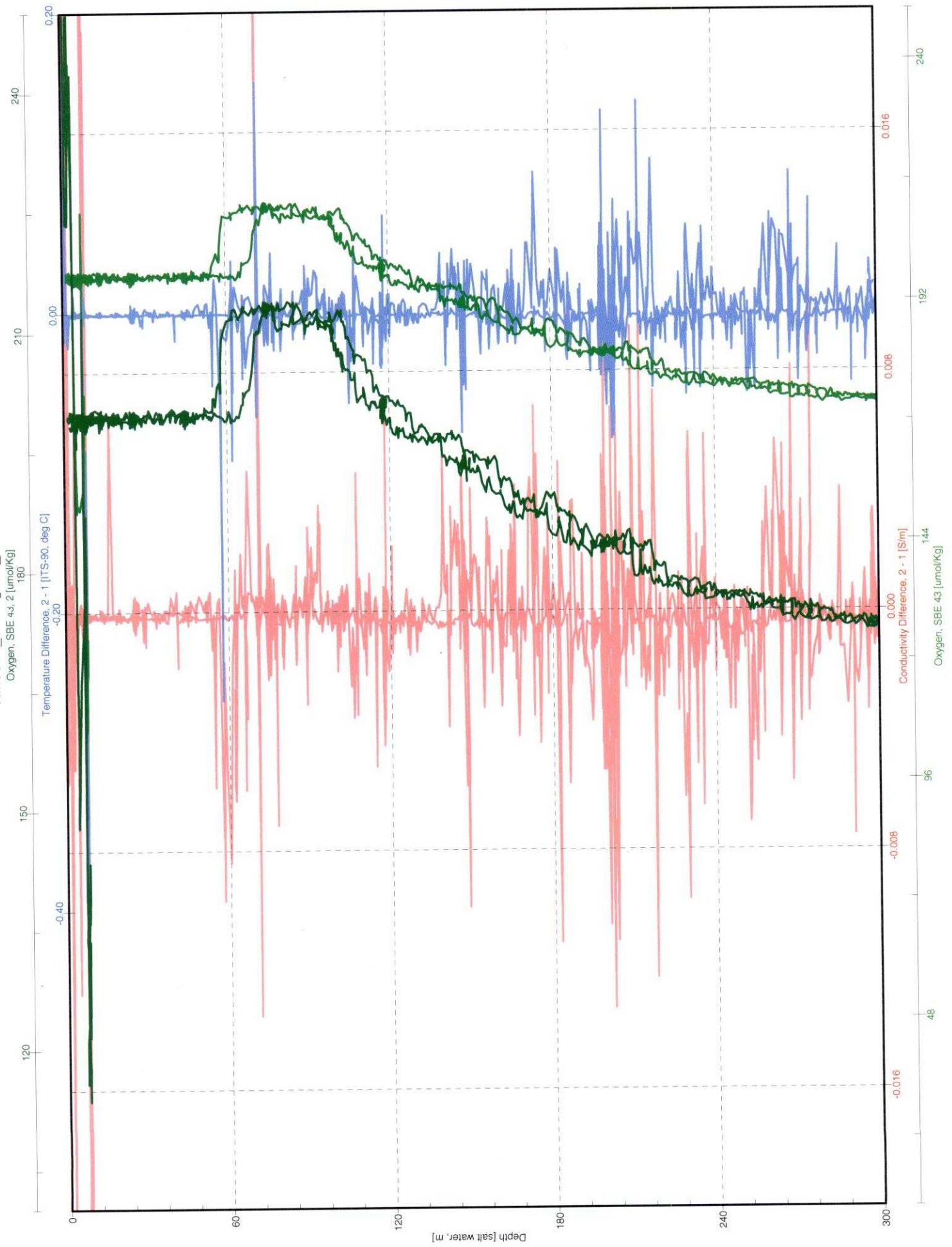


Bottle
Firing
Sequence
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23

KM0814_c _S48_c1



KM0814_d1_S48_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.7	Operator Calil
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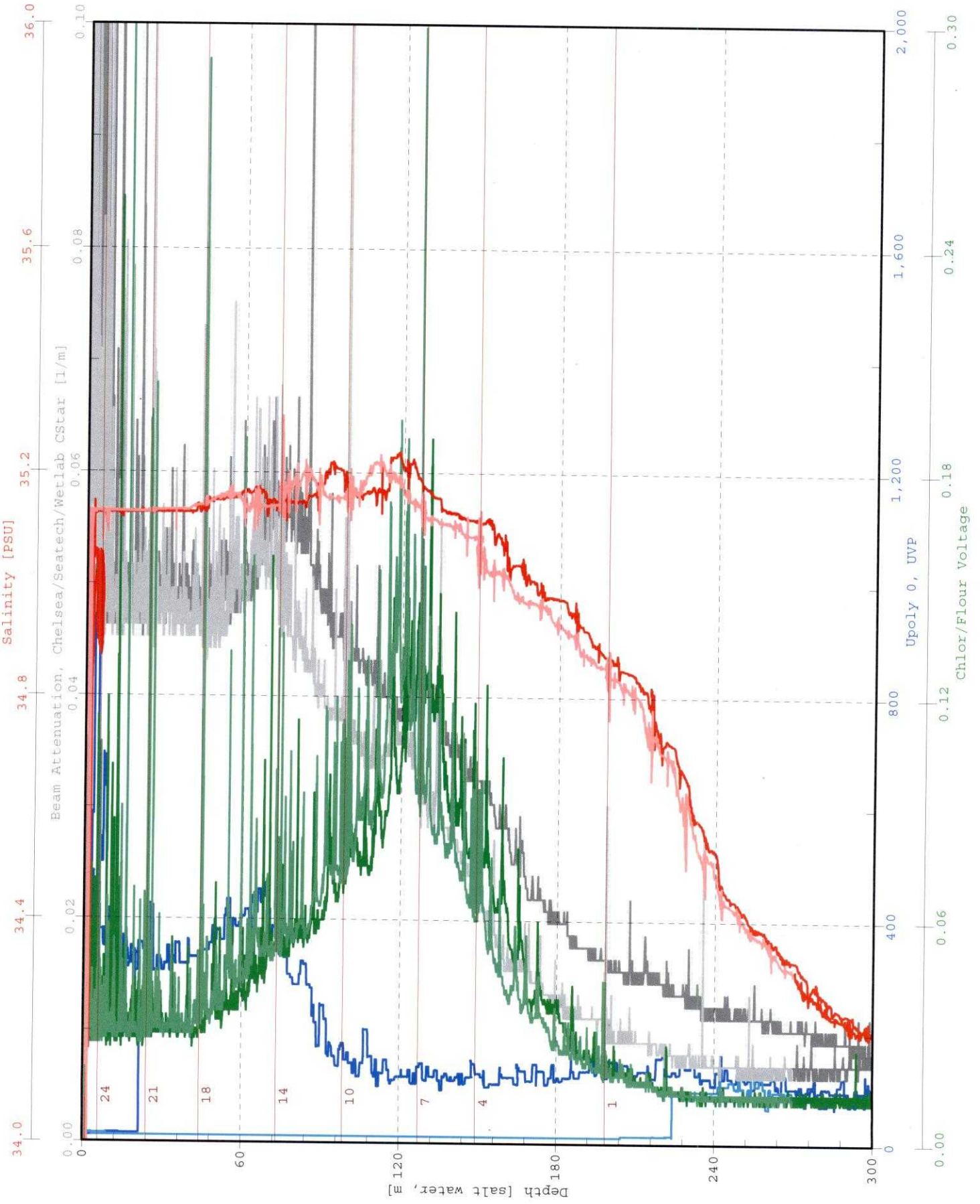
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487___
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 49	Cast: 1
Latitude start: 22d 59.980'N end:	Longitude start: 160d 40.021'W end:
Depth of water: 4401 meters	Date (GMT): 224 08 / 11 / 2008
Pressure on Deck Begin: 0.65-0.89 End: 0.42	Time: 12:03:00Z Start Log: 12:10:25Z In Water: 12:12:19 Out of Water: 12:48:23
Max cast pressure: 300 dbar	

