

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

Si03

Event #:

1

Ship:

Tully

UTC Date (dd|mmm|yyyy): 15 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	PIC											
1	1	1	Bot-10	✓ 220	x	x											
2	2	2	200		x												
3	3	3	175		xx	x											
4	4	4	150		x	x											
5	5	5	125		x												
6	6	6	100		x	x											
7	7	7	75		x												
8	8	8	50		xx	x											
9	9	9	25		x	x											
10	10	10	10		x												
11	11	11	5		x	x											
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth:	226 m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	2137	1437
Bottom	2153	
End	2210	

Positional Information	
Start	Lat: 48° 35.61' N
	Lon: 123° 29.97' W

Bottom	Lat: 48° 35.59' N
	Lon: 123° 29.98' W

End	Lat: 48° 35.59' N
	Lon: 123° 29.97' W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P1 Event #: 2 Ship: Tully UTC Date (dd/mm/yyyy): 16 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments						
			Target Pressure	Confirmed ☒ Pressure	Nut-F	Sal-R	Chl	HPLC											
								N ²	N ²										
1		12	Max		30	x		x x	x x										
2		13	5			x	x	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):

Bottom Depth: 127 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1223	0523
Bottom	1226	
End	1231	

Positional Information
Start
Lat: 48 ° 34.52 N
Lon: 125 ° 30.14 W

Bottom
Lat: ° 34.51 N
Lon: ° 30.16 W

End
Lat: ° 34.51 N
Lon: ° 30.22 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P2

Event #:

3

Ship:

Tully

UTC Date (dd/mm/yyyy): 16 AUG 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut-C	Nut-F	Sal-R	DIC	pH	DORC	PIC			
					SR/NL	NS			MR/JC	GC	GC	ES			
1	1	14	Bot-10	110	xx	x			x	x					
2	2	15	100	100	x	x			x	x	xx	x			
3	3	16	75	75	x	x			xx	x					
4	4	17	75	50	x	x			x	x		x			
5	5	18	50	25	x	x			x	xxx		x			
6	6	19	25	10	x	xx			x	x		x			
7	7	20	10	5	x	x			x	x	xt	x			
8		21	5		x	x		x	x	x	xx	x			
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): SR

Bottom Depth:	115	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	1454	0754
Bottom	1458	0758
End	1508	0808

Positional Information		
Start	Lat: 48 ° 36.02	N
	Lon: 125 ° 59.99	W

Bottom	Lat: 48 ° 36.03	N
	Lon: 125 ° 59.99	W

End	Lat: 48 ° 36.06	N
	Lon: 125 ° 59.96	W

Extra comments:

Deep cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P2 Event #: 5 Ship: Tully UTC Date (dd mmm yyyy): 16 AUG 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments									
			Target Pressure	Confirmed ✓	Pressure	DMS	DMSP	DMSP	Nut-C	Chl	HPLC										
						MP	MA	d MA	NS	IC	N ²										
1	1	22	100	✓	161	x	x	x	xx	x											
2	2	23	75			x			x	x											
3	3	24	50			x			x	x											
4	4	25	40			x			x	x											
5	5	26	30			x			x	x											
6	7	27	25			x			x	xx											
7	9	28	20			xx	xx	xx	x	x											
8	9	29	15			x			x	x											
9	10	30	10			x			x	x											
10	12	31	5			x	x	x	x	x											
11	11	32	0			x	x	x	x	x											
12	6	33	Max		30					xx	xx										
13	16	34	Max		15					xx	xx										
14	13	35	5 Max							xx	xx										
15	14																				
16																					
17																					
18																					
19																					
20																					
21																					
22																					
23																					
24																					

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

Watchkeeper(s): SR

Bottom Depth: 117 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1640	0940
Bottom	1643	
End	1658	

