

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: S103 Event #: 1 Ship: Tully UTC Date (dd/mmm/yyyy): Apr 6 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	PIC													
1	1	1	Bot-10	✓	216	x												
2	2	2	175	✓	175	x												
3	3	3	150	✓	150	x												
4	4	4	100	✓	100	x												
5	5	5	50	✓	50	xx												
6	6	6	25	✓	25	x												
7	7	7	5	✓	5	x												
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DI inc

Bottom Depth: 227 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	0336	2036
Bottom	0340	2040
End	0350	

Positional Information
 Start
 Lat: 48 ° 35.67 N
 Lon: 123 ° 29.89 W

Bottom
 Lat: 48 ° 35.69 N
 Lon: 123 ° 29.89 W

End
 Lat: 48 ° 35.71 N
 Lon: 123 ° 29.90 W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P1 Event #: 2 Ship: Tully UTC Date (dd/mmm/yyyy): 8 / 6 / 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments				
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	DIC	Oxy	pH						
1	1	8	Bot-10	129	x				xx	x	xxx						
2	2	9	30/Max	30	x		xx	xx									
3	3	10	5		x	x	xx	xx	x	x	xxx						
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): H.M/S.B/N.S

Bottom Depth: 127 m
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1817	1117
Bottom	1819	1119
End	1824	1124

Positional Information

Start
 Lat: 48 ° 34.46 N
 Lon: 125 ° 30.21 W

Bottom
 Lat: 48 ° 34.45 N
 Lon: 125 ° 30.27 W

End
 Lat: 48 ° 34.41 N
 Lon: 125 ° 30.35 W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P2 Event #: 4 Ship: Tully UTC Date (dd:mmm/yyyy): 08/06/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed Pressure	Oxy	Nut-N	Nut-P	Sal	DIC	pH	PIC	DOC	UW				
1		11	Bot-10	✓	105	x	x			x	x			x			
2		12	100	✓	100	x	x			x	x	x	x				
3		13	75	✓	75	x	x			xx	x			x			
4		14	75	✓	74	x	x			x	x	x					
5		15	50	✓	49	x	x			x	xxx	x	x				
6		16	25	✓	25	x	xx			x	x	x	x				
7		17	10	✓	10	x	x			x	x	xx	x				
8		18	5	✓	5	x	x			x	x	x	x				MIS FIRE
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY

Bottom Depth: 118 m
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2054	1354
Bottom	2056	1356
End	2105	1405

Positional Information

Start	Lat: 48 ° 36.04 N
	Lon: 125 ° 59.83 W
Bottom	Lat: 48 ° 36.05 N
	Lon: 125 ° 59.84 W
End	Lat: 48 ° 36.13 N
	Lon: 125 ° 59.89 W

Extra comments:
 Deep cast

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P2 Event #: 6 Ship: Tully UTC Date (dd:mm:yyyy): 8 Jul 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					Comments											
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F	UNC												
1	1	19	50	✓	51	xx		x													
2	2	20	45	✓	45	xx	xx		x												
3	3	21	40	✓	40	xx		x	xx												0.8
4	4	22	35	✓	35	xx	xx		x												
5	5	23	30	✓	29	xx		x	x												
6	6	24	25	✓	24	xx		xx													
7	7	25	20	✓	20	xx		x	x												
8	8	26	15	✓		xx		x	x												Mcs-fire
9	15	27	10	✓	10	xx		x	x												Max
10	16	28	5	✓	5	xx	xx	xx													
11	9	29	Max	✓	15																x
12	10	30	Max	✓	15																x
13	11	31	Max	✓	15																x
14	12	32	Max	✓	15																x
15	13	33	Max	✓	15																x
16	14	34	Max	✓	15	xx		x	x	x											HPLC Chl + Nut because of 8 mcs fire
17	17	35	5	✓	5																x
18	18	36	5	✓	5																x
19	19	37	5	✓	4																x
20	20	38	5	✓	4																x
21	21	39	5	✓	4																x
22	22	40	5	✓	5																x
23																					
24																					

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): MR

Bottom Depth: 108 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	2147	1444
Bottom	2148	1448
End	2201	1501

Positional Information
 Start
 Lat: 48° 36.23 N
 Lon: 126° 00.23 W

Bottom
 Lat: 48° 36.24 N
 Lon: 126° 02.26 W

End
 Lat: 48° 36.30 N
 Lon: 126° 0.31 W

Extra comments:
 HPLC and UNC cast
 OUT-OF-ORDER

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P3 Event #: 7 Ship: Tully UTC Date (dd:mmm:yyyy): 8 6 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		41	30 (Max)	✓ 25	x		xx	xx	Max @ 25 m
2		42	5	✓ 5	x	x	xx	xx	Fired 8 to test
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY

