

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): 4th 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): DJ 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/mm/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) I	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/mm/yyyy): 08/06/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ✓ Pressure	Oxy	Nut-5	Nut-6	Sal	DIC	pH	PIC	DOC	UW						
1		11	Bot-10	✓	105	x x	x			x	x		x						
2		12	100	✓	100	x	x			x	x	x	x						
3		13	75	✓	75	x	x			x x	x		x						
4		14	75	✓	74	x	x			x	x	x							
5		15	50	✓	49	x	x			x	x x x	x	x						
6		16	25	✓	25	x	x x			x	x	x	x						
7		17	10	✓	10	x	x			x	x	x x	x						
8		18	5	✓	5	x	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:mmm/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							Miss-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 misfire
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	2144	1444
Bottom	2148	1448
End	2201	1501

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

Start

Bottom

End

Lat:	48° 36.24	N
Lon:	126° 02.26	W

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

Lat: 48° 37.42 N

Lon: 126° 19.75 W

Start

Bottom

End

Lat: 48° 37.32 N

Lon: 126° 19.83 W

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	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	0228	1928
Bottom	0253	1953
End	0334	2034

Positional Information

Lat:	48 ° 38.90	N
Lon:	126 ° 39.96	W

Start

Bottom

End

Lat:	48 ° 38.90	N
Lon:	126 ° 39.96	W

Lat:	48 ° 38.90	N
Lon:	126 ° 39.96	W

Extra comments:

Deep cast - OUT OF ORDER

1 - 20 - 2 - 3 - 4 - 21 - 5 - 6 - 7 ...

... 17 - 18 - 19 - 22

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-12→
7	7	71	20	✓ 20	xx		x	x		x								
8	8	72	15	✓ 15	xx		xx	x		xx	xx							chlE-12→
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

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.C.

Bottom Depth: 1324 m
Transmisso Cleaned: (Y) I N

Time	UTC	Local
Start	0713	0013
Bottom	0723	
End	0739	

Positional Information

Lat:	48	°	38	88	N
Lon:	126	°	39	06	W

▼

Lat:	48	°	38	88	N
Lon:	126	°	39	05	W

▼

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	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														
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 1 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 (dd/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. / Ric			

Bottom Depth:	1326	m
Transmisso Cleaned:	☒ Y	☐ N

Time	UTC	Local
Start	1408	0708
Bottom	1410	
End	1415	

Positional Information			
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

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 S		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	MAX 5		NO TRIP	x									
8		134	MAX 5		NO TRIP	x									
9		135	MAX 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/mm/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	25	x											
2	2	151	5				x	x										
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: ☒ 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): <u>ny</u>

Bottom Depth: <u>2547</u> m
Transmisso Cleaned: ☒ Y ☐ N

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

Positional Information	
Start	
Lat: <u>48° 44.65</u> N	
Lon: <u>127° 39.94</u> W	

Bottom	
Lat: <u>48° 44.59</u> N	
Lon: <u>127° 39.86</u> W	

End	
Lat: <u>48° 44.61</u> N	
Lon: <u>127° 39.84</u> W	

Extra comments:
pH and HPLC
<u>Max @ 20 m</u>

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	30 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	0225	1925
Bottom	0300	2000
End	0333	2033

Positional Information		
Lat:	48 ° 46.53	N
Lon:	128 ° 9.93	W

Start

Bottom

End

Lat:	48 ° 46.54	N
Lon:	128 ° 9.88	W

Lat:	48 ° 46.52	N
Lon:	128 ° 9.91	W

Extra comments:

414A - 271

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): 10/06/2013

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						
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								
24	22	191	15	✓ 15			x		x	xx								

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

Bottom Depth: 2522 m
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0656	2356
Bottom	0732	
End	0828	0128

Positional Information

Lat:	48 ° 48.90	N
Lon:	128 ° 40.19	W

Start

Lat:	48 ° 48 91	N
Lon:	128 ° 40 30	W

Bottom

Lat:	48 ° 49 01	N
Lon:	128 ° 40 37	W

End

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		x x	x x							
2	2	193	5	✓	x	x	x x	x x							
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

Start Lon: 129 ° 10.11 W

Bottom Lat: 48 ° 51.40 N

Bottom Lon: 129 ° 10.10 W

End Lat: 48 ° 51.40 N

End 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/mm/yyyy): 10/06/13

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					6					Top valve open
2	2	195	150	✓	149					6					
3	3	196	125	✓	125					6					
4	4	197	100	✓	101					6					
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	1855	1155
End	1857	1157

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

Start

Bottom

End

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

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		x x	x x	chl Max 30 m
2	2	209	5		x	x	x x	x x	
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: Y / 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

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	xx	x	x								
3		212	3000	✓	3000	xx	xx	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	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							
14		223	200	✓	200	x		x		xxx	x	x		x					
15		224	175	✓	175	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): <u>dy</u>

Bottom Depth:	<u>3231</u> m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	<u>0203</u>	<u>1903</u>
Bottom	<u>0304</u>	<u>2004</u>
End	<u>0421</u>	

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

Start

Bottom

End

Lat:	<u>48° 58.13</u>	<u>N</u>
Lon:	<u>130° 39.98</u>	<u>W</u>

Lat:	<u>48° 58.17</u>	<u>N</u>
Lon:	<u>130° 40.07</u>	<u>W</u>

Extra comments:
Deep cast
<u>no significant chlmax</u>

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	x									
5	5	237	35	✓ 35	xx	xx		x									
6	6	238	30	✓ 30	xx		xx	x									
7	7	239	25	✓ 24	xx		x										
8	8	240	20	✓ 21	xx		xx	x									
9	9	241	15	✓ 15	xx		x	x									
10	10	242	5	✓ 4	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): <u>dy</u>