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1	12:30:14	12:30:40	199.35	200	DCM = 128 dbar
2					
3					
4	12:32:48	12:33:10	149.94	150	
5					
6					
7	12:34:27	12:34:50	128.00	DCM	
8					
9					
10	12:36:29	12:36:50	99.03	100	
11					
12					
13					
14	12:38:18	12:38:40	74.04	75	
15					
16					
17					
18	12:40:13	12:40:35	44.29	45	
19					
20					
21	12:41:58	12:42:20	25.25	25	
22					
23					
24	12:45:53	12:46:15	6.08	5	3m of wire out

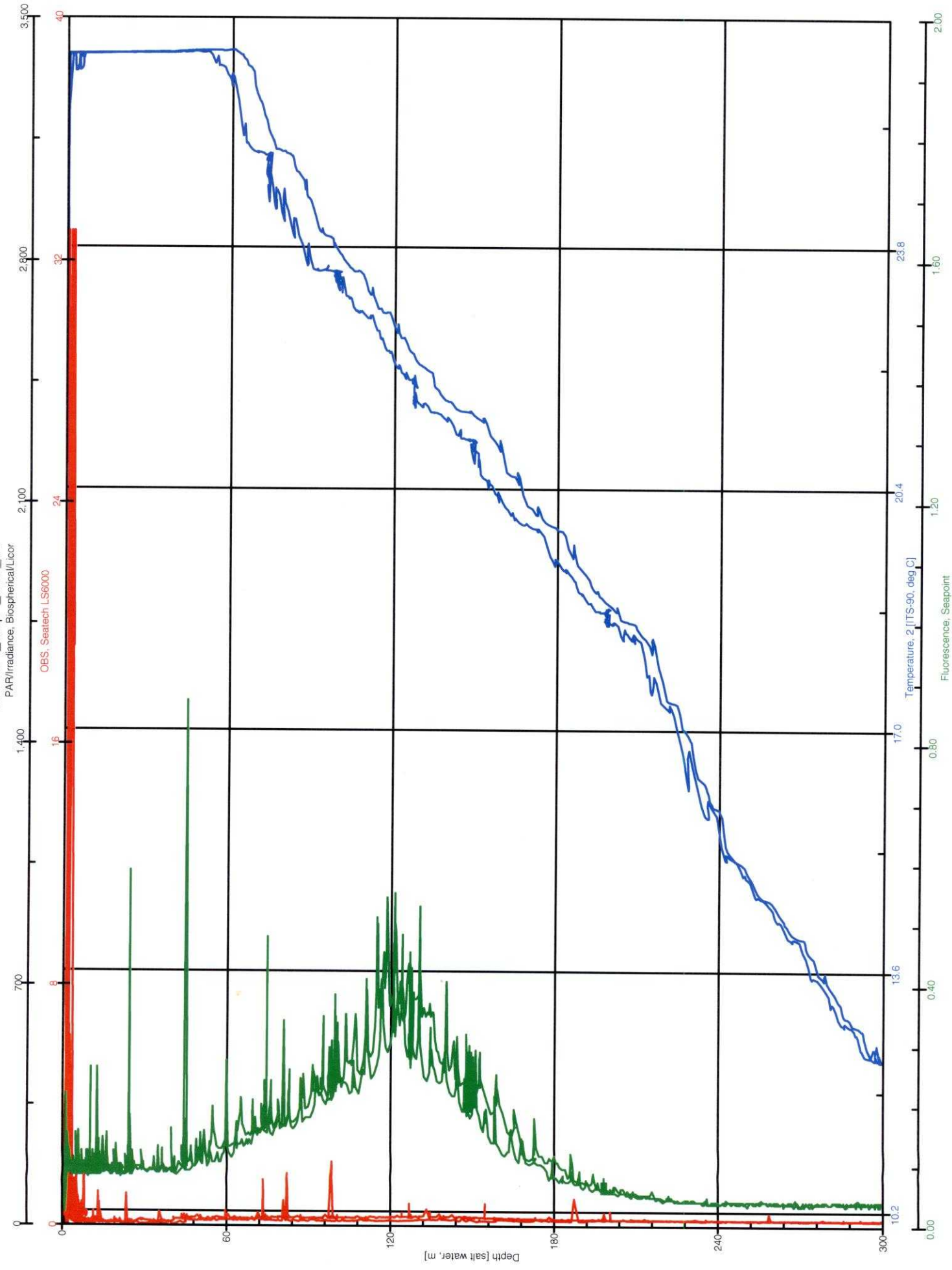
KM0814_displ_S49_C1



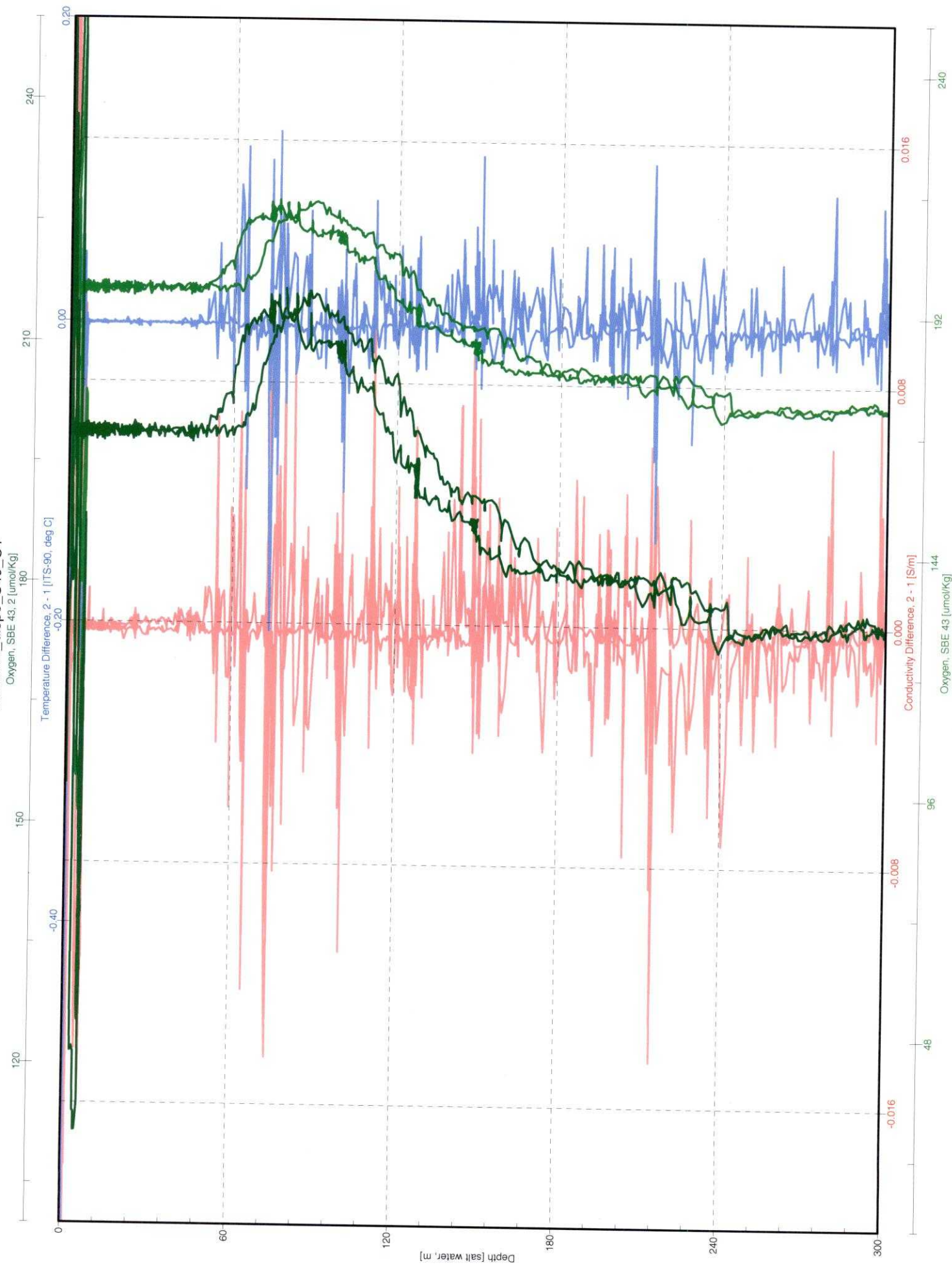
Bottle
Firing
Sequence
1 4 7
10 14 18
21 24