Positional Information

Start Lat: 48 ° 36.01 N

Start Lon: 126 ° 0.04 W

Bottom Lat: 48 ° 35.99 N

Bottom Lon: 126 ° 0.01 W

End Lat: 48 ° 35.97 N

End Lon: 126 ° 0.01 W

Extra comments:

DMS cast; out-of-order

4, 5, 12, 16, 17, 18, 19, 10, 14, 11

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P3 Event #: 6 Ship: Tully UTC Date (dd mmm yyyy): 16 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal-R	Chl	HPLC	
1		36	Max	30	x		xx	xx	
2		37	5 max		x	x	xx	xxxx	SHORT ON WATER FOR SAL
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): SR/N²

Bottom Depth: 812 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1842	1142
Bottom	1856	1156
End	1914	1214

Positional Information

Start	Lat: 48 ° 37.49	N
	Lon: 126 ° 19.95	W
Bottom	Lat: 48 ° 37.49	N
	Lon: 126 ° 19.94	W
End	Lat: 48 ° 37.49	N
	Lon: 126 ° 19.95	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P4

Event #: 8

Ship: Tully

UTC Date (dd|mmm|yyyy): 16 | AUG | 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-C		Chl	HPLC	Phyto	ONAr		
				✓		t	d								
1	1	38	300	✓		x			x						
2	2	39	200	✓		x	x	x	x						
3	3	40	175	✓		x	x	x	x						
4	4	41	100	✓		x	x	x	x	x					
5	5	42	75	✓		x			x	x					
6	6	43	50	✓		x			x	x					
7	7	44	40	✓		x			x	x					
8	8	45	30	✓		x			x	xx					
9	10	46	25	✓		x			x	x					
10	11	47	20	✓		xx	xx	xx	x	x					
11	12	48	15	✓		x			x	x					
12	14	49	10	✓	MAY	x			xx	x	xx				
13	15	50	5	✓		x	x	x	x	x					
14	22	51	0	✓		x	x	x	x	x					
15	9	52	Max-10	✓	30					xx	xx				
16	13	53	Max	✓	15					xx	xx				
17	16	54	5	✓						xx	xxx	xxx			
18	17	55	5	✓							x				
19	18	56	5	✓							x				
20	19	57	5	✓							x				
21	20	58	5	✓							x				
22	21	59	5	✓									x		
23															
24															

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

Bottom Depth:	1320 m
Transmisso Cleaned:	Y / N

Time	UTC	Local
Start	2132	1432
Bottom	2138	1438
End	2200	1500

Positional Information
Start
Lat: 48 ° 38.98 N
Lon: 126 ° 39.98 W

Bottom
Lat: 48 ° 38.99 N
Lon: 126 ° 39.98 W

End
Lat: 48 ° 38.95 N
Lon: 126 ° 39.96 W

Extra comments:
DMS cast; out-of-order.

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

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P4

Event #: 9

Ship: Tully

UTC Date (dd/mmm/yyyy): 16 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	THWV	WHI	HC	MIS	SOL						
1		60	1300	✓ 1300.2	X	X	X	X	X						
2		61	1100	✓ 1100.85	X	X	X	X	X						
3		62	700	✓ 700	X	X	X	X							
4		63	500	✓ 498	X	X	X	X							
5		64	300	✓ 300.17	X	X	X	X							
6		65	150	✓ 148.03	X	X	X	X							
7		66	50	✓ 49.66											
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):

Bottom Depth: 1324 m
Transmisso Cleaned: ☒ NAY / N

Time	UTC	Local
Start	2208	
Bottom	2238	
End	2305	

Positional Information

Start	Lat: 48 ° 38.97 N
	Lon: 126 ° 39.96 W
Bottom	Lat: 48 ° 39.11 N
	Lon: 126 ° 40.17 W
End	Lat: 48 ° 38.99 N
	Lon: 126 ° 40.01 W