Bottom Depth:	<u>3317</u>	m
Transmisso Cleaned:	☒ Y ☐ N	

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

Positional Information
Start
Lat: <u>48</u> ° <u>58.18</u> N
Lon: <u>130</u> ° <u>40.03</u> W

Bottom
Lat: <u>48</u> ° <u>58.18</u> N
Lon: <u>130</u> ° <u>40.05</u> W

End
Lat: <u>48</u> ° <u>58.16</u> N
Lon: <u>130</u> ° <u>40.03</u> 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				
						10S	X	X	UVic	UVic	UW					
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

Start

Bottom

End

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 S		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	

Start	Positional Information		
	Lat:	48 ° 58 17	N
Bottom	Lon:	130 ° 40 21	W
	▼		
End	Lat:	48 ° 58 16	N
	Lon:	130 ° 40 20	W
	▼		
	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

Start Lon: 131° 39.87 W

Bottom Lat: 49° 2.70 N

Bottom Lon: 131° 39.85 W

End Lat: 49° 2.65 N

End 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/yyyy): 12/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								pH					Comments
			Target Pressure	Confirmed ✓ Pressure	HPLC	Chl-N	Chl	Nut-F										
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): <u>dy</u>

Bottom Depth:	<u>3317</u>	m
Transmisso Cleaned:	<u>Q1</u>	N

Time	UTC	Local
Start	<u>0425</u>	<u>2125</u>
Bottom	<u>0502</u>	<u>2202</u>
End	<u>0541</u>	<u>2241</u>

Positional Information
Start
Lat: <u>49° 7.40</u> N
Lon: <u>132° 39.76</u> W

Bottom
Lat: <u>49° 7.40</u> N
Lon: <u>132° 39.74</u> W

End
Lat: <u>49° 7.22</u> N
Lon: <u>132° 39.68</u> W

Extra comments:
<u>pH and HPLC</u>

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): H.M.

Bottom Depth:	3407	m
Transmisso Cleaned:	☒ Y	N

Time	UTC	Local
Start	1134	0434
Bottom	1209	
End	1248	

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

Start

Bottom

End

Lat:	49 ° 11.94	N
Lon:	133 ° 39.97	W

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	5 3		x										
2		300	5 3		x										
3		301	5 3		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 30	✓	x										
10		308	Max 30	✓			x								
11		309	Max 30	✓			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 mmm/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: 49 ° 16.93 N
Lon: 134 ° 40.27 W

Bottom
Lat: 49 ° 16.92 N
Lon: 134 ° 40.32 W

End
Lat: 49 ° 16.92 N
Lon: 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 mmm/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		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	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	x					
7		338	1500	✓ 1500	x	x	xx	xx	x	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	x					
10		341	800	✓ 800	x		x	x	x	x	x	x		x					
11		342	600	✓ 600	x		x	x	x	x	x	x		x		Bottom cap open			
12		343	400	✓ 400	x		x	x	x	x	x	x		x					
13		344	300	✓ 300	xx		x		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		x					
16		347	175	✓ 175	xx		x		x	x		x							
17		348	150	✓ 150	x		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		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
Lat: 49° 16.99 N
Lon: 134° 39.97 W

Start

Bottom

End

Lat: 49° 16.98 N
Lon: 134° 39.98 W

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		
Lat:	49 ° 17.21	N
Lon:	134 ° 40.35	W

Start

Bottom

End

Lat:	49 ° 17.14	N
Lon:	134 ° 40.36	W

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	N G	Sal	Oxy	
				✓							UVic	UVic	UW	UW	UNC
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

Start

Bottom

End

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

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P17

Event #: 54

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	Nut-F	Sal	Chl	HPLC	
1	1	397	50 Max	✓ 50	x		x x	x x	
2	2	398	5		x	x	x x	x x	
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.A.

Bottom Depth:	3705 m
Transmisso Cleaned:	(Y) / N

Time	UTC	Local
Start	1119	0419
Bottom	1157	
End	1231	

Positional Information
Start
Lat: 49 ° 20.93 N
Lon: 135 ° 39.93 W

Bottom
Lat: 49 ° 20.94 N
Lon: 135 ° 40.04 W

End
Lat: 49 ° 20.93 N
Lon: 135 ° 40.30 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P18

Event #: 55

Ship: Tully

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

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								pH					Comments
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F										
1	1	399	250	✓ 250									6					
2	2	400	85	✓ 85									6					
3	3	401	75	✓ 75									6					
4	5	402	50	✓ 50									6					
5	4	403	60	✓ 60	xx	xx		x										
6	6	404	50	✓ 50	xx	xx		x										
7	7	405	45	✓ 45	xx	xx		xx										EMPTY
8	8	406	40	✓ 40	xx	xx		x										
9	9	407	35	✓ 35	xx	xx		x										CHL MAX
10	10	408	30	✓ 30	xx		xx	x										
11	11	409	25	✓ 25	xx	xx		x										
12	12	410	20	✓ 20	xx	xx		x										
13	13	411	15	✓ 15	xx	xx		x										
14	14	412	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: 3822 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1705	1005
Bottom	1756	
End	1837	

Positional Information

Lat:	49 ° 25 . 95	N
Lon:	136 ° 40 . 13	W

Start

Bottom

End

Lat:	49 ° 25 96	N
Lon:	136 ° 39 94	W

Lat:	49 ° 25 78	N
Lon:	136 ° 40 10	W

Extra comments:

pH and HPLC

OUT-OF-ORDER!

1 - 2 - 3 - 5 - 4 - 6 - 7 - ...