KM0814_disr_S49_c1

PAR/Irradiance, Biospherical/Licor



KM0814_disj_s49_C1



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST 26.8	Operator Calil
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- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 50	Cast: 1
Latitude start: 23d 10.005'N end: 23d 10 019'N	Longitude start: 160d 30.037'W end: 160d 30.035'W
Depth of water: 4847 meters	Date (GMT): 22 4 08/11/2008
Pressure on Deck	Time: 14:16:30Z
Begin: 0.80 End: 0.45	Start Log: 14:19:36 In Water: 14:23:26 Out of Water:
Max cast pressure: 300 dbar	

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1	14:45:00	14:45:20	200.48	200	DCM = 132 dbar
2					
3					
4	14:47:26	14:47:50	150.54	150	
5					
6					
7	14:48:56	14:49:20	131.57	DCM	
8					
9					
10	14:50:52	14:51:20	99.97	100	
11					
12					
13					
14	14:52:50	14:53:10	75.11	75	
15					
16					
17					
18	14:54:50	15:55:10	44.23	45	
19					
20					
21	14:56:23	14:56:45	25.95	25	
22					
23					
24	15:00:21	15:00:40	5.70	5	3 m of wire out

C-MORE CRUISE LOG
OPEREX
Station Data Sheet

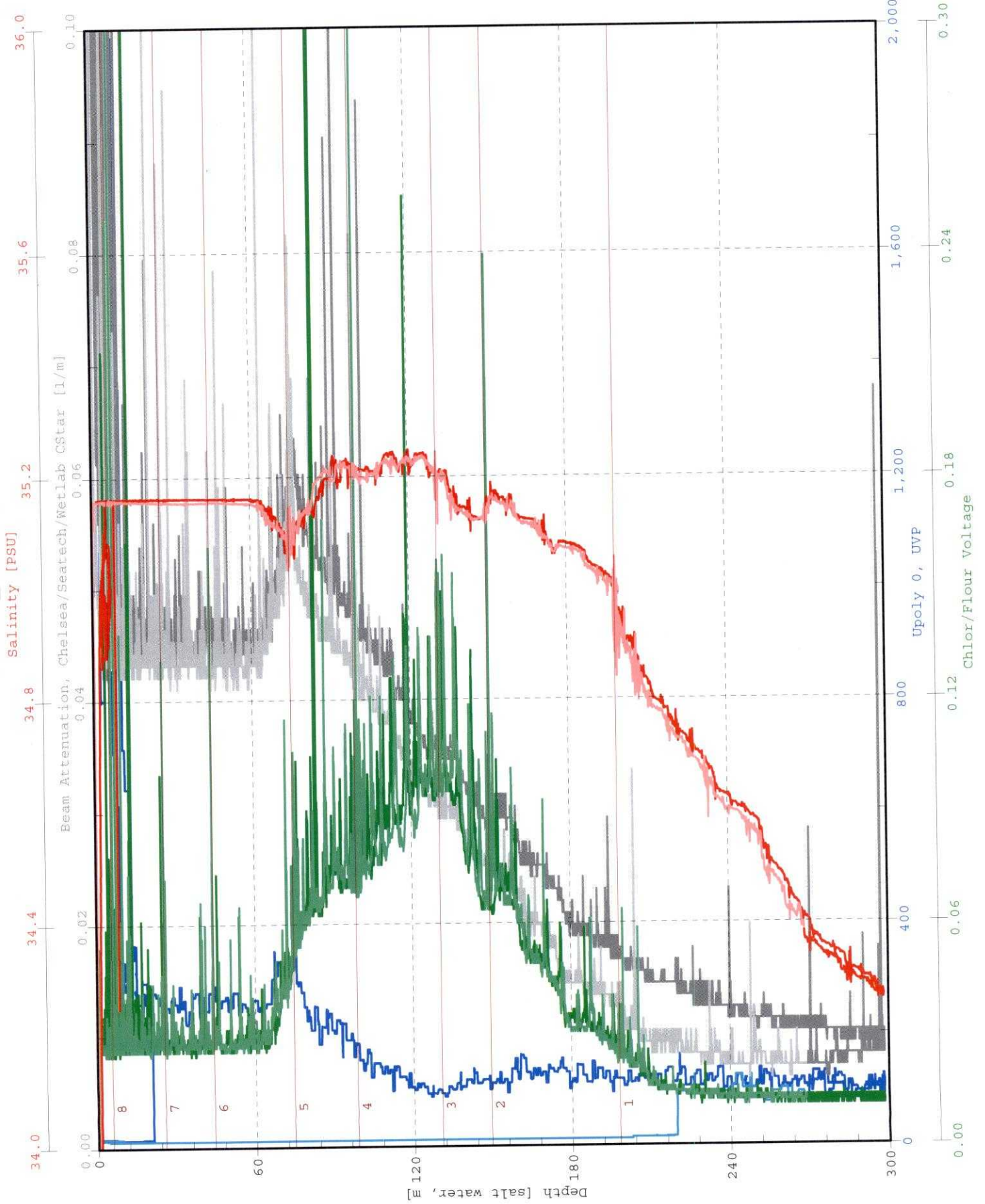
Station Number: 50, Source eddy sampling
 Cast Number: 1
 Operators: JB, DV, PC, ZK, LS, AF

Date: 8/11/2008 (224) (GMT)
 Time: (GMT)
 Position:

Rosette Position	Desired Depth	HPLC	CHL	NUTS	FRRF					
1	200	X	X	X	X					
2										
3										
4	150	X	X	X	X					
5										
6										
7	DCM	X	X	X	X					
8										
9										
10	100	X	X	X	X					
11										
12										
13										
14	75	X	X	X	X					
15										
16										
17										
18	45	X	X	X	X					
19										
20										
21	25	X	X	X	X					
22										
23										
24	5	X	X	X	X					