Extra comments:
TMR-1

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P4

Event #: 16

Ship: Tully

UTC Date (dd|mmm|yyyy): 17 | 08 | 12

			Rosette Operation		Samples Taken / Sampler's Initials										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut-C	Nut-F	Sal-R	DIC	pH	DOC	PIC	UBC	DORC				
1		67	Bot-10	✓	1310						x	x		x				
2		68	Bot-10	✓		x	x	x		x	x			x				
3		69	1250	✓		x	x	x	xx	x	x		x					
4		70	1250	✓		x	x	x		xx	x			x				
5		71	1000	✓		xxxx	x	x	xx	x	x	x	x	x				
6		72	800	✓		x	xx	xx	x	x	x		x	x				
7		73	600	✓		x	x	x		x	xxx		x	x				
8		74	400	✓		x	x	x		x	x		x	x				
9		75	300	✓		x	x			x	x		x	x				
10		76	300	✓											x			
11		77	250	✓		x	x			x	x	x	x					
12		78	200	✓		x	x			x	x		x	x				
13		79	175	✓		x	xx			x	x		x					
14		80	150	✓		x	x			x	x		x	x				
15		81	125	✓		xx	x			x	x		x					
16		82	100	✓		x	x			x	x	x	x	x				
17		83	75	✓		x	x			x	xxx		x					
18		84	50	✓		x	x			x	x		x	x				
19		85	25	✓		x	x			x	x	x	x	x				
20		86	10	✓		x	x			x	x	x	x	x				
21		87	5	✓		xx	x			x	x		x					
22		88	0	✓											x			
23																		
24																		

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

Bottom Depth:	1320	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	0109	1809
Bottom	0130	1830
End	0213	

Positional Information
Start
Lat: 48 ° 38.98 N
Lon: 126 ° 39.96 W

Bottom
Lat: 48 ° 38.96 N
Lon: 126 ° 39.99 W

End
Lat: 48 ° 38.97 N
Lon: 126 ° 39.99 W

Extra comments:
Deep cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P4 Event #: 13 Ship: Tully UTC Date (dd|mmm|yyyy): 17 | 08 | 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	UBC	Sal	Nut Fr	Nut-C							
1	1	89	1300 2000	☒											
2	2	90	1300 2000	☒	x	x	x	x							
3	3	91	1300 2000	☒											
4	4	92	1000	☒											
5	5	93	1000	☒	x	x	x	x							
6	6	94	1000	☒											
7	7	95	500	☒											
8	8	96	500	☒	x	x	x	x							
9	9	97	500	☒											
10	10	98	10	☒											
11	11	99	10	☒	x	x	x								
12	12	100	10	☒											
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 1323 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0531	2231
Bottom	0555	2255
End	0622	2322

Positional Information
Start
Lat: 48 ° 38.98 N
Lon: 126 ° 39.97 W

Bottom
Lat: 48 ° 38.99 N
Lon: 126 ° 40.06 W

End
Lat: 48 ° 38.99 N
Lon: 126 ° 39.99 W

Extra comments:
UBC cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P4

Event #: 14

Ship: Tully

UTC Date (dd/mm/yyyy): 17 Aug 2012

Bottle		Ship: Tully		UTC Date (dd/mm/yyyy)														
Niskin #	Firing #	Sample #	Rosette Operation	Confirmed DEPTH Pressure	Samples Taken / Sampler's Initials													Comments
			Target Pressure	✓		NUYS	SLS	TMUV	THUBC	Fe(II)	O3	Al 125	Mn 125	Cu 500	DaveS	unfilt.	Zn	
1		101	1200	✓	1199					X	X							
2	1	102	1200	✓	1198	CF	X	X	X	X	X	X	X	X		X	X	
3	2	103	1000	✓	998	CF	X	X	X	X	X	X	X	X		X	X	
4	3	104	800	✓	799	CF		X	X	X	X	X	X	X		X	X	
5	4	105	600	✓	600	CF		X	X	X	X	X	X	X		X	X	
6	5	106	400	✓	400	CF		X	X	X	X	X	X	X		X	X	
7	6	107	200	✓	200	F		X	X	X	X	X	X	X		X	X	
8	7	108	100	✓	100	F		X	X	X	X	X	X	X		X	X	
9	8	109	75	✓	74	F		X	X	X	X	X	X	X		X	X	
10	9	110	50	✓	50	F		X	X	X	X	X	X	X		X	X	
11	10	111	25	✓	25	F		X	X	X	X	X	X	X		X	X	
12	11	112	10	✓	9.6	F		X	X	X	X	X	X	X	X	X	X	
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Version: 25 Nov 2011