Sampling Log

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

Cruise ID: 2013-17 Station: P19 Event #: 58 Ship: Tully UTC Date (dd:mmm:yyyy): 13 6 2013

[illegible]

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

Bottom Depth: 390 m

Transmisso Cleaned: Y / N

<i>Time</i>	<i>UTC</i>	<i>Local</i>
Start	2259	1559
Bottom	2335	1635
End	0012	1712

Positional Information	
Start	Lat: 49 ° 29.99
	Lon: 137 ° 40.03
Bottom	Lat: 49 ° 29.97
	Lon: 137 ° 39.98
End	Lat: 49 ° 29.99
	Lon: 137 ° 40.04

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P20 Event #: 61 Ship: Tully UTC Date (dd|mmm|yyyy): 14|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	415	60	✓ 59	xx	xx		x							
2	2	416	50	✓ 49	xx	xx									
3	3	417	45	✓ 45	xx	xx		x							
4	4	418	40	✓ 40	xx	xx		x							
5	5	419	35	✓ 34	xx	xx		x							
6	6	420	30	✓ 30	xx		xx	x							
7	7	421	25	✓ 24	xx	xx									
8	8	422	20	✓ 20	xx	xx		x							
9	9	423	15	✓ 15	xx	xx		x							
10	10	424	5	✓ 5	xx	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): DY

Bottom Depth: 3966 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0445	2145
Bottom	0449	2149
End	0501	2201

Positional Information
Start
Lat: 49 ° 33.93 N
Lon: 138 ° 39.96 W

Bottom
Lat: 49 ° 33.94 N
Lon: 138 ° 33.98 W

End
Lat: 49 ° 33.92 N
Lon: 138 ° 39.96 W

Extra comments:
HPLC
no chl max
-well mixed to ~50m

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P20

Event #: 63

Ship: Tully

UTC Date (dd mmm yyyy): 14 6 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments			
			Target Pressure	Confirmed Pressure	ONAr	NG	Sal	Oxy								
				✓	UVic	UVic	UW	UW								
1	1	425	4000	✓	4000	x x	x x	x	x x					LEAKY TOP		(B-33m)
2	2	426	3000	✓	3000	x x	x x	x	x x							
3	3	427	2000	✓	2000	x x	x x	x	x x							
4	4	428	1000	✓	1000	x x		x	x x							
5	5	429	5	✓	5	x x			x x							
6	6	430	5	✓	✓						x					
7	7	431	5	✓	✓						x					EMPTY-MISFIRE
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:	4033	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	0833	0133
Bottom	0936	0236
End	1052	0352

Positional Information
Start
Lat: 49 ° 33.91 N
Lon: 138 ° 40.08 W

Bottom
Lat: 49 ° 33.91 N
Lon: 138 ° 40.09 W

End
Lat: 49 ° 33.91 N
Lon: 138 ° 40.09 W

Extra comments:
ONAr + UNC

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P20

Event #: 65

Ship: Tully

UTC Date (dd|mmm|yyyy): 14 | 6 | 13

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					
				✓	mm/H ₂ O	mm	AM	AM	mm/AW	GC	mm/hr	SD	NC	N ₂ /H ₂ O					
1	1	432	Bot-10	✓	4024	x	x	x	x	x	x	x	x	x					
2	2	433	3500	✓	3500	x	x	x	x	xx	x		x						
3	3	434	3500	✓	3500	xx	x	x	x	x	x		x	x					
4	4	435	3000	✓	2999	x	xx	x	x	x	x	x	x	x	x				
5	5	436	2500	✓	2500	x	x	xx	xx	x	x		xx	x					
6	6	437	2000	✓	1999	x	xx	x	x	x	x	x	x	x	x				
7	7	438	1500	✓	1501	x	x	x	x	x	x	x	x	x	x				
8	8	439	1250	✓	1250	x	x	x	x	x	xxx		x	x	x				
9	9	440	1000	✓	1000	x	xx	x	x	x	x	x	x	x	x				
10	10	441	800	✓	799	xx	x	x	x	x	x	x	x		x				
11	11	442	600	✓	600	x	x	x	x	x	x	x	x		x				
12	12	443	400	✓	400	x	x	x	x	x	x	x	x		x				
13	13	444	300	✓	300	x	x	x		x	x	x	x		x				
14	14	445	250	✓	250	x	x	x		x	x	x	x						
15	15	446	200	✓	199	xx	x	x		x	x	xx	x		x				
16	16	447	175	✓	175	x	x	x		x	x		xx						
17	17	448	150	✓	150	x	x	x		x	xxx	x	x		x				
18	18	449	125	✓	125	x	x	xx		x	x		x						
19	19	450	100	✓	100	x	x	x		x	x	x	x		x				
20	20	451	75	✓	75	x	x	x		x	x	x	xx						
21	21	452	50	✓	50	x	x	x		x	x	x	x		x				
22	22	453	25	✓	25	x	x	x		x	x	x	x		x				
23	23	454	10	✓	10	xx	x	x		x	x	x	x		x				
24	24	455	5	✓	5	x	x	x		x	x		x						

Profile type:			
☒ ROS	☐ TRM	☐ X-Niskin	☐ other?
Watchkeeper(s): 4.m.			