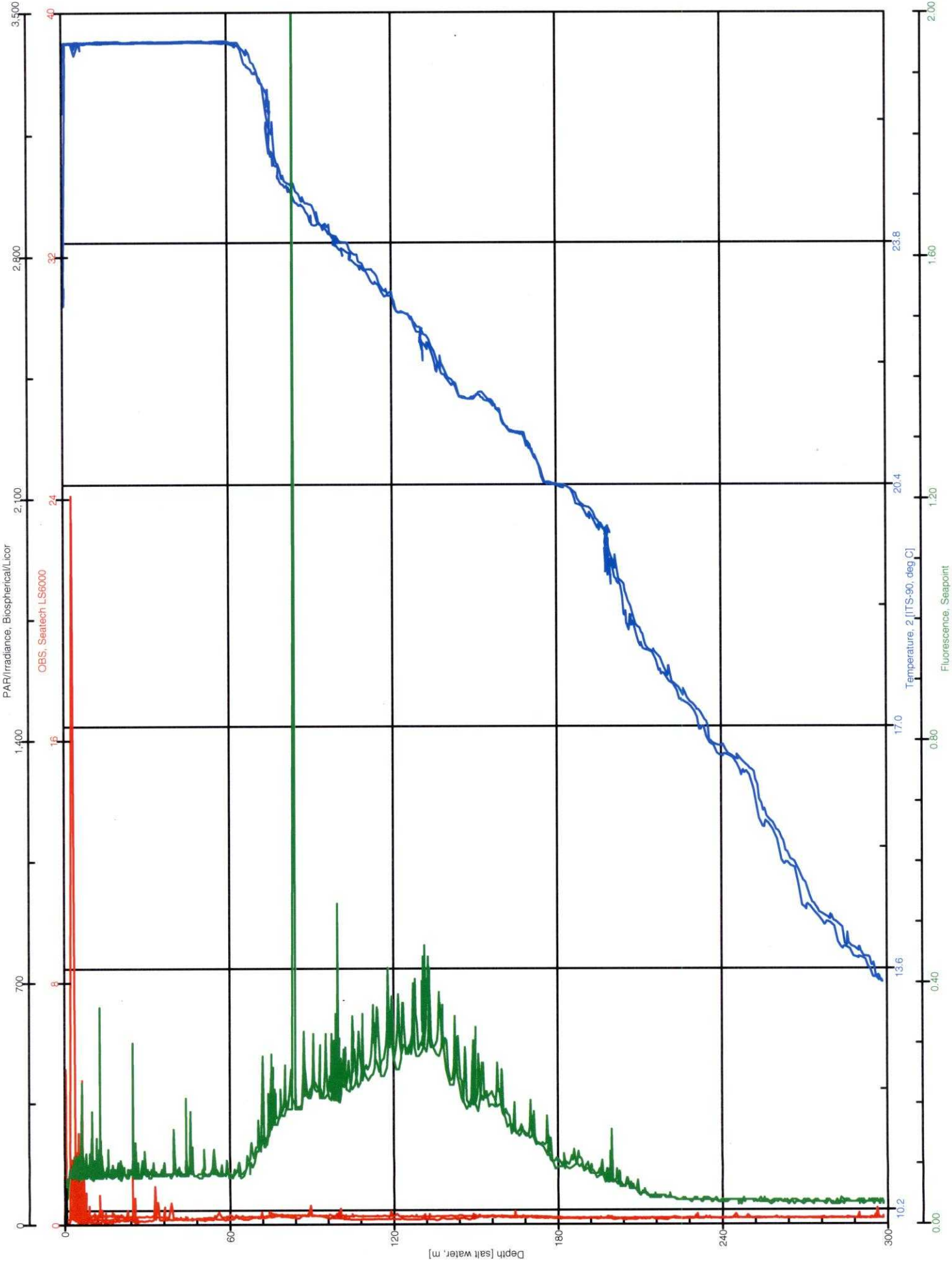
NOTES:

KM0814_disp+S50_C1

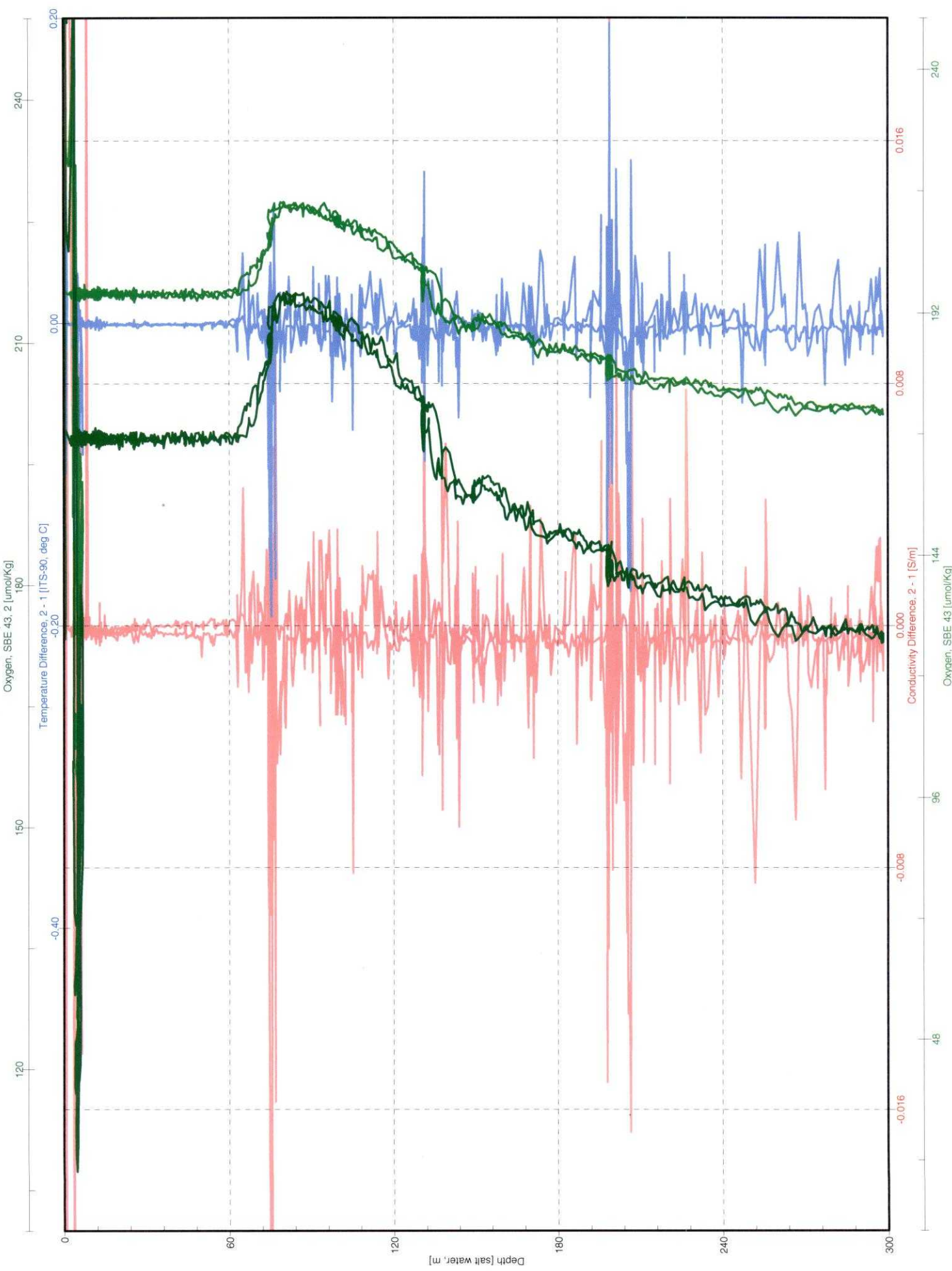


Bottle Firing Sequence
1 2 3
4 5 6
7 8

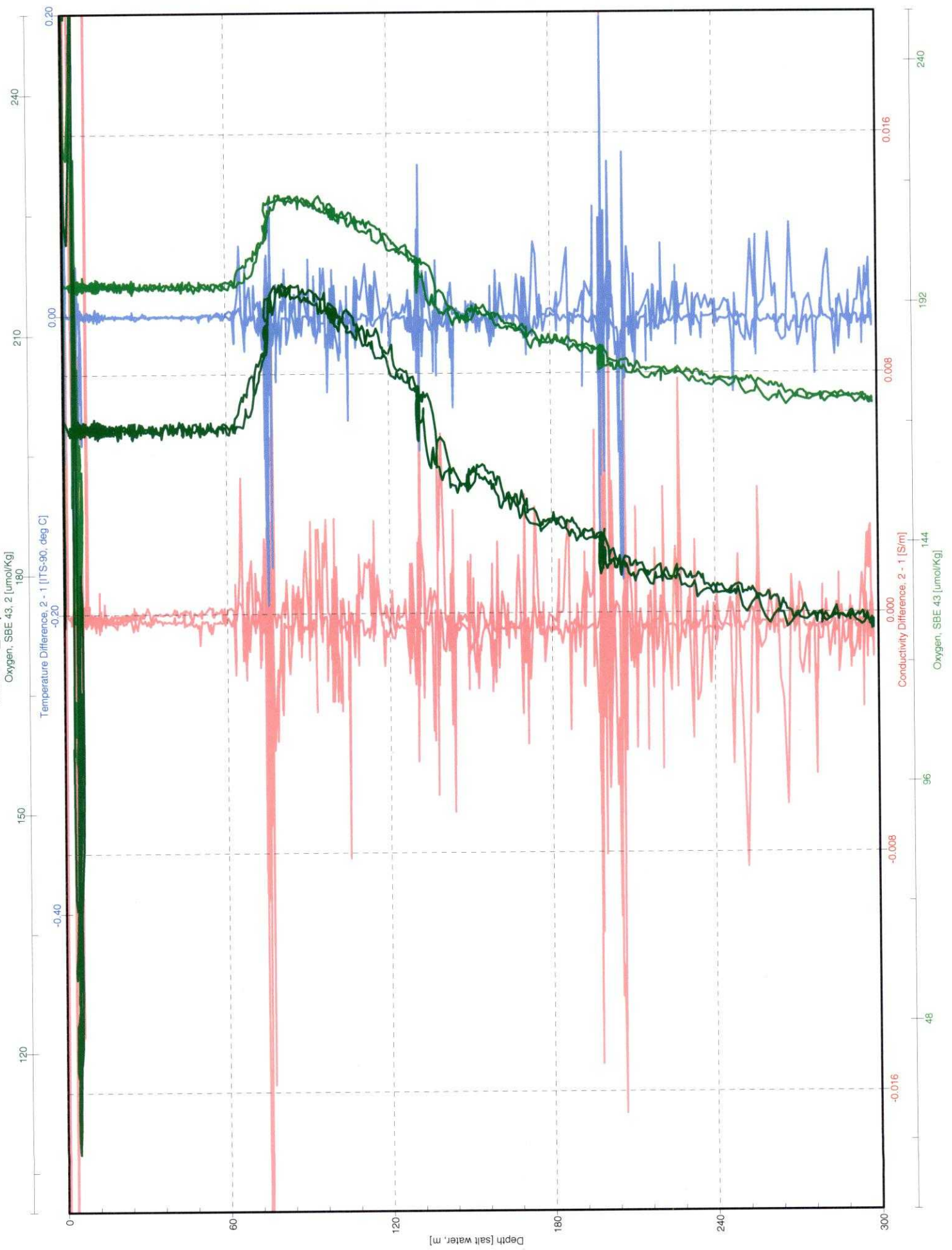
KM0814_dis_..._S50_c1



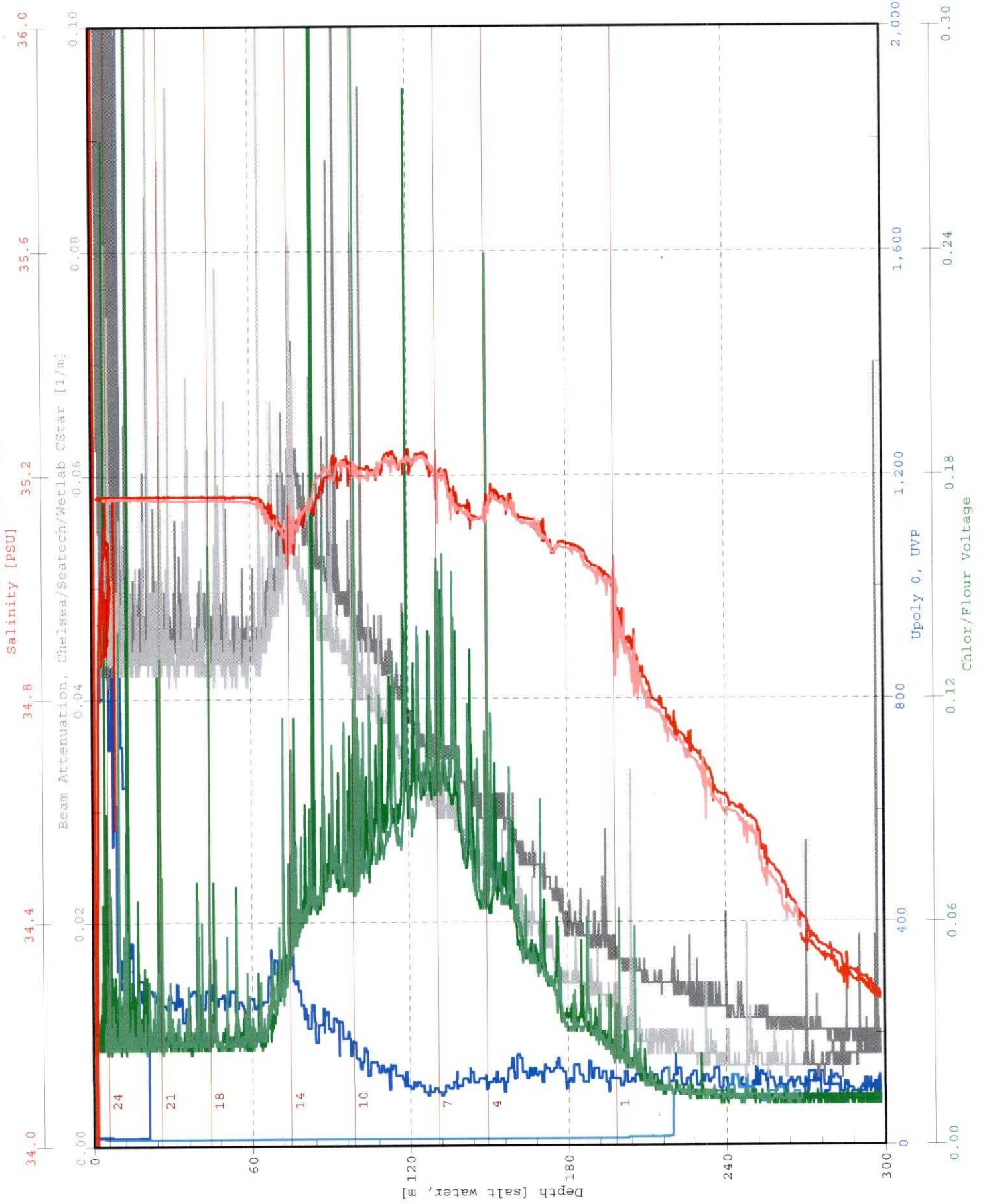
KM0814_disj..._S50_C1



KM0814_dis_~_S50_C1

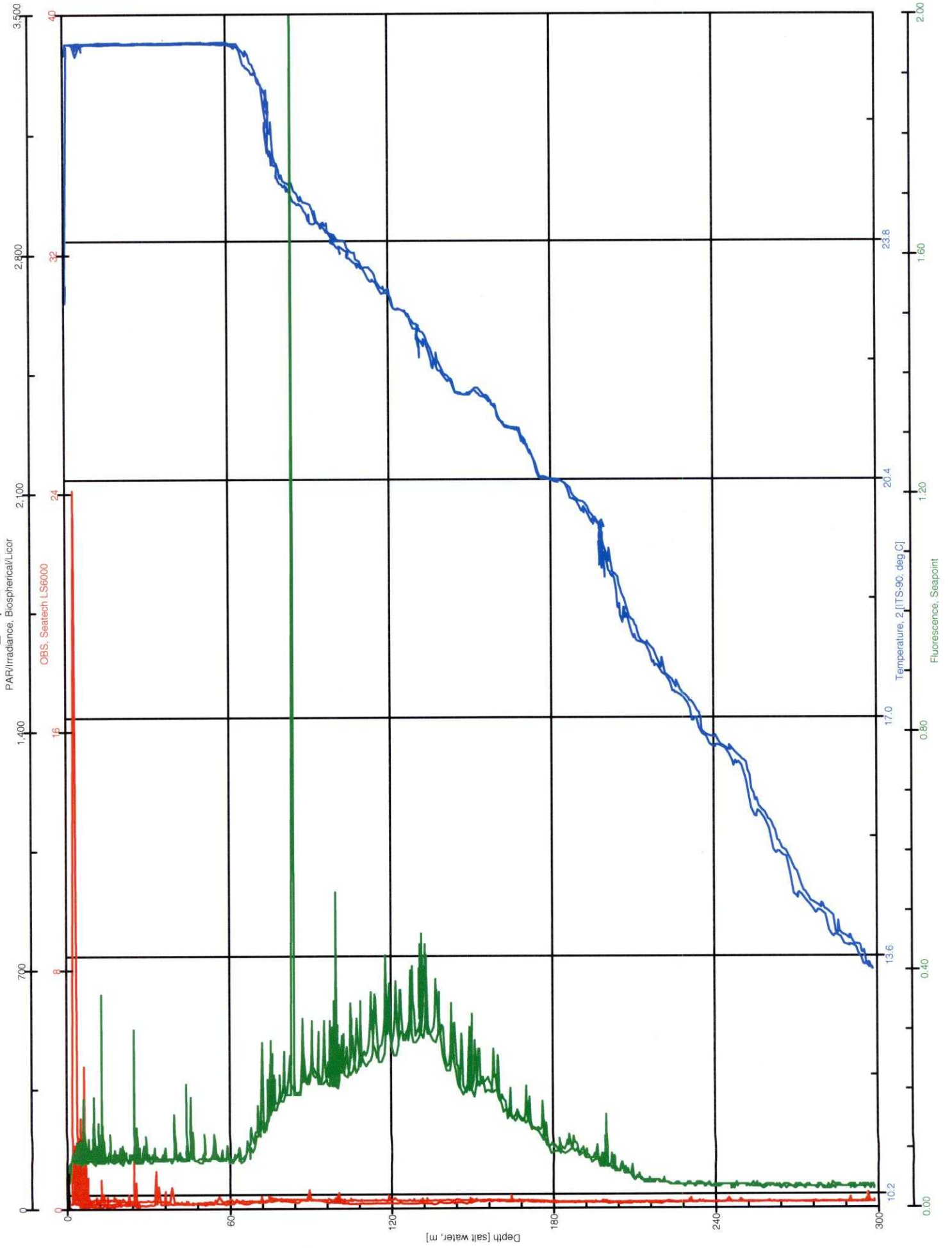


KM0814_disr_s50_c1



Bottle
Firing
Sequence
1 4 7
10 14 18
21 24

KM0814_disr_S50_c1



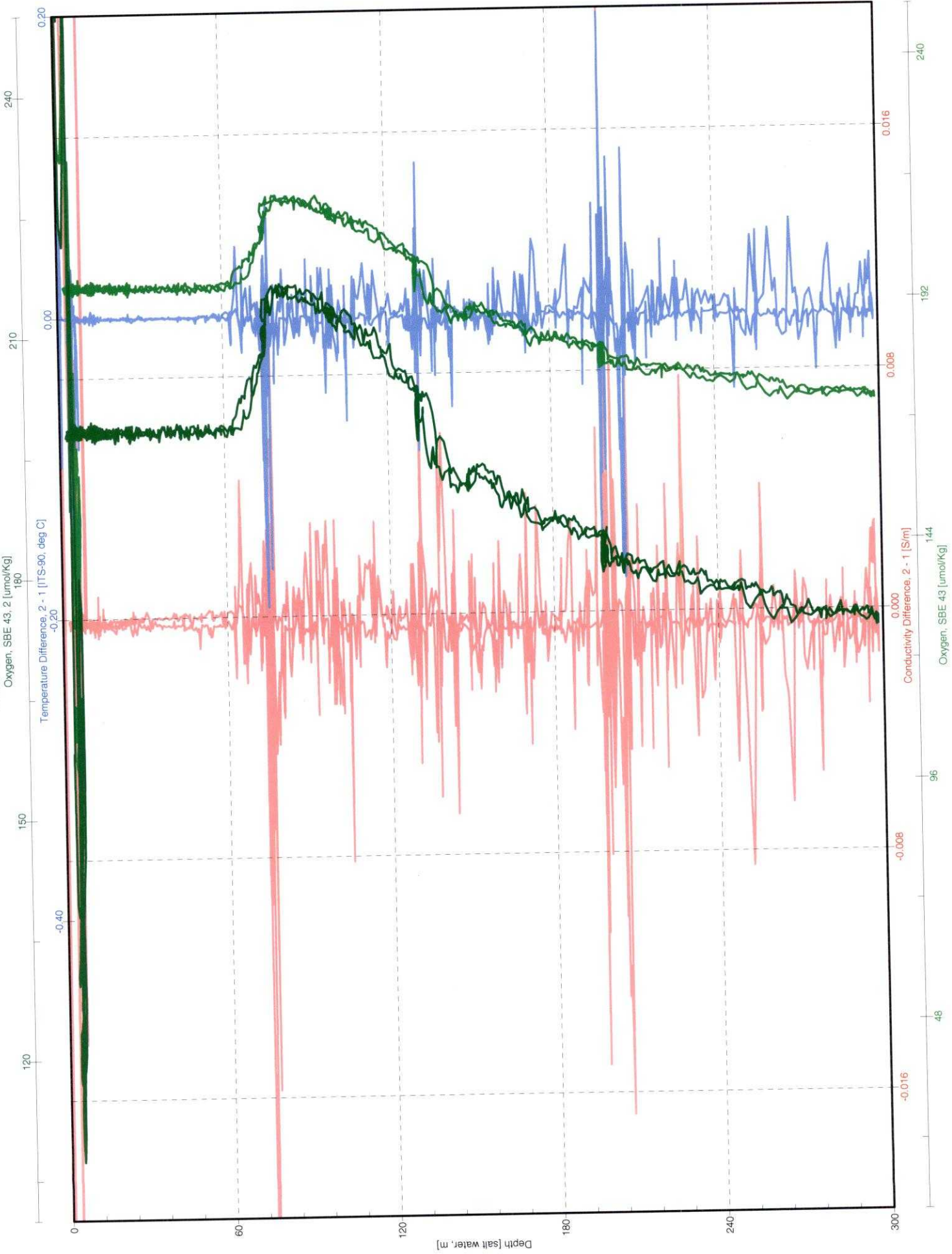
KM0814_disr_S50_C1

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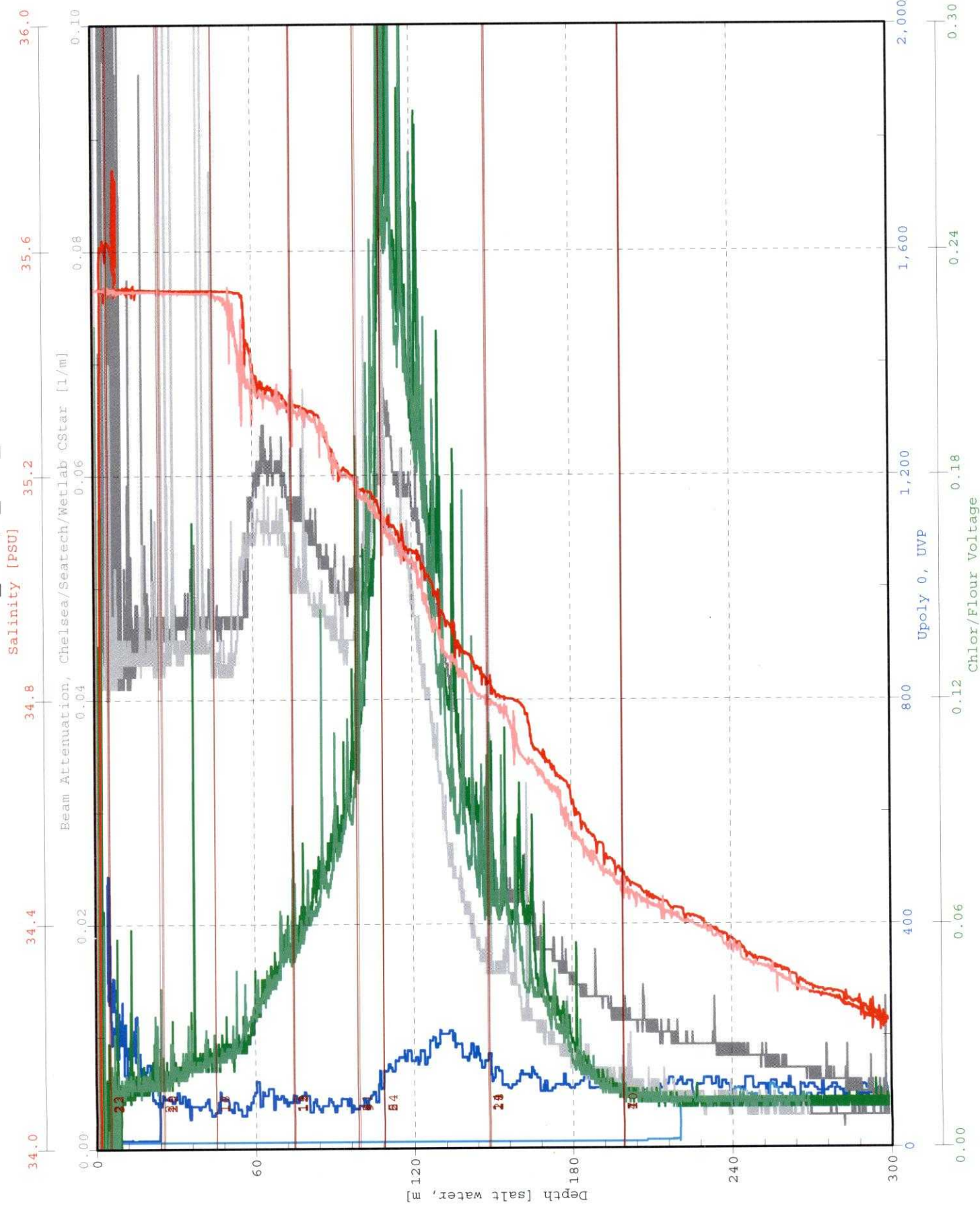
- UVP
- LSS