Transmissometer to be cleaned before each cast, do not use

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

Bottom Depth: 1319 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1300	
Bottom	1325	
End	1354	

Positional Information

Lat:	48 ° 38.98	N
Lon:	126 ° 40.00	W

Start

Lat:	48 ° 38.98	N
Lon:	126 ° 39.99	W

Bottom

Lat:	48 ° 38.99	N
Lon:	126 ° 40.00	W

End

Extra comments:
TMR cast 2
BOTTLE 11 PLACED
ON GROUND OF
CONTAINER

Version: 25 Nov 2011

Transmissometer to be cleaned before each cast, do not use Ammonia products

<http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/>

SAMPLE BOTTLE #1 FROM GO-FLO #12
" #2 " #3
" #3 " #4
THROUGH ALL 12 BOTTLES
GO FLO #1 ONLY USED FOR Fe(II), Supox

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P4

Event #: 15

Ship: Tully

UTC Date (dd mmm yyyy): 17 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure											
1		113	3.6%	15											
2		114	3.6%	15											
3		115	7.5%	8.5											
4		116	7.5%	8.5											
5		117	13%	5.2											
6		118	13%	5.2											
7		119	29%	4.7											
8		120	29%	4.7											
9		121	55%	3.7											
10		122	55%	3.7											
11		123	100%	surf											
12		124	100%	surf											
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 1317 m
 Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1521	0821
Bottom	1526	
End	1538	

Positional Information

Start	Lat: 48 ° 38.97 N
	Lon: 126 ° 40.15 W

Bottom

Lat: 48 ° 38.97 N
Lon: 126 ° 40.15 W

End

Lat: 48 ° 39.02 N
Lon: 126 ° 40.13 W

Extra comments:
 Light cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P5 Event #: 16 Ship: Tully UTC Date (dd|mmm|yyyy): 17 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Nut-F		ChI	HPLC							
1	1	125	Max	✓ 25	x		xx	xx							
2	2	126	5	✓	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): SR

Bottom Depth: 2098 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1752	1052
Bottom	1823	1123
End	1855	1155

Positional Information
Start
Lat: 48° 41.44' N
Lon: 127° 10.13' W

Bottom
Lat: 48° 41.45' N
Lon: 127° 10.01' W

End
Lat: 48° 41.46' N
Lon: 127° 10.02' W

Extra comments:

Sampling Log

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

Cruise ID: 2012-13

Station: P6

Event #: 17

Ship: Tully

UTC Date (dd mmm yyyy): 17 AUG 2012

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): HCG

Bottom Depth: 2130 m

Transmisso Cleaned: Y / N

<i>Time</i>	<i>UTC</i>	<i>Local</i>
Start	2138	1438
Bottom	2216	1510
End	2241	1541

Positional Information	
Start	Lat: 48 ° 44,60
	Lon: 127 ° 39,83

Bottom	Lat: 48 ° 44.55	N
	Lon: 127 ° 40.11	W

End	Lat: 48 ° 44.46 N
	Lon: 127 ° 40.21 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P7 Event #: 19 Ship: Tully UTC Date (dd/mm/yyyy): 18/08/12

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials												Comments	
			Target Pressure	Confirmed	Nut-F		Chl	HPLC											
				✓															Pressure
								N ²	N ²										
1	1	130	Max	✓	35	x		x x	x x										
2	2	131	5	✓		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): MG