Bottom Depth:	3967	m
Transmisso Cleaned:	☒ Y / ☐ N	

Time	UTC	Local
Start	1251	0551
Bottom	1417	0717
End	1551	0851

Positional Information		
Lat:	49 ° 34.01	N
Lon:	138 ° 39.91	W

Start
Bottom
End

Lat:	49 ° 34.05	N
Lon:	138 ° 40.07	W

Lat:	49 ° 34.03	N
Lon:	138 ° 40.06	W

Extra comments:

Deep cast

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P20 Event #: 67 Ship: Tully UTC Date (dd/mm/yyyy): 14/6/13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Nina S		UNC		Nina S						
1		456	3	✓	3	x									
2		457	3	✓		x									
3		458	3	✓		x									
4		459	MLD 25	✓	25	x									
5		460	MLD 25	✓		x									
6		461	MLD 25	✓		x									
7		462	Max 50	✓		x									
8		463	Max	✓	50	x									
9		464	Max	✓		x									
10		465	Max	✓			x								
11		466	Max	✓			x								
12		467	Max	✓			x								
13		468	Max	✓			x								
14		469	Max	✓			x								
15		470	Max	✓			x								
16		471	5	✓	5		x								
17		472	5	✓			x								
18		473	5	✓			x								
19		474	5	✓			x								
20		475	5	✓			x								
21		476	5	✓			x								
22		477	Max 50	✓					x						
23															
24															

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

Bottom Depth: 3965 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1701	1001
Bottom	1705	
End	1710	

Positional Information
Start
Lat: 49 ° 33 87 N
Lon: 138 ° 39 86 W

Bottom
Lat: 49 ° 33 87 N
Lon: 138 ° 39 89 W

End
Lat: 49 ° 33 88 N
Lon: 138 ° 39 89 W

Extra comments:
Nina S + UNC
OUT-OF-ORDER
7-15, 22, 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: P21 Event #: 69 Ship: Tully UTC Date (dd/mm/yyyy): 14/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								pH				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC									
1	1	478	50 Max	✓ 50	x		xx	xx									No sign. Max
2	2	479	5	✓ 5	x	x	xx	xx									
3	2	480	25	✓ 25									6				
4	3	481	10	✓ 10									6				
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:	3959 m
Transmisso Cleaned:	(Y) / N

Time	UTC	Local
Start	2201	1901
Bottom	2234	1534
End	2310	1610

Positional Information	
Start	Lat: 49° 37.98 N
	Lon: 139° 39.86 W

Bottom	Lat: 49° 37.90 N
	Lon: 139° 39.89 W

End	Lat: 49° 37.85 N
	Lon: 139° 39.97 W

Extra comments:
OUT-OF-ORDER
1-3-4-2

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P22

Event #: 2471

Ship: Tully

UTC Date (dd mmm yyyy): 15 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	482	60	✓ 60	xx	xx		x								
2	2	483	50	✓ 50	xx	xx		x								
3	3	484	45	✓ 45	xx	xx		xx								
4	4	485	40	✓ 40	xx	xx		x								
5	5	486	35	✓ 35	xx	xx		x								
6	6	487	30	✓ 30	xx		xx	x								
7	7	488	25	✓ 24	xx	xx		x								
8	8	489	20	✓ 20	xx	xx		x								
9	9	490	15	✓ 15	xx	xx		x								
10	10	491	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:	3944	m
Transmisso Cleaned:	Y / N	

Time	UTC	Local
Start	0405	2105
Bottom	0438	2138
End	0518	2218

Positional Information		
Lat:	49 ° 41.88	N
Lon:	140 ° 40.00	W

Start

Bottom

End

Lat:	49 ° 41.62	N
Lon:	140 ° 40.19	W

Lat:	49 ° 41.54	N
Lon:	140 ° 40.48	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: P23

Event #: 72

Ship: Tully

UTC Date (dd mmm yyyy): 15 6 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments				
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC									
1	1	492	(50) Max	✓	50	x		x x	x x								
2	2	493	5	✓	5	x	x	x x	x x								
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: 4052 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1026	0326
Bottom	1054	
End	1127	

Positional Information

Start	Lat:	49 ° 46.01	N
	Lon:	141 ° 40.06	W
Bottom	Lat:	49 ° 46.14	N
	Lon:	141 ° 40.16	W
End	Lat:	49 ° 46.36	N
	Lon:	141 ° 40.30	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P24 Event #: 75 Ship: Tully UTC Date (dd/mm/yyyy): 15/6/13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments					
			Target Pressure	Confirmed Pressure	HPLC	Chl-N	Chl	Nut-F										
1	1	494	60	✓ 60	xx	xx		x										
2	2	495	50	✓ 50	xx	xx		x										
3	3	496	45	✓ 45	xx	xx		xx										
4	4	497	40	✓ 40	xx	xx		x										
5	5	498	35	✓ 35	xx	xx		x										
6	6	499	30	✓ 30	xx		xx	x										
7	7	500	25	✓ 25	xx	xx		x										
8	8	501	20	✓ 20	xx	xx		x										
9	9	502	15	✓ 15	xx	xx		x										
10	10	503	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): H. M.

Bottom Depth:	3987 m
Transmisso Cleaned:	☒ Y ☐ N

Time	UTC	Local
Start	1641	0941
Bottom	1710	
End	1750	

Positional Information	
Start	Lat: 49 ° 50 . 22 N
	Lon: 142 ° 40 . 04 W

Bottom	Lat: 49 ° 50 . 33 N
	Lon: 142 ° 40 . 11 W

End	Lat: 49 ° 50 . 47 N
	Lon: 142 ° 40 . 35 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: P25

Event #: 76

Ship: Tully

UTC Date (dd/mmm/yyyy): 15/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC		DIC	pH								
1	1	504	2000	✓	2000		x				xxx	xxx							
2	2	505	2000	✓			x				xxx	xxx							
3	3	506	2000	✓			x				xxx	xxx							
4	4	507	2000	✓			x				xxx	xxx							
5	5	508	2000	✓			x				xxx	xxx							
6	6	509	2000	✓			x												
7	7	510	2000	✓			x												
8	8	511	2000	✓			x												
9	9	512	2000	✓			x												
10	10	513	2000	✓			x												
11	11	514	2000	✓			x												
12	12	515	2000	✓			x												
13	13	516	2000	✓			x												
14	14	517	2000	✓			x												
15	15	518	2000	✓			x												
16	16	519	2000	✓			x												
17	17	520	2000	✓			x												
18	18	521	2000	✓			x												
19	19	522	2000	✓			x												
20	20	523	2000	✓			x												
21	21	524	2000	✓			x												
22	22	525	2000	✓			x												
23	23	526	50/100	✓	50	x	x	xx	xx										No chl Max
24	24	527	5	✓	5	x	x	xx	xx										