Bottom Depth: 811 m
 Transmisso Cleaned: 01 N

Time	UTC	Local
Start	2351	1651
Bottom	0006	1706
End	0021	1721

Positional Information
 Start
 Lat: 48° 37.42 N
 Lon: 126° 19.75 W

Bottom
 Lat: 48° 37.32 N
 Lon: 126° 19.83 W

End
 Lat: 48° 37.27 N
 Lon: 126° 19.93 W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P4 Event #: 8 Ship: Tully UTC Date (dd|mmm|yyyy): 09|06|2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Oxy	Nut-F	Nut-C	Sal	DIC	pH	PIC	DOC	UBC	Oxy UVic		ONAr UVic	Sal UW		
1	1	43	Bot-10	✓	1320	x	x	x		x	x		x	x	x				
2	3	44	1250	✓	1250	x	x	x	x	xx	x				x				
3	4	45	1250	✓	1250	xx	x	x	xx	x	x		x	xx					
4	5	46	1000	✓	1000	x	x	x	xx	x	x		x	x	x				
5	7	47	800	✓	801	x	x	x	x	x	x		x	x	x				
6	8	48	600	✓	599	x	xx	xx		x	xxx		x	x	x				
7	9	49	400	✓	400	x	x	x		x	x		x	x	x				
8	10	50	300	✓	300	x	x			x	x		x	x	x				
9	11	51	250	✓	248	x	x			x	x		xx						
10	12	52	200	✓	200	x	x			x	x		x	x	x				
11	13	53	175	✓	175	x	x			x	x		x	x					
12	14	54	150	✓	150	x	x			x	x		x	x	x				
13	15	55	125	✓	124	x	xx			x	x		x	x					
14	16	56	100	✓	100	x	x			x	x		x	x	x				
15	17	57	75	✓	75	xx	x			x	x		x	x					
16	18	58	50	✓	50	x	x			x	x		x	x	x				
17	19	59	25	✓	24	x	x			x	xxx		x	x	x				
18	20	60	10	✓	10	x	x			x	x		x	x	x				
19	21	61	5	✓	5	x	x			x	x		x	x					
20	2	62	Bot-10	✓	1322										xx	x	x		
21	6	63	1000	✓	1000										xx	x	x		
22	22	64	5	✓	5										xx	x			
23																			
24																			

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY

Bottom Depth: 1325 m
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	<u>0228</u>	<u>1928</u>
Bottom	<u>0253</u>	<u>1953</u>
End	<u>0334</u>	<u>2034</u>

Positional Information

Start	Lat: <u>48° 38.90</u> N	Lon: <u>126° 39.96</u> W
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Bottom

Bottom	Lat: <u>48° 38.90</u> N	Lon: <u>126° 39.96</u> W
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End

End	Lat: <u>48° 38.90</u> N	Lon: <u>126° 39.96</u> W
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Extra comments:
Deep cast - OUT OF ORDER
 1 - 20 - 2 - 3 - 4 - 21 - 5 - 6 - 7 ...
 ... 17 - 18 - 19 - 22

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Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P4 Event #: 10 Ship: Tully UTC Date (dd:mmm:yyyy): 9 6 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F	Chl-L	Chl-E	Phyto						
1	1	65	50	✓ 50	xx		x			x							
2	2	66	45	✓ 45	xx	xx		x									
3	3	67	40	✓ 40	xx		x	xx		x							
4	4	68	35	✓ 35	xx	xx		x									
5	5	69	30	✓ 30	xx		x	x		x							
6	6	70	25	✓ 25	xx		xx			xx	xx						chlE-1l →
7	7	71	20	✓ 20	xx		x	x		x							
8	8	72	15	✓ 15	xx		xx	x		xx	xx						chlE-1l →
9	9	73	10	✓ 9.5	xx		x	x		x							
10	10	74	5	✓ 5	xx	xx	xx			xx			xxx				
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY/NZ

Bottom Depth: 1326 m
 Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0555	2055
Bottom	0559	2059
End	0613	2313

Positional Information

Start	Lat: 48 ° 38.88 N	Lon: 126 ° 39.85 W
Bottom	Lat: 48 ° 38.88 N	Lon: 126 ° 39.85 W
End	Lat: 48 ° 38.88 N	Lon: 126 ° 39.86 W

Extra comments:
 HPLC

3

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P4 Event #: 11 Ship: Tully UTC Date (dd/mmm/yyyy): 9 / 6 / 15

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed Pressure	Cs															
1		75	600	✓	600	x														
2		76	600	✓	✓	x														
3		77	600	✓	✓	x														
4		78	600	✓	✓	x														
5		79	500	✓	500	x														
6		80	500	✓		x														
7		81	500	✓		x														
8		82	500	✓		x														
9		83	400	✓	400	x														
10		84	400	✓		x														
11		85	400	✓		x														
12		86	400	✓		x														
13		87	300	✓	300	x														
14		88	300	✓		x														
15		89	300	✓		x														
16		90	300	✓		x														
17		91	200	✓	200	x														
18		92	200	✓		x														
19		93	200	✓		x														
20		94	200	✓		x														
21		95	150	✓	150	x														
22		96	150	✓		x														
23		97	150	✓		x														
24		98	150	✓		x														