Bottom Depth: 2506 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0115	1815
Bottom	0146	1846
End	0226	1926

Positional Information
Start
Lat: 48 ° 46.59 N
Lon: 128 ° 9.95 W

Bottom
Lat: 48 ° 46.57 N
Lon: 128 ° 9.94 W

End
Lat: 48 ° 46.56 N
Lon: 128 ° 9.93 W

Extra comments:
CURRENT? AT 525M

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P8

Event #: 20

Ship: Tully

UTC Date (dd/mm/yyyy): 18/08/12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ☒ Pressure	Oxy	SalRun	Nut Fr	Nut C	pH	chl	HPLC	DORC	PIC						
					WLR	AC	CR	SR	GC	AC	N ²	GC	EM						
1	1	132	2000	☒		x x	x x	x	x	x			x	x					
2	2	133	1500	☒		x	x	x	x	x				x				VENT OPEN	
3	3	134	1250	☒		x	x	x x	x x	x					x				
4	4	135	1000	☒		x x x x	x x	x	x	x					x				
5	5	136	800	☒		x	x	x	x	x					x				
6	6	137	600	☒		x		x	x	x x x					x				
7	7	138	400	☒		x		x	x	x					x				
8	8	139	300	☒		x		x		x			x	x					
9	9	140	250	☒		x		x		x			x	x					
10	10	141	200	☒		x		x		x				x					
11	11	142	175	☒		x		x		x				x					
12	12	143	150	☒		x		x x		x				x					
13	13	144	125	☒		x		x		x x x				x					
14	14	145	100	☒		x		x		x	x			x					
15	15	146	75	☒		x		x		x	x			x					
16	16	147	50	☒		x		x		x	x			x					
17	18	148	25	☒		x x		x		x	x x			x					
18	20	149	10	☒		x		x		x	x			x					
19	20	150	5	☒		x	x	x		x	x								
20	17	151	35 Max+10	☒	35						x x	x x							
21	19	152	35 Max	☒	25						x x	x x							
22	22	153	5	☒							x x	x x							
23	23	154	0	☒															
24													x						

Version: 25 Nov 2011

Transmissometer to be cleaned before each use

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

Bottom Depth:	2519	m
Transmisso Cleaned:	Y	/ N

Time	UTC	Local
Start	0507	2207
Bottom	0539	2239
End	0640	2340

Positional Information
Lat: 48 ° 48.98 N
Lon: 128 ° 40.05 W

Start
Lat: 48 ° 48.99 N
Lon: 128 ° 39.92 W

Bottom
Lat: 48 ° 48.96 N
Lon: 128 ° 39.93 W

End
Extra comments:
Firing out of order
O ₂ BUMP BETWEEN 200-400

Version: 25 Nov 2011

Transmissometer to be cleaned before each cast, do not use Ammonia products

<http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/>1-216 26, 17, 21, 18, 19, 22, 23
IN ORDER

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P9

Event #: 23

Ship: Tully

UTC Date (dd/mm/yyyy): 18 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments			
			Target Pressure	Confirmed Pressure	Nut-F		Chi	HPLC								
1	1	155	Max	25	x		xx	xx								
2	2	156	5		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): SR

Bottom Depth:	2343 m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	1038	0338
Bottom	1123	
End	1155	

Start	Positional Information		
	Lat:	48 ° 51.51	N
	Lon:	129 ° 9.98	W
Bottom	▼		
	Lat:	48 ° 51.44	N
	Lon:	129 ° 9.92	W
End	▼		
	Lat:	48 ° 51.48	N
	Lon:	129 ° 9.94	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P10 Event #: 24 Ship: Tully UTC Date (dd mmm yyyy): 18 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Nut-F	Sal R	Chl	HPLC							
1	1	157	Max	28	x		xx	xx							
2	2	158	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): SR