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

Bottom Depth:	4141	m
Transmisso Cleaned:	(Y) / N	

Time	UTC	Local
Start	2259	1559
Bottom	2334	1634
End	0010	1710

Positional Information
Start
Lat: 50° 0.02 N
Lon: 143° 36.35 W

Bottom
Lat: 50° 0.03 N
Lon: 143° 36.26 W

End
Lat: 50° 0.07 N
Lon: 143° 36.38 W

Extra comments:
Calibration cast

Sampling Log

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

Cruise ID: 2013-17 **Station:** P35

Event #: 78

Ship: Tully

UTC Date (dd mmm yyyy): 16 6 2013

[illegible]

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

Bottom Depth:	4150	m
Transmisso Cleaned:	Y	/ N

Time	UTC	Local
Start	0344	2044
Bottom	0419	2119
End	0452	2152

Positional Information		
Start	Lat: 50° 0.02	N
	Lon: 144° 17.95	W

Bottom	Lat: 50 ° 0.06 N
	Lon: 144 ° 18.14 W

End	Lat: 50 ° 00.02	N
	Lon: 144 ° 18.23	W

Extra comments:
No chl max

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P26 Event #: 79 Ship: Tully UTC Date (dd|mmm|yyyy): 16 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed ☒ Pressure	UNC			TM	TM								
								Filt	Non-F								
1		530	40	☒				x x	x x								
2		531	30	☒				x x	x x								
3		532	20	☒				x x	x x								
4		533	15	☒		x											
5		534	10	☒				x x	x x								
6		535	5	☒				x x	x x								
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): AM/HMBottom Depth: 4250 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0804	0104
Bottom		
End	1246	0546

Positional Information
Start
Lat: 50 ° 00 . 02 N
Lon: 145 ° 00 . 11 WBottom
Lat: ° N
Lon: ° WEnd
Lat: 50 ° 00 . 36 N
Lon: 145 ° 00 . 38 WExtra comments:
Pumping for UNC

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P26

Event #: 81

Ship: Tully

UTC Date (dd|mmm|yyyy): 16 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	Cs												
1	1	536	600	✓	600	x											
2	2	537	600	✓		x											
3	3	538	600	✓		x											
4	4	539	600	✓		x											
5	5	540	600	✓		x											
6	6	541	600	✓		x											
7	7	542	500	✓	500	x											
8	8	543	500	✓		x											
9	9	544	500	✓		x											
10	10	545	500	✓		x											
11	11	546	500	✓		x											
12	12	547	500	✓		x											
13	13	548	400	✓	400	x											
14	14	549	400	✓		x											
15	15	550	400	✓		x											
16	16	551	400	✓		x											
17	17	552	400	✓		x											
18	18	553	400	✓		x											
19	19	554	300	✓	300	x											
20	20	555	300	✓		x											
21	21	556	300	✓		x											
22	22	557	300	✓		x											
23	23	558	300	✓		x											
24	24	559	300	✓		x											

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

Bottom Depth:	4252 m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	1434	0734
Bottom	1445	
End	1459	

Start	Positional Information	
	Lat: 49 ° 59.96 N	Lon: 145 ° 00.16 W

Bottom	Lat: 49 ° 59.99 N	Lon: 145 ° 00.19 W
--------	-------------------	--------------------

End	Lat: 49 ° 59.97 N	Lon: 145 ° 00.19 W
-----	-------------------	--------------------

Extra comments:

Cesium 1

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P26 Event #: 92 Ship: Tully UTC Date (dd:mmm/yyyy): 16 6 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Oxy	ONAr	ONAr	N G	Sal	DIC	DIC	Si-I	Nuts					
				✓		UW	UW	UVic	UW	UW	UW	IOS	PC	ON/US				
1		560	4000	✓	4000	x x	x x	x		x								
2		561	4000	✓														
3		562	4000	✓		x x			x x	x								
4		563	4000	✓														
5		564	3000	✓	3000	x x	x x	x		x								
6		565	3000	✓														
7		566	3000	✓		x x			x x	x								
8		567	3000	✓														
9		568	2000	✓	2000	x x	x x	x		x								
10		569	2000	✓														
11		570	2000	✓		x x			x x	x								
12		571	2000	✓														
13		572	4000	✓	4000					x	x	x	x	x x				
14		573	3500	✓	3500					x	x	x	x	x x				
15		574	3000	✓	3000					x	x	x	x	x x				
16		575	2500	✓	2500					x	x	x	x	x x				
17		576	2000	✓	2000					x	x	x	x	x x				
18		577	1500	✓	1500					x	x	x	x	x x				
19		578	1250	✓	1250					x	x	x	x	x x				
20		579	1000	✓	1000					x	x	x	x	x x				
21																		
22																		
23																		
24																		

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

Bottom Depth:	4252 m
Transmisso Cleaned:	☒ Y ☐ N

Time	UTC	Local
Start	1550	0850
Bottom	1703	
End	1806	

Positional Information	
Start	Lat: 49 ° 59 . 95 N
	Lon: 145 ° 00 . 14 W

Bottom	Lat: 49 ° 59 . 96 N
	Lon: 145 ° 00 . 15 W

End	Lat: 49 ° 59 . 91 N
	Lon: 145 ° 00 . 16 W

Extra comments:
ONAr + Si I + nutrients
OUT-OF-ORDER
1 - 2 - 3 - 4 - 13 - 14 - 15 - 5 - 6 - 7 - 8
16 - 17 - 9 - 10 - 11 - 12 - 18 - 19 - 20