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): H.M/H.C/R.I.C

Bottom Depth: 1324 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0713	0013
Bottom	0723	
End	0739	

Positional Information
 Start
 Lat: 48 ° 38 88 N
 Lon: 126 ° 39 06 W

Bottom
 Lat: 48 ° 38 88 N
 Lon: 126 ° 39 05 W

End
 Lat: 48 ° 38 88 N
 Lon: 126 ° 39 06 W

Extra comments:
Cs cast #1

4

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17

Station: P4

Event #: 13

Ship: Tully

UTC Date (dd:mmm/yyyy): 9/6/13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					Comments										
			Target Pressure	Confirmed Pressure	UBC	Sal	Nut Fr	Nut-C	UNC											
1	1	99	1250	✓	1250															
2	2	100	1250	✓		x	x	x	x											
3	3	101	1250	✓																
4	4	102	1250	✓																
5	5	103	1000	✓	1000															
6	6	104	1000	✓		x	x	x	x											
7	7	105	1000	✓																
8	8	106	1000	✓																
9	9	107	500	✓	500															
10	10	108	500	✓		x	x	x	x											
11	11	109	500	✓																
12	12	110	10	✓	10															
13	13	111	10	✓		x	x	x												
14	14	112	10	✓																
15	15	113	5	✓	5					x										
16	16	114	5	✓						x										
17	17		40																	
18																				
19																				
20																				
21																				
22																				
23																				
24																				

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): HM Mc AM

Bottom Depth: 1326 m
 Transmisso Cleaned: N

Time	UTC	Local
Start	0846	0146
Bottom	0905	
End	0928	

Positional Information
 Start
 Lat: 48 ° 38 . 89 N
 Lon: 126 ° 39 . 89 W

Bottom
 Lat: 48 ° 38 91 N
 Lon: 126 ° 39 89 W

End
 Lat: 48 ° 38 88 N
 Lon: 126 ° 39 88 W

Extra comments:
 UBC cast + UNC

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P4 Event #: 14 Ship: Tully UTC Date (d/mmm/yyyy): 9/6/13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments							
			Target Pressure	Confirmed Pressure	Cs																	
1		115	100	✓	100	x																
2		116	100	✓		x																
3		117	100	✓		x																
4		118	100	✓		x																
5		119	50	✓	50	x																
6		120	50	✓		x																
7		121	50	✓		x																
8		122	50	✓		x																
9		123	5	✓	5	x																
10		124	5	✓		x																
11		125	5	✓		x																
12		126	5	✓		x																
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						
21																						
22																						
23																						
24																						

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): H.M / Ric

Bottom Depth: 1326 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1408	0708
Bottom	1410	
End	1415	

Positional Information
 Start
 Lat: 48° 38' 90" N
 Lon: 126° 39' 84" W

Bottom
 Lat: 48° 38' 90" N
 Lon: 126° 39' 84" W

End
 Lat: 48° 38' 89" N
 Lon: 126° 39' 82" W

Extra comments:
 Cs cast #2

6

CM = 6
MIX 17

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P4 Event #: 17 Ship: Tully UTC Date (dd/mmm/yyyy): 9/6/13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials						Comments	
			Target Pressure	Confirmed Pressure	Nina	UNC	Nari					
1		127	Max 3	✓	x							
2		128	Max 3	✓	x							
3		129	Max 3	✓	x							
4		130	MLD 1	✓	x							
5		131	MLD 1	✓	x							
6		132	MLD 1	✓	x							
7		133	MAY 5		NO TRIP	x						
8		134	MAY 5		NO TRIP	x						
9		135	MAY 5		NO TRIP	x						
10		136	Max 3	✓			x					
11		137	Max 3	✓			x					
12		138	Max 3	✓			x					
13		139	Max	✓			x					
14		140	Max	✓			x					
15		141	Max	✓			x					
16		142	5	✓			x					
17		143	5	✓			x					
18		144	5	✓			x					
19		145	5	✓			x					
20		146	5	✓			x					
21		147	5	✓			x					
22		148	100	✓				x				
23		149	100	✓				x				
24												

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): U.M.