- OTG Seapoint Fluorometer s/n 2487 _____
- Biospherical PAR
- Transmis.. CST-1043DR

Time-GMT	Comments

Station: 51	Cast: 1
Latitude start: 25° 31.022' N end: 25° 31.023' N	Longitude start: 157° 33.481' W end: 157° 33.481' W
Depth of water: 4916 meters	Date (GMT): (???) 08/12/2008
Pressure on Deck Begin: 0.88 dbar End: 0.40 dbar	Time: 22:45:00 Start Log: 22:46:00 In Water: 22:47:00 Out of Water: 23:25:00
Max cast pressure: 300 dbar	

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1	23:04:22	23:04:40	201.0	200	
2		23:04:50	200.8	200	
3		23:05:00	201.0	200	
4		23:05:10	200.5	200	
5	23:07:23	23:07:40	199.0	150	
6		23:07:50	199.4	150	
7		23:08:00	198.9	150	
8	23:10:10	23:10:20	109.5	DCM	110 dbar
9		23:10:30	109.3	DCM	
10		23:10:40	109.9	DCM	
11	23:12:55	23:13:10	100.0	100	
12		23:13:20	99.4	100	
13		23:13:30	99.9	100	
14	23:14:51	23:15:10	74.5	75	
15		23:15:20	74.9	75	
16		23:15:30	75.4	75	
17	23:17:10	23:17:20	45.3	45	
18		23:17:30	45.4	45	
19	23:18:20	23:18:50	24.5	25	
20		23:19:00	25.4	25	
21		23:19:10	25.7	25	
22	23:21:54	23:22:10	5.5	5	
23		23:22:20	5.4	5	
24		23:22:30	4.9	5	