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P26

Event #: 84

Ship: Tully

UTC Date (dd/mmm/yyyy): 16/6/2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Oxy	ONAr	ONAr	NG	Sal									
				✓	UW	UW	UVic	UW	UW									
1	1	580	400	✓	400	x x	x x	*	x x	x								
2	2	581	400	✓														
3	3	582	400	✓		xx		xx	x									
4	4	583	400	✓														
5	5	584	250	✓	250	x x	x x	*	x x	x								
6	6	585	250	✓	2													
7	7	586	250	✓		xx		xx	x									
8	8	587	250	✓														
9	9	588	100	✓	100	x x	x x	*	x x	x								
10	10	589	100	✓														
11	11	590	100	✓		xx		xx	x									
12	12	591	100	✓														
13	13	592	5	✓	5	x x	x x	x x		x								
14	14	593	5	✓														
15	15	594	5	✓		x x			x x	x								
16	16	595	5	✓														
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth:	4251 m
Transmisso Cleaned:	Y / N

Time	UTC	Local
Start	2048	1348
Bottom	2056	1356
End	2106	1406

Positional Information		
Start	Lat: 50° 0.13	N
	Lon: 145° 0.04	W
Bottom	Lat: 50° 0.15	N
	Lon: 145° 0.02	W
End	Lat: 50° 0.16	N
	Lon: 145° 0.04	W

Extra comments:
ONAr

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P26

Event #: 85

Ship: Tully

UTC Date (dd|mmm|yyyy): 16 | 6 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments						
			Target Pressure	Confirmed	Oxy	ONAr	ONAr	N G	Sal	Nari	Nina								
			✓	Pressure	UW	UW	UVic	UW	UW		S								
1	1	596	1000	✓	1001						x	x							
2	2	597	1000	✓							x								
3	3	598	1000	✓		xx	xx	x		x									
4	4	599	1000	✓															
5	5	600	1000	✓		xx			xx	x									
6	6	601	1000	✓															
7	7	602	800	✓	800	xx	xx	x		x									
8	8	603	800	✓															
9	9	604	800	✓		xx			xx	x									
10	10	605	800	✓															
11	11	606	600	✓	601	xx	xx	x		x									
12	12	607	600	✓															
13	13	608	600	✓		xx			xx	x									
14	14	609	600	✓															
15	15	610	100	✓	100						x								
16	16	611	100	✓							x								
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth:	4251 m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	2246	1546
Bottom	2304	1604
End	2325	1625

Positional Information		
Lat:	50° 0.05	N
Lon:	144° 59.94	W

Lat:	50° 0.05	N
Lon:	144° 59.95	W

Lat:	50° 0.10	N
Lon:	144° 59.84	W

Extra comments:

ONAr + Nari

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17

Station: P26

Event #: 86

Ship: Tully

UTC Date (dd/mm/yyyy): 17 6 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut Fr	NutCo	DIC	Alk	pH	PIC	DOC	UBC			
1	1	612	Bot-10	✓	4318	x		xx	x	x	x	x	xx	x			
2	2	613	4000	✓	3999	xx	xx	xx	1+4	xx	x	x	xx	x			
3	3	614	3500	✓	3500	x	x	xx	x	x	x		xx				
4	4	615	3000	✓	3000	x	xx	xx	x	x	x	x	xx	x			
5	5	616	2500	✓	2500	x	x	xx	xx	x	x	xxx	xx				
6	6	617	2000	✓	2001	x	xx	xx	x	x	x	x	xx	x			
7	7	618	1500	✓	1500	x		xx	x	x	x	x	xx	x			
8	8	619	1250	✓	1249	xx		xx	x	x	x		xx	x			
9	9	620	1000	✓	1000	x	xx	xx	1+4	x	x	x	xx	x			
10	10	621	800	✓	800	x		xxx	xx	x	x	x	xx	x			
11	11	622	600	✓	600	x		xx	1+4	x	x	x	xx	x			
12	12	623	400	✓	400	x		xx	1+4	x	x	x	xx	x			
13	13	624	300	✓	300	x		xx		x	x	x	xx	x			
14	14	625	250	✓	250	xx		2+4		x	x	x	xx	xx			
15	15	626	200	✓	200	x		xx		x	x	x	xx	x			
16	16	627	175	✓	175	x		xx		x	x	x	xx				
17	17	628	150	✓	150	x		xx		x	x	x	xx	x			
18	18	629	125	✓	125	xx		xx		x	x	x	xx				
19	19	630	100	✓	100	x		xx		x	x	x	xx	x			
20	20	631	75	✓	75	x		xx		x	x	xxx	x	xx			
21	21	632	50	✓	50	x		xx		x	x	x	xx	x			
22	22	633	25	✓	25	x		xx		x	x	x	xx	x			
23	23	634	10	✓	10	x		2+4		x	x	x	xx	x			
24	24	635	5	✓	5	x	x	xx		x	x	x	xx				

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

Bottom Depth:	4250 m
Transmisso Cleaned:	Y / N

Time	UTC	Local
Start	0149	1849
Bottom	0309	2009
End	0449	2149

Positional Information
Start
Lat: 50° 0.08 N
Lon: 144° 59.93 W

Bottom
Lat: 50° 0.06 N
Lon: 144° 59.95 W

End
Lat: 49° 59.96 N
Lon: 144° 59.85 W

Extra comments:

Deep cast

Water Properties Group

Sampling Log

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

Cruise ID:

2013-17

Station:

P26

Event #:

87

Ship:

Tully

UTC Date (dd/mm/yyyy):