Bottom Depth: 1322 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1520	0820
Bottom	1524	
End	1531	

Positional Information
 Start
 Lat: 48 ° 38 86 N
 Lon: 126 ° 39 91 W

Bottom
 Lat: 48 ° 38 85 N
 Lon: 126 ° 39 91 W

End
 Lat: 48 ° 38 83 N
 Lon: 126 ° 39 91 W

Extra comments:
 Nina S + UNC + Nari S
 OUT-OF-ORDER

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P5 Event #: 17 Ship: Tully UTC Date (dd|mmm|yyyy): 9 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments	
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC		
1	1	150	30 (Max)	✓	70	x		xx	xx	
2	2	151	5			x	x	xx	xx	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): H.M./DY

Bottom Depth: 2093 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1829	1129
Bottom	1859	1159
End	1935	1235

Positional Information

Start	Lat: 48 ° 41.46 N	Lon: 127 ° 10.00 W
Bottom	Lat: 48 ° 41.43 N	Lon: 127 ° 10.21 W
End	Lat: 48 ° 41.50 N	Lon: 127 ° 10.41 W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P6 Event #: 18 Ship: Tully UTC Date (dd mmm yyyy): 09 06 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments	
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F	Chl-E	pH			
1	1	152	800	✓	799							6	
2	2	153	600	✓	600							6	
3	3	154	450	✓	449							6	
4	4	155	300	✓	299							6	
5	5	156	50	✓	51	xx		x	x				
6	6	157	45	✓	44	xx	xx		x				
7	7	158	40	✓	40	xx		x	xx				
8	8	159	35	✓	34	xx	xx		x				
9	9	160	30	✓	29	xx		x	x				
10	10	161	25	✓	25	xx		xx	x	xx			
11	11	162	20	✓	20	xx		x	x				Chl Max @ 20 m
12	12	163	15	✓	15	xx		x	x				
13	13	164	10	✓	10	xx		x	x				
14	14	165	5	✓	5	xx	xx	xx	x				
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): NY

Bottom Depth: 2547 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	2211	1511
Bottom	2248	1548
End	2339	1639

Positional Information
 Start
 Lat: 48° 44.65 N
 Lon: 127° 39.94 W

Bottom
 Lat: 48° 44.59 N
 Lon: 127° 39.86 W

End
 Lat: 48° 44.61 N
 Lon: 127° 39.84 W

Extra comments:
 pH and HPLC
Max @ 20 m

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P7 Event #: 19 Ship: Tully UTC Date (dd:mmm:yyyy): 10/06/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments	
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC		
1	1	166	38 (Max)	✓	20	x		xx	xx	chl Max @ 20m
2	2	167	5	✓	5	x	x	xx	xx	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY

Bottom Depth: 2509 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	<u>0225</u>	<u>1925</u>
Bottom	<u>0300</u>	<u>2000</u>
End	<u>0333</u>	<u>2033</u>

Positional Information

Start	Lat: <u>48° 46.53</u> N	Lon: <u>128° 9.93</u> W
Bottom	Lat: <u>48° 46.54</u> N	Lon: <u>128° 9.88</u> W
End	Lat: <u>48° 46.52</u> N	Lon: <u>128° 9.91</u> W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P8 Event 22 Ship: Tully UTC Date (dd/mm/yyyy): 10/16/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments		
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut Fr	Nut C	Chl	HPLC	PIC	Si-I			
				✓	HM/N ²	NC/AM	N ²	N ²		AM	N ² /AM			NC	
1	1	168	2000	✓	2000	xx	xx	x	x			x		x	
2	2	169	1500	✓	1500	x	x	x	x			x		x	
3	3	170	1250	✓	1250	x	x	xx	xx			x		x	
4	4	171	1000	✓	1000	x	xx	x	x			x		x	
5	5	172	800	✓	800	x	x	x	x			x			
6	6	173	600	✓	600	x		x	x			x			
7	7	174	400	✓	400	x		x	x			x			
8	8	175	300	✓	300	x		x				xx			
9	9	176	250	✓	250	xx		x				x			
10	10	177	200	✓	200	x		x				x			
11	11	178	175	✓	175	x		x				x			
12	12	179	150	✓	150	x		xx				x			
13	13	180	125	✓	125	x		x				x			
14	14	181	100	✓	99	x		x				x			
15	15	182	75	✓	75	xx		x				x			
16	16	183	50	✓	50	x		x		xx	xx	x			
17	20	184	25	✓	25	x		x		x	xx	x			
18	23	185	10	✓	10	x		x		x	xx	x			
19	24	186	5	✓	5	x	x	x		xx	xx				
20	17	187	40	✓	40			x		x	xx				
21	18	188	35	✓	35			x		x	xx				
22	19	189	30	✓	30			x		xx	xx				
23	21	190	20	✓	20			x		x	xx				MAY
24	22	191	15	✓	15			x		x	xx				

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY/HM

Bottom Depth: 2572 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0656	2356
Bottom	0732	
End	0828	0128

Positional Information
 Start
 Lat: 48 ° 48.90 N
 Lon: 128 ° 40.19 W

Bottom
 Lat: 48 ° 48.91 N
 Lon: 128 ° 40.30 W

End
 Lat: 48 ° 49.01 N
 Lon: 128 ° 40.37 W

Extra comments:
 Firing out of order
 1 ... 15 - 16 - 20 - 21 - 22 - 17 -
 23 - 24 - 18 - 19

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P9 Event #: 25 Ship: Tully UTC Date (dd mmm/yyyy): 10 6 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1	1	192	50 Max	✓	x		xx	xx	
2	2	193	5	✓	x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): H.M.