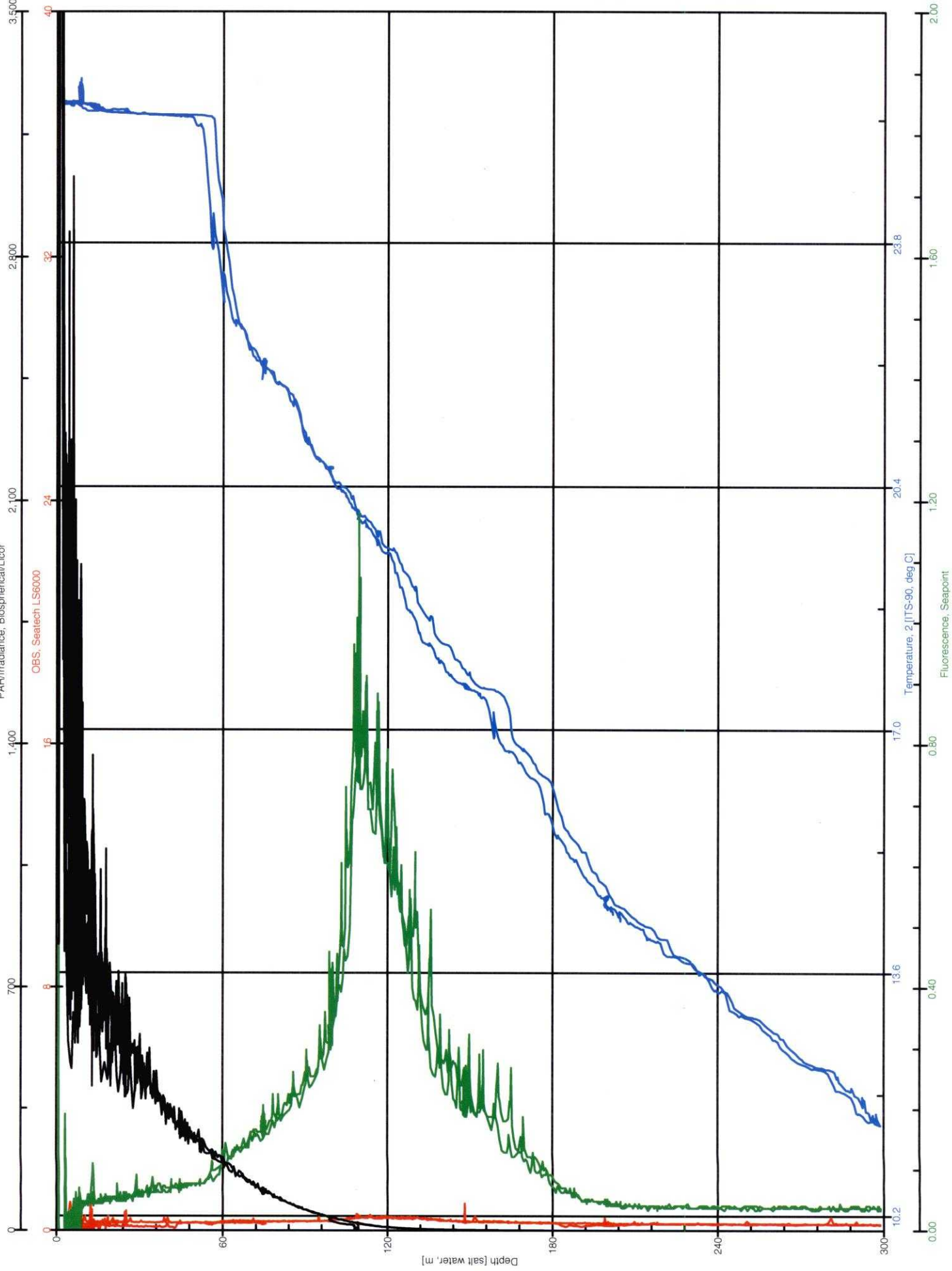
KM0814_di_1_S51_C1



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

KM0814_d._S51_c1

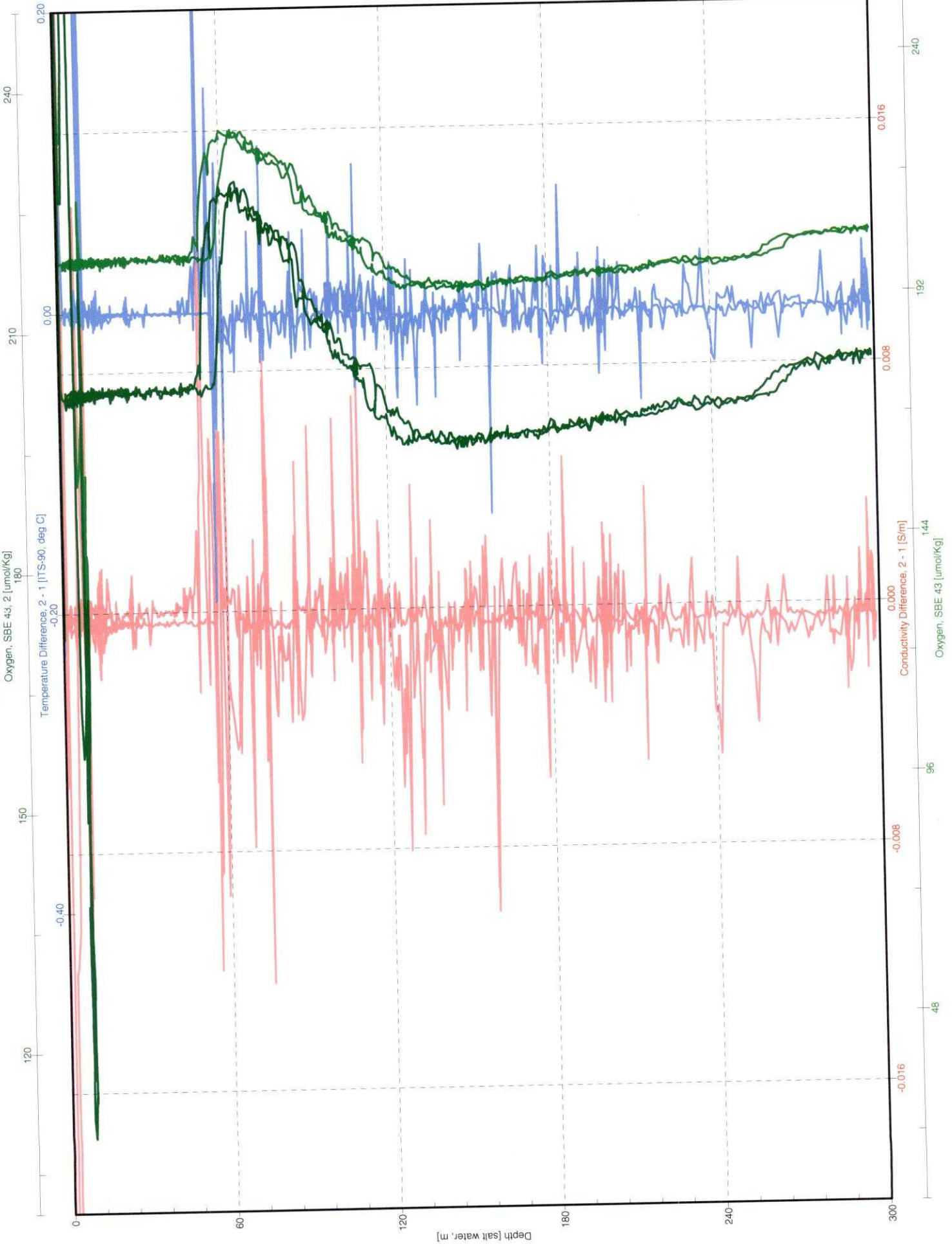
PAR/Irradiance, Biospherical/Licor



KM0814 di. S51_C1

Oxygen, SBE 43, 2 [umol/Kg]

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



km0814 OPEREX-CMORE CONSOLE LOG

Cast type	Bottle type	SST	Operator
		26.2	Calil

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

Time-GMT	Comments

Station: 52	Cast: 1
Latitude start: 24d 13.357'N end: 24d 13.357'N	Longitude start: 157d 29.060'W end: 157d 29.057'W
Depth of water: 4458 meters	Date (GMT): 226 08/13/2008
Pressure on Deck	Time: 16:02:45E
Begin: 0.80	Start Log: 16:08:11Z
End: 0.42	In Water: 16:10:57Z
Max cast pressure: 300 dbar	Out of Water: 16:52:05

Trip/ Niskin	Time -GMT stopped	Confirm tripped	Pressure dbar	Target Depth-dbar	Comments
1	16:30:49	16:31:00	199.92	200	DCM = 101 dbar
2		16:31:20	200.71	200	
3		16:31:40	200.48	200	
4		16:32:00	199.90	200	
5	16:34:43	16:35:00	149.62	150	
6		16:35:20	150.60	150	
7		16:35:40	149.43	150	
8	16:37:43	16:38:00	102.41	DCM	
9		16:38:20	102.30	PCM	
10		16:38:40	101.50	DCM	
11	16:39:17	16:39:30	99.93	100	
12		16:39:50	99.25	100	
13		16:40:10	98.87	100	
14	16:41:40	16:42:00	75.32	75	
15		16:42:20	75.49	75	
16		16:42:40	75.29	75	
17	16:44:04	16:44:20	45.54	45	
18		16:44:40	45.68	45	
19	16:45:56	16:46:10	25.56	25	
20		16:46:30	25.79	25	
21		16:46:50	25.97	25	
22	16:49:25	16:49:45	4.76	5	} 3m of wire out
23		50:05	4.85	5	
24		50:25	5.37	5	