17 6 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	Cs		HPLC										
1	1	636	200	✓	200	x											
2	2	637	200	✓		x											
3	3	638	200	✓		x											
4	4	639	200	✓		x											
5	5	640	200	✓		x											
6	6	641	200	✓		x											
7	7	642	150	✓	150	x											
8	8	643	150	✓		x											
9	9	644	150	✓		x											
10	10	645	150	✓		x											
11	11	646	150	✓		x											
12	12	647	150	✓		x											
13	13	648	100	✓	100	x											
14	14	649	100	✓		x											
15	15	650	100	✓		x											
16	16	651	100	✓		x											
17	17	652	100	✓		x											
18	18	653	100	✓		x											
19	19	654	5		5			x									
20	20	655	5					x									
21	21	656	5					x									
22	22	657	5					x									
23	23	658	5					x									
24	24	659	5					x									

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

Bottom Depth:	4252	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	1434	0734
Bottom	1439	
End	1446	

Positional Information		
Start	Lat: 49 ° 59 . 97	N
	Lon: 144 ° 59 . 84	W

Bottom	Lat: 49 ° 59 94	N
	Lon: 144 ° 59 87	W

End	Lat: 49 ° 59 92	N
	Lon: 144 ° 59 91	W

Extra comments:
Cesium 2 + HPLC

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: PA-007 Event #: 89 Ship: Tully UTC Date (dd|mmm|yyyy): 17 | 6 | 2013

Cruise ID: 2018-11			Station: 11001												Comments					
Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials															
			Target Pressure	Confirmed ✓ Pressure	ONAr UW	DIC UW	Sal UW	Oxy UW												
1	1	660	56	✓	6	xx	xx	x	xx											
2	2	661	23	✓	3	xx	x	x	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: 4214 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	2110	1410
Bottom	2119	1419
End	2129	1429

Positional Information

Start Lat: 50° 807 N

Start Lon: 144° 48.83 W

Bottom Lat: 50° 8.04 N

Bottom Lon: 144° 48.82 W

End Lat: 50° 8.02 N

End Lon: 144° 48.85 W

Extra comments:

Calibration at new mooring (ONAr)

To 500m

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: PA-007 Event #: 90 Ship: Tully UTC Date (dd|mmm|yyyy): 17 | 6 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments					
			Target Pressure	Confirmed Pressure	ONAr	DIC	Sal	Oxy										
				✓	UW	UW	UW	UW										
1	1	662	6	✓	6	xx	xx	x	xx									
2	2	663	3	✓	3	xx	x	x	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:	4213 m
Transmisso Cleaned:	✓ / N

Time	UTC	Local
Start	2333	1633
Bottom	2343	1643
End	2354	1654

Positional Information
Start
Lat: 50° 8.12 N
Lon: 144° 48.86 W

Bottom
Lat: 50° 8.10 N
Lon: 144° 48.92 W

End
Lat: 50° 8.13 N
Lon: 144° 48.98 W

Extra comments:
2 nd Calibration at new mooring to 500m

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P26 Event #: 91 Ship: Tully UTC Date (dd:mmm:yyy): 18 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	664	60	✓ 60	xx		x	x	x									
2	2	665	50	✓ 50	xx		x		x									
3	3	666	45	✓ 45	xx		x	x	x									
4	4	667	40	✓ 40	xx		x	x	x									
5	5	668	35	✓ 35	xx	xx	x	x	x									
6	6	669	30	✓ 30	xx		xx	x	xx	xx								
7	7	670	25	✓ 25	xx		x	xx	x									
8	8	671	20	✓ 20	xx		x	x	x									
9	9	672	15	✓ 15	xx		x	x	x	xx								-took chl-E here
10	10	673	5	✓ 5	xx	xx	xx		xx	ba	xxx							Exp - no water
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: 4252 m
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0304	2004
Bottom	0308	2008
End	0318	2018

Positional Information
 Start
 Lat: 50 ° 0.03 N
 Lon: 144 ° 59.93 W

Bottom
 Lat: 50 ° 0.03 N
 Lon: 144 ° 59.95 W

End
 Lat: 50 ° 0.01 N
 Lon: 144 ° 59.91 W

Extra comments:
 HPLC cast

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P26 Event #: 92 Ship: Tully UTC Date (dd/mm/yyyy): 18 6 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure		UBC		UNC							
1	1	674	4000	✓	4000		x								To replace deep cast bottle
2	2	675	2000	✓	2000										
3	3	676	2000	✓			x								
4	4	677	2000	✓											
5	5	678	2000	✓											
6	6	679	2000	✓											
7	7	680	1000	✓	1000										DID NOT CLOSE
8	8	681	1000	✓			x								
9	9	682	1000	✓											
10	10	683	1000	✓											
11	11	684	1000	✓											
12	12	685	1000	✓			x								To replace deep cast bottle
13	13	686	800	✓	800		x								To replace deep cast bottle
14	14	687	500	✓	500										
15	15	688	500	✓			x								
16	16	689	500	✓											
17	17	690	500	✓											
18	18	691	10	✓	10										
19	19	692	10	✓			x								
20	20	693	10	✓											
21	21	694	10	✓											
22	22	695	5	✓	5				x						
23	23	696	5	✓				x							
24															

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

Bottom Depth: 4252 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0657	2357
Bottom	0804	0104
End	0908	0208

Positional Information

Lat:	50	°	00	'	03	N
Lon:	144	°	59	'	99	W

Start

Lat:	49	°	59	'	98	N
Lon:	145	°	00	'	06	W

Bottom

Lat:	49	°	59	'	97	N
Lon:	145	°	00	'	11	W

End

Extra comments:
UBC cast + UNC

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: PA-006 Event #: 94 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	ONAr	DIC	Sal	Oxy										
				✓	UW	UW	UW	UW										
1	1	697	5	✓ 5	x x	x	x	x x										
2	2	698	2		x x	x	x	x x										
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:	4228	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	1504	0804
Bottom	1513	
End	1522	