Bottom Depth: 2354 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1340	0640
Bottom	1417	0717
End	1453	

Positional Information
 Start
 Lat: 48 ° 51.39 N
 Lon: 129 ° 10.11 W

Bottom
 Lat: 48 ° 51.40 N
 Lon: 129 ° 10.10 W

End
 Lat: 48 ° 51.40 N
 Lon: 129 ° 10.10 W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P10 Event #: 26 Ship: Tully UTC Date (dd|mmm|yyyy): 10 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments							
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F	Chl-E	pH									
1	1	194	200	✓	200														Top valve open
2	2	195	150	✓	149														
3	3	196	125	✓	125														
4	4	197	100	✓	101														
5	5	198	50	✓	50	xx		x	x										
6	6	199	45	✓	46	xx	xx		x										Chl MAY = 30m
7	7	200	40	✓	40	xx		x	xx										
8	8	201	35	✓	36	xx	xx		x										
9	9	202	MAY 30	✓	30	xx		x	x										
10	10	203	25	✓	24	xx		xx	x	xx									
11	11	204	20	✓	20	xx		x	x										
12	12	205	15	✓	15	xx		x	x										
13	13	206	10	✓	11	xx		x	x										
14	14	207	5	✓	5	xx	xx	xx	x										
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): H.M.

Bottom Depth: 2645 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1743	1043
Bottom	1805	1105
End	1857	1157

Positional Information
 Start
 Lat: 48 ° 53.48 N
 Lon: 129 ° 40.14 W

Bottom
 Lat: 48 ° 53.47 N
 Lon: 129 ° 40.13 W

End
 Lat: 48 ° 53.46 N
 Lon: 129 ° 40.13 W

Extra comments:
pH and HPLC

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P11 Event #: 30 Ship: Tully UTC Date (dd:mmm/yyyy): 10/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1	1	208	50 / Max	✓ 30	x		xx	xx	chl Max 30 m
2	2	209	5		x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): dy

Bottom Depth: 2755 m
 Transmisso Cleaned: / N

Time	UTC	Local
Start	2142	1442
Bottom	2217	1517
End	2253	1553

Positional Information

Start	Lat: 48° 56.05' N	Lon: 130° 9.83' W
Bottom	Lat: 48° 56.13' N	Lon: 130° 9.94' W
End	Lat: 48° 56.28' N	Lon: 130° 9.88' W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P12 Event #: 32 Ship: Tully UTC Date (dd:mmm:yyyy): 11_6_2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	pH	PIC	DOC	Si-I	UBC				
1		210	Bot-10	✓	3275	x		x	x	x	x	x	x	x				
2		211	3000	✓	3000	x		x	x	xx	x	x						
3		212	3000	✓	3000	xx	xx	x	x	x	x		x	x	x			
4		213	2500	✓	2500	x	x	xx	xx	x	x		x	x				
5		214	2000	✓	2000	x	x	x	x	x	x		x	x	x			
6		215	1500	✓	1500	x	x	x	x	x	x		x	x	x			
7		216	1250	✓	1249	x	x	x	x	x	xxx		x	x	x			MISFIRE!!!
8		217	1000	✓	1000	xx	xx	x	x	x	x		x	x	x			
9		218	800	✓	800	x		x	x	x	x		x		x			
10		219	600	✓	599	x		x	x	x	x		x		x			
11		220	400	✓	399	x		x	x	x	x		x		x			
12		221	300	✓	300	x		x		x	x		x		x			
13		222	250	✓	250	x		x		x	x		x		x			
14		223	200	✓	200	x		x		x	xxx		x		x			
15		224	175	✓	175	x		x		x	x		xx					
16		225	150	✓	150	xx		x		x	x		x		x			
17		226	125	✓	124	x		x		x	x		x					
18		227	100	✓	100	x		xx		x	x		x		x			
19		228	75	✓	75	x		x		x	x		x					
20		229	50	✓	50	xx		x		x	x		x		x			
21		230	25	✓	25	x		x		x	x		x		x			
22		231	10	✓	10	x		x		x	x		x		x			
23		232	5	✓	5	x	x	x		x	x		x					
24																		

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY

Bottom Depth: 3231 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	0203	1903
Bottom	0304	2004
End	0421	