Bottom Depth: 2643 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1401	0701
Bottom	1433	
End	1507	

Positional Information
Start
Lat: 48 ° 53.57 N
Lon: 129 ° 39.91 W

Bottom
Lat: 48 ° 53.47 N
Lon: 129 ° 39.79 W

End
Lat: 48 ° 53.52 N
Lon: 129 ° 39.77 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P11

Event #: 25

Ship: Tully

UTC Date (dd/mm/yyyy): 18 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	CHI	HPLC		
1	1	159	Max	50	x		xx	xx	
2	2	160	5	x2	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): BR

Bottom Depth:	2753 m
Transmisso Cleaned:	(Y) N

Time	UTC	Local
Start	1716	1016
Bottom	1750	1030
End		

Positional Information	
Start	Lat: 48 ° 55.99 N
	Lon: 130 ° 9.93 W

Bottom	Lat: 48 ° 55.97 N
	Lon: 130 ° 9.97 W

End	Lat: 48 ° N
	Lon: 130 ° W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P12

Event #: 26

Ship: Tully

UTC Date (dd mmm yyyy): 18 AUG 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments										
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-Fr	Chl	HPLC	Phyto	ONAr											
1		161	300	✓	301	x			x														
2		162	200	✓		x	x	x	x														
3		163	100	✓		x	x	x	x														
4		164	75	✓		x			x														
5		165	50	✓		x			x														
6		166	40	✓		x			xx														
7		167	30	✓		x			x														
8		168	25	✓		x			x														
9		169	20	✓		xx	xx	xx	x														
10		170	15	✓		x			x														
11		171	10	✓		x			x														
12		172	5	✓		x	x	x	x														
13		173	0	✓		x	x	x	x														
14		174	Max-10	✓	65				xx	xx													
15		175	Max	✓	55				xx	xxx													
16		176	5	✓					xx	xx													
17		177	5	✓						x													
18		178	5	✓						x													
19		179	5	✓						x													
20		180	5	✓						x													
21		181	5	✓								x											
22																							
23																							
24																							

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

Bottom Depth: 3229 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2141	1441
Bottom	2147	1447
End	2208	1508

Positional Information

Lat:	48 ° 58.02	N
Lon:	130 ° 40.13	W

Start

Lat:	48 ° 58.10	N
Lon:	130 ° 40.15	W

Bottom

Lat:	48 ° 58.02	N
Lon:	130 ° 40.19	W

End

Extra comments:
DMS cast; out-of-order.

NOINDEX
1-4, 14, 15, 5-11, 12, 16-21, 13
IN ORDER
TOGETHER

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P12 Event #: 27 Ship: Tully UTC Date (dd|mmm|yyyy): 18|Aug|2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ☒ Pressure	Sal	NutFr	TM	TM	unfilt	Zn	Fe(II)	TM	UVC	TM				
1		182	35															
2		183	Max															
3		184	25	20			X											
4		185	10	10			X											
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? pump
Watchkeeper(s):

Bottom Depth: _____ m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2216	
Bottom	2235	
End	2336	

Positional Information

Lat:	48° 58.01	N
Lon:	130° 40.22	W

▼

Lat:	48° 58.12	N
Lon:	130° 40.19	W

▼

Lat:	48° 58.08	N
Lon:	130° 40.08	W

Extra comments:

Pumping DEPTHS WERE 15m

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P12 Event #: 28 Ship: Tully UTC Date (dd|mmm|yyyy): 18 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Sal	Nut Fr	Nut-C	TM	VR	Un	FI	IT	Zn		
1		186	2000	✓ 1999	X	X	X	X	X	X					
2		187	1600	✓ 1599.7	X	X	X	X	X	X					
3		188	1600	✓ 1600				X		X					
4		189	1300	✓ 1301		X	X	X	X	X					
5		190	1100	✓ 1100		X	X	X	X	X					
6		191	700	✓ 700		X	X	X	X	X					
7		192	500	✓ 500		X	X	X	X	X					
8		193	300	✓ 300		X		X	X	X					
9		194	150	✓ 150		X		X	X	X					
10		195	150	✓ 149				X		X					
11		196	75	✓ 75.1		X		X	X	X					
12		197	75	✓ 74.7				X							
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Watchkeeper(s):