Start	Positional Information		
	Lat:	50 ° 02. 40	N
Bottom	Lon:	144 ° 52. 61	W
	▼		
End	Lat:	50 ° 02. 47	N
	Lon:	144 ° 52. 65	W
▼			
	Lat:	50 ° 02. 47	N
	Lon:	144 ° 52. 67	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P26

Event #: 98

Ship: Tully

UTC Date (dd|mmm|yyyy): 19 | 6 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Cs	Oxy	DIC	O17	Sal						
1	1	699	200	✓ 200		x x	x	x x	x						
2	2	700	150	✓ 100		x x	x	x x	x						
3	3	701	100	✓ 100		x x	x	x x	x						
4	4	702	50	✓ 50	x										
5	5	703	50	✓	x										
6	6	704	50	✓	x										
7	7	705	50	✓	x										
8	8	706	50	✓	x										
9	9	707	50	✓	x										
10	10	708	50	✓	x										
11	11	709	5	✓ 5	x										
12	12	710	5	✓	x										
13	13	711	5	✓	x										
14	14	712	5	✓	x										
15	15	713	5	✓	x										
16	16	714	5	✓	x										
17	17														
18	18														
19	19														
20	20														
21	21														
22	22														
23	23														
24	24														

Profile type:
☒ RO3 ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): H.M.

Bottom Depth: 4252 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1438	0738
Bottom	1442	
End	1449	

Positional Information

Lat:	49 ° 59 . 99	N
Lon:	144 ° 59 . 94	W

Start

Bottom

End

Lat: 50 ° 00 . 00 N
Lon: 144 ° 59 . 94 W

Lat: 50 ° 00 . 02 N
Lon: 144 ° 59 . 94 W

Extra comments:

Cesium 3 + O¹⁷

Water Properties Group

Sampling Log

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

Cruise ID:

2013-17

Station:

P26

Event #:

99

Ship:

Tully

UTC Date (dd/mm/yyyy):

19 / 6 / 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Nina	UNC	Oxy	DIC	O17	Sal					
				✓	S		UW	UW	UW	UW					
✓ 22		715	3		x										Bot 1 = 50 m
2		716	3		x										
3		717	3		x										
4		718	MLD 25	25	x										
5		719	MLD	1	x										
6		720	MLD		x										
7		721	Max		x										
8		722	Max		x										
9		723	Max		x										
10		724	Max			x									
11		725	Max			x									
12		726	Max			x									
13		727	Max			x									
14		728	Max			x									
15		729	Max	25		x									
16		730	5			x									
17		731	5			x									
18		732	5			x									
19		733	5			x									
20		734	5			x									
21		735	5			x									
22	1	736	50	✓ 50	1		xx	xx	xx	x					Bot 22 = 3 m
23		737	10	✓ 10			xx	x	xx	x					
24		738	5				xx	x	xx						FORGOT TO TRIGGER #24

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

Bottom Depth:	4252 m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	1602	0902
Bottom	16 05	
End	16	

Positional Information
Start
Lat: 50 ° 00 . 04 N
Lon: 144 ° 59 . 94 W

Bottom
Lat: 50 ° 00 . 02 N
Lon: 144 ° 59 . 91 W

End
Lat: 50 ° 00 N
Lon: 144 ° 59 W

Extra comments:
Nina S + UNC + O17
OUT-OF-ORDER
22, 4-15, 23, 16-21, 24, 13

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P16 Event #: 104 106 Ship: Tully UTC Date (dd|mmm|yyyy): 21 6 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	UBC		Oxy										
				✓			UW										
1	1	739	1000	✓	1000			x									
2	2	740	1000	✓	✓			x									
3	3	741	800	✓	800			x									
4	4	742	800	✓	✓			x									
5	5	743	600	✓	600			x									
6	6	744	600	✓	✓			x									
7	8	745	400	✓	400			x									
8	9	746	400	✓	✓			x									
9	10	747	200	✓	200			x									
10	11	748	200	✓	✓			x									
11	12	749	5	✓	5			x									
12	13	750	5	✓	✓			x									
13	7	751	600	✓	600	x											
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Profile type:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): H.m.

Bottom Depth: 3632 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1430	0730
Bottom	1446	
End	1504	

Positional Information

Start

Lat: 49 ° 17 . 04 N

Lon: 134 ° 40 . 07 W

Bottom

Lat: 49 ° 17 . 03 N

Lon: 134 ° 40 . 12 W

End

Lat: 49 ° 17 . 16 N

Lon: 134 ° 40 . 16 W

Extra comments:

P16, return leg

UBC and OW Oxy

OUT-OF-ORDER

1 - ... - 6 - 13 - 7 - 8 ...

Water Properties Group

Sampling Log

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

Cruise ID: 2013-17 Station: P4 Event #: 108 Ship: Tully UTC Date (dd mmm/yyyy): 23 6 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	pH	HPLC	Nina										
1	1	752	85	✓ 85	6												
2	9	753	25	✓ 25	6												
3	10	754	15	✓ 15	6												
4	11	755	5	✓ 5	6												
5	2	756	Max	✓ 30			x										
6	3	757	Max	✓ 30		x											
7	4	758	Max	✓ 30		x											
8	5	759	Max	✓ 30		x											
9	6	760	Max	✓ 30		x											
10	7	761	Max	✓ 30		x											
11	8	762	Max	✓ 30		x											
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: 1302 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0103	1803
Bottom	0123	1823
End	0147	1847

Positional Information

Start Lat: 48° 39.11 N

Start Lon: 126° 39.98 W

Bottom Lat: 48° 39.10 N

Bottom Lon: 126° 39.95 W

End Lat: 48° 39.07 N

End Lon: 126° 39.88 W

Extra comments:

P4, return leg

pH, HPLC, Nina S

OUT-OF-ORDER

1-5-6...11-2-3-4