Positional Information

Lat: <u>48° 58.09</u> N
Lon: <u>130° 39.94</u> W

Start
Bottom
End

Lat: 48° 58.13 N
 Lon: 130° 39.98 W

Lat: 48° 58.17 N
 Lon: 130° 40.07 W

Extra comments:
 Deep cast
 no significant chlmax

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17

Station: P12

Event #: 33

Ship: Tully

UTC Date (dd/mm/yyyy): 11/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F	
1	1	233	60	✓ 59	xx	xx		x	
2	2	234	50	✓ 50	xx			x	
3	3	235	45	✓ 45	xx	xx		xx	
4	4	236	40	✓ 39	xx			x	
5	5	237	35	✓ 35	xx	xx		x	
6	6	238	30	✓ 30	xx			xx	
7	7	239	25	✓ 24	xx			x	
8	8	240	20	✓ 21	xx			xx	
9	9	241	15	✓ 15	xx			x	
10	10	242	5	✓ 4	xx	xx		xx	
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): My

Bottom Depth: 3317 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	0528	2228
Bottom	0531	2231
End	0542	2242

Positional Information
 Start
 Lat: 48 ° 58.18 N
 Lon: 130 ° 40.03 W

Bottom
 Lat: 48 ° 58.18 N
 Lon: 130 ° 40.05 W

End
 Lat: 48 ° 58.16 N
 Lon: 130 ° 40.03 W

Extra comments:
 HPLC

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P12 Event #: 35 Ship: Tully UTC Date (dd|mmm|yyyy): 11 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments					
			Target Pressure	Confirmed Pressure	UBC	Sal	Nut-F	Nut-C	ONAr	N G	Sal	UNC						
1		243	2000	✓	2000													
2		244	2000	✓	/	x	x	x	x									
3		245	2000	✓	/													
4		246	2000	✓	/													
5		247	1000	✓	1000													
6		248	1000	✓	/	x	x	x	x									
7		249	1000	✓	/													
8		250	1000	✓	/													
9		251	500	✓	500													
10		252	500	✓	/	x	x	x	x									
11		253	500	✓	/													
12		254	10	✓	10													
13		255	10	✓	/	x	x	x										
14		256	10	✓	/													
15																		
16		257	Bot-10	✓	3168					xx		x						
17		258	3000	✓	3000					xx	xx	x						
18		259	2000	✓	2000					xx	xx	x						
19		260	1000	✓	1000					xx		x						
20		261	5	✓	5					xx								
21																		
22		262	5	✓	/													x
23		263	5	✓	/													x
24																		

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): H.M.

Bottom Depth: 3229 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1059	0359
Bottom	1203	0503
End	1308	0608

Positional Information
 Start
 Lat: 48 ° 58 . 18 N
 Lon: 130 ° 40 . 08 W

Bottom
 Lat: 48 ° 58 . 13 N
 Lon: 130 ° 40 . 13 W

End
 Lat: 48 ° 58 13 N
 Lon: 130 ° 40 16 W

Extra comments:
UBC, ONAr, UNC-Night
OUT-OF-ORDER: 16 - 17 - 18 -
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 19 - 9 -
10 - 11 - 12 - 13 - 14 - 20 - 22 - 23

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17

Station: P12

Event #: 37

Ship: Tully

UTC Date (dd|mmm|yyyy): 11 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials						Comments	
			Target Pressure	Confirmed Pressure	Nina	UNC	Nari					
1		264	Max 3		x							
2		265	Max 3		x							
3		266	Max 3		x							
4		267	MLD 25		x							
5		268	MLD 25		x							
6		269	MLD 25		x							
7		270	5 24		x							
8		271	5 24		x							
9		272	5 24		x							
10		273	Max 44				x					
11		274	Max 44				x					
12		275	Max 44				x					
13		276	Max 44				x					
14		277	Max 44				x					
15		278	Max 44				x					
16		279	5				x					
17		280	5				x					
18		281	5				x					
19		282	5				x					
20		283	5				x					
21		284	5				x					
22												
23												
24												

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): HM

Bottom Depth: 3229 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1524	0824
Bottom	1529	
End	1537	

Positional Information

Start	Lat: 48 ° 58 17 N
	Lon: 130 ° 40 21 W

Bottom

Lat: 48 ° 58 16 N
Lon: 130 ° 40 20 W

End

Lat: 48 ° 58 14 N
Lon: 130 ° 40 22 W

Extra comments:
 Nina S + UNC
 OUT-OF-ORDER
 7-15 4-6 16-21
 1-3

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P13 Event #: 38 Ship: Tully UTC Date (dd/mm/yyyy): 11/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1	1	285	50 / Max	✓ 50	x		xx	xx	Fl jumpy
2	2	286	5		x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): AY

Bottom Depth: ~3000 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	2119	1419
Bottom	2154	1454
End	2230	1530