Bottom Depth: 2993 m

Transmisso Cleaned: NAY / N

Time	UTC	Local
Start	2348	
Bottom	0025	
End		

Positional Information

Start

Lat: 48 ° 58.01 N

Lon: 130 ° 40.09 W

Bottom

Lat: 48 ° 57.95 N

Lon: 130 ° 40.5 W

End

Lat: 48 ° 57.95 N

Lon: 130 ° 40.8 W

Extra comments:

TMR cast 1

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P12

Event #: 29

Ship: Tully

UTC Date (dd|mmm|yyyy): 19|08|12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	OXY	Sal R	Nut-F	Nut-C	DIC	pH	PIC	DORC	FCM	DNA	Gases	WGA	
1		198	Bot-10	✓	3261	x		x	x	x	x		x	x	xx	x	VENT OPEN
2		199	3000	✓		x		x	x	xx	x	x	x				
3		200	3000	✓		xx		xx	x	x	x		x	x	xx	x	
4		201	2500	✓		x		x	xx	xx	x	xxx					
5		202	2000	✓		x		x	x	x	x		x	x	xx	x	
6		203	1500	✓		x		x	x	x	x		x	x	xx	x	
7		204	1250	✓		x		x	x	x	x		x	x	xx	x	
8		205	1000	✓		xxxx		xx	x	x	x		x	x	xx	x	
9		206	800	✓		x		x	x	x	x		x	x	xx	x	
10		207	600	✓		x		x	x	x	x		x	x	xx	x	
11		208	400	✓		x		x	x	x	x		x	x	xx	x	
12		209	300	✓		x		x		x	x		x	x	xx	x	
13		210	300	✓								x					
14		211	250	✓		x		x		x	xxx	x					
15		212	200	✓		x		x		x	x		x	x	xx	x	
16		213	175	✓		xx		x		x	x						
17		214	150	✓		x		x		x	x		x	x	xx	x	
18		215	125	✓		x		xx		x	x						
19		216	100	✓		x		x		x	x		x	x	xx	x	
20		217	75	✓		xx		x		x	x						
21		218	50	✓		x		x		x	x		x	x	xx	x	
22		219	25	✓		x		x		x	x		x	x	xx	x	
23		220	10	✓		x		x		x	x		x	x	xx	x	
24		221	5	✓		x		x		x	x		x				vent open

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

Bottom Depth: 3231 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0211	1911
Bottom	0308	2008
End	0427	2127

Positional Information

Lat:	48 ° 58.20	N
Lon:	130 ° 40.05	W

Start

Lat:	48 ° 58.21	N
Lon:	130 ° 40.08	W

Bottom

Lat:	48 ° 58.24	N
Lon:	130 ° 40.09	W

End

Extra comments:

Deep cast
CHL MAX ~ 53M
O2 INCREASE @ 600

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P12

Event #: 32

Ship: Tully

UTC Date (dd|mmm|yyyy): 19 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	UBC	Sal	Nut Fr	Nut-C							
1	1	222	2000												
2	2	223	2000			x	x	x	x						
3	3	224	2000												
4	4	225	1000												
5	5	226	1000			x	x	x	x						
6	6	227	1000												
7	7	228	500												
8	8	229	500			x	x	x	x						
9	9	230	500												
10	10	231	10												
11	11	232	10												
12	12	233	10			x	x	x							
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth:	3230 m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	0711	0011
Bottom	0804	
End	0908	