Positional Information
 Start
 Lat: 49° 2.70 N
 Lon: 131° 39.87 W

Bottom
 Lat: 49° 2.70 N
 Lon: 131° 39.85 W

End
 Lat: 49° 2.65 N
 Lon: 131° 39.87 W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P14 Event #: 40 Ship: Tully UTC Date (dd:mmm:yyy): 12/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments					
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F		pH								
1	1	287	60	✓	59	xx	xx		x									No chax-mixed to 30m
2	2	288	50	✓	57	xx	xx		x									
3	3	289	45	✓	45	xx	xx		xx									
4	4	290	40	✓	40	xx	xx		x									
5	5	291	35	✓	34	xx	xx		x									
6	6	292	30	✓	31	xx		xx	x									
7	7	293	25	✓	26	xx	xx		x									
8	8	294	20	✓	20	xx	xx		x									
9	9	295	15	✓	14	xx	xx		x									
10	10	296	5	✓	5	xx	xx	xx	x									
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): dy

Bottom Depth: 5317 m
 Transmisso Cleaned: 1 N

Time	UTC	Local
Start	0425	2125
Bottom	0502	2202
End	0541	2241

Positional Information

Start	Lat: 49° 7.40 N	Lon: 132° 39.76 W
Bottom	Lat: 49° 7.40 N	Lon: 132° 39.74 W
End	Lat: 49° 7.22 N	Lon: 132° 39.68 W

Extra comments:
 pH and HPLC

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17

Station: P15

Event #: 41

Ship: Tully

UTC Date (dd|mmm|yyyy): 12 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1	1	297	50 / Max	✓ 50	x		xx	xx	
2	2	298	5	✓ 5	x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): HM.

Bottom Depth: 3407 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1134	0434
Bottom	1209	
End	1248	

Positional Information
 Start
 Lat: 49 ° 11.93 N
 Lon: 133 ° 39.88 W

Bottom
 Lat: 49 ° 11.99 N
 Lon: 133 ° 39.97 W

End
 Lat: 49 ° 11.88 N
 Lon: 133 ° 39.13 W

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P16 Event #: 42 Ship: Tully UTC Date (dd|mmm|yyyy): 12 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments	
			Target Pressure	Confirmed Pressure	Nina	UNC	Nari							
1		299	53		x									
2		300	53		x									
3		301	53		x									
4		302	MLD 25		x									
5		303	MLD 25		x									
6		304	MLD 25		x									
7		305	Max 28	✓ 38	x									
8		306	Max 30	✓	x									
9		307	Max 28	✓	x									
10		308	Max 28	✓			x							
11		309	Max 28	✓			x							
12		310	Max 28	✓			x							
13		311	Max 28	✓			x							
14		312	Max 28	✓			x							
15		313	Max 28	✓			x							
16		314	5				x							
17		315	5				x							
18		316	5				x							
19		317	5				x							
20		318	5				x							
21		319	5				x							
22														
23														
24														

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): HM

Bottom Depth: ? m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1834	1134
Bottom	1836	1136
End	1840	1140

Positional Information

Start	Lat: 49 ° 16. 97	N
	Lon: 134 ° 39 95	W

Bottom

Lat: 49 ° 16 96	N
Lon: 134 ° 39 97	W

End

Lat: 49 ° 16. 95	N
Lon: 134 ° 39. 95	W

Extra comments:
 Nina S + UNC
 OUT-OF-ORDER
 7-15 4-6 16-21
 1-3

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17

Station: P16

Event #: 43

Ship: Tully

UTC Date (dd/mm/yyyy): 11/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Cs													
1		320	100	✓ 100	x													
2		321	100	✓ 100	x													
3		322	100	✓ 100	x													
4		323	100	✓ 100	x													
5		324	50	✓ 50	x													
6		325	50	✓ 50	x													
7		326	50	✓ 49	x													
8		327	50	✓ 49	x													
9		328	5	✓ 5	x													
10		329	5	✓ 5	x													
11		330	5	✓ 5	x													
12		331	5	✓ 5	x													
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): DY

Bottom Depth: 3633 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1924	1224
Bottom	1928	1228
End	1934	1234

Positional Information

Start	Lat	Lon
	49 ° 16.93 N	134 ° 40.27 W
Bottom	49 ° 16.92 N	134 ° 40.32 W
End	49 ° 16.92 N	134 ° 40.34 W

Extra comments:
 Cs cast #1

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P16 Event #: 49 Ship: Tully UTC Date (dd/mm/yyyy): 12/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	pH	PIC	DOC	Si-I	UBC			
1		332	Bot-10	✓	3687	x		x	x	x	x	x		x			Top vent open
2		333	3500	✓	3500	x		x	x	xx	x	x	xx				
3		334	3500	✓	3580	x	x	x	x	x	x		x	x			
4		335	3000	✓	2999	x	xx	x	x	x	x	x	x	x			
5		336	2500	✓	2501	x	x	x	x	x	xxx		x	x			
6		337	2000	✓	1999	xx	xx	x	x	x	x	x	x	x			
7		338	1500	✓	1500	x	x	xx	xx	x	x	x	x	x			
8		339	1250	✓	1251	x	x	x	x	x	x		x	x	x		
9		340	1000	✓	1000	x	xx	x	x	x	x	x	x	x			
10		341	800	✓	800	x		x	x	x	x	x		x			
11		342	600	✓	600	x		x	x	x	x	x		x			Bottom cap open
12		343	400	✓	400	x		x	x	x	x	x		x			
13		344	300	✓	300	xx		x		x	x	xx		x			
14		345	250	✓	250	x		x		x	xxx	x	x				
15		346	200	✓	200	x		x		x	x	x		x			
16		347	175	✓	175	xx		x		x	x		x				
17		348	150	✓	150	x		x		x	x	x		x			
18		349	125	✓	125	x		x		x	x		xx				
19		350	100	✓	100	x		x		x	x	x		x			
20		351	75	✓	75	xx		x		x	x	xx	x				
21		352	50	✓	50	x		xx		x	x	x	x		x		
22		353	25	✓	25	x		x		x	x	x	x		x		
23		354	10	✓	10	x		x		x	x	x	x		x		
24		355	5	✓	5	x	x	x		x	x		x				

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): dy

Bottom Depth: 3634 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	2209	1509
Bottom	2312	1612
End	0038	1738

Positional Information
 Start
 Lat: 49° 16.99 N
 Lon: 134° 39.97 W

Bottom
 Lat: 49° 16.98 N
 Lon: 134° 39.98 W

End
 Lat: 49° 17.01 N
 Lon: 134° 39.99 W

Extra comments:
Deep cast

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P16 Event #: 52 Ship: Tully UTC Date (dd/mmm/yyyy): 13 JUN 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed Pressure	Cs															
1		356	600	✓	601	x														
2		357	600	✓	↓	x														
3		358	600	✓	↓	x														
4		359	600	✓	↓	x														
5		360	500	✓	499	x														
6		361	500	✓	↓	x														
7		362	500	✓	↓	x														
8		363	500	✓	↓	x														
9		364	400	✓	400	x														
10		365	400	✓	↓	x														
11		366	400	✓	↓	x														
12		367	400	✓	↓	x														
13		368	300	✓	300	x														
14		369	300	✓	↓	x														
15		370	300	✓	↓	x														
16		371	300	✓	↓	x														
17		372	200	✓	200	x														
18		373	200	✓	↓	x														
19		374	200	✓	↓	x														
20		375	200	✓	↓	x														
21		376	150	✓	150	x														
22		377	150	✓	↓	x														
23		378	150	✓	↓	x														
24		379	150	✓	↓	x														

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): N2

Bottom Depth: 3633 m
 Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	03 00	20 00
Bottom	03 12	20 12
End	03 30	20 30

Positional Information
 Start
 Lat: 49 ° 17.21 N
 Lon: 134 ° 40.35 W

Bottom
 Lat: 49 ° 17.14 N
 Lon: 134 ° 40.36 W

End
 Lat: 49 ° 17.23 N
 Lon: 134 ° 40.27 W

Extra comments:
 Cs cast # 2

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2013-17 Station: P16 Event #: 53 Ship: Tully UTC Date (dd/mmm/yyyy): 13/6/13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F	Chl-L	Chl-E	ONAr UVic	N G UVic	Sal UW	Oxy UW				
1	1	380	Bot-10	✓	3685									xx		x	xx	
2	2	381	3000	✓	3000									xx	xx	x	xx	
3	3	382	2000	✓	1999									xx	xx	x	xx	
4	4	383	1000	✓	1000									xx		x	xx	
5	15	384	5	✓	5									xx			xx	
6																		
7																		
8																		
9	5	385	60	✓	60	xx	xx		x									
10	6	386	50	✓	50	xx		x		x								
11	7	387	45	✓	45	xx	xx		xx									
12	8	388	40	✓	39	xx		x	x		x							
13	9	389	35	✓	35	xx	xx		x									
14	10	390	30	✓	30	xx		x	x		x							no chl max
15	11	391	25	✓	25	xx		xx	x		xx	xx						
16	12	392	20	✓	20	xx		x	x		x							
17	13	393	15	✓	15	xx		x	x		x							
18	14	394	5	✓	5	xx	xx	xx			xx	xx						
19																		
20	16	395	5	✓	5												x	
21	17	396	5	✓	5												x	
22																		
23																		
24																		

Profile type:
 ROS TRM X-Niskin other?
 Watchkeeper(s): dy

Bottom Depth: 3633 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	0404	2104
Bottom	0508	2204
End	0620	2320

Positional Information
 Start
 Lat: 49° 17.07 N
 Lon: 134° 39.97 W

Bottom
 Lat: 49° 16.98 N
 Lon: 134° 40.02 W

End
 Lat: 49° 16.99 N
 Lon: 134° 39.98 W

Extra comments:
 HPLC + ONAr
 OUT-OF-ORDER
 1-2-3-4-9-10-11-12-13 ✓
 14-15-16-17-18-5-20-21 ✓