Positional Information
Start
Lat: 48 ° 58.11 N
Lon: 130 ° 39.81 W

Bottom
Lat: 48 ° 58.18 N
Lon: 130 ° 40.00 W

End
Lat: 48 ° 58.23 N
Lon: 130 ° 39.83 W

Extra comments:
UBC cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P12 Event #: 33 Ship: Tully UTC Date (dd:mmm:yyyy): 19 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Sal	Nut Fr	Nut-C	TMUVIC	Zn	unf. H.	DivCS	A/125	M/125	C/50		U/BOM		
1		234	1800	✓ 1800	X	X	X	X	X	X		X	X	X	X			use upcast CTD wash up/down
2		235	1400	✓ 1401	X	X	X	X	X	X		X	X	X	X			
3		236	1200	✓ 1201		X	X	X	X	X								
4		237	1000	✓ 1000		X	X	X	X	X		X	X	X	X			
5		238	800	✓ 800		X	X	X	X	X		X	X	X	X			
6		239	600	✓ 600		X	X	X	X	X		X	X	X	X			
7		240	400	✓ 400		X	X	XX	X	X		X	X	X	X			
8		241	200	✓ 200		X		X	X	X		X	X	X	X			
9		242	100	✓ 100		X		X	X	X		X	X	X	X			
10		243	50	✓ 50		X		X	X	X		XX	X	X	X			
11		244	25	✓ 25		X		X	X	X		XX	X	X	X			
12		245	10	✓ 11		X		X	X	X	XX	XX	X	X	X			
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 322.7 m
 Transmisso Cleaned: N/A Y / N

Time	UTC	Local
Start	15:19	
Bottom	1546	
End		

Positional Information

Lat: 48 ° 58.17	N
Lon: 130 ° 40.01	W

Start

Bottom

End

Lat: 48 ° 58.14	N
Lon: 130 ° 40.04	W

Lat: 48 ° 58.11	N
Lon: 130 ° 40.00	W

Extra comments:
 TMR cast 2
 salinity CTD bad
 in upper 40 m use
 upcast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P12

Event #: 34

Ship: Tully

UTC Date (dd:mmm/yyyy): 19 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure											
1		246	3.6%	40											
2		247	3.6%	40											
3		248	7.5%	28											
4		249	7.5%	28											
5		250	13%	20											
6		251	13%	20											
7		252	29%	18											
8		253	29%	18											
9		254	55%	5											
10		255	55%	5											
11		256	100%	Surf											
12		257	100%	Surf											
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth:	3230	m
Transmisso Cleaned:	Y	☒ N

Time	UTC	Local
Start	1649	0949
Bottom	1658	
End	1710	

Positional Information	
Start	Lat: 48 ° 58.14 N
	Lon: 130 ° 40.07 W

Start

Bottom

End

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

End	Lat: 48 ° 58 N
	Lon: 130 ° 40.01 W

Extra comments:
Light cast

Sampling Log

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

Cruise ID: 2012-13

Station: P13

Event #: 35

Ship: Tully

UTC Date (dd mmm yyyy): 19 AUG 12

[illegible]

Profile type:
ROS TRM X-Niskin other?

Watchkeeper(s): MG

Bottom Depth: 3011 m

Transmisso Cleaned: (Y) / N

<i>Time</i>	<i>UTC</i>	<i>Local</i>
Start	2111	1412
Bottom	2144	1444
End	2217	1517

Positional Information			
Start	Lat:	49 ° 260	N
	Lon:	131 ° 40.16	W

Bottom	Lat: 49 ° 2.63 N
	Lon: 131 ° 40.18 W

End	Lat: 49 ° 2.58 N
	Lon: 131 ° 40.21 W

Extra comments:
DOUBLE PEAK CHL 27+40
SHALLER AT 40

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P14 Event #: 36 Ship: Tully UTC Date (dd|mmm|yyyy): 20 Aug 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal R	Chl	HPLC							
1	1	260	Max	✓ 50	x		x x	x x							
2	2	261	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): NLG

Bottom Depth: 3310 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0252	1952
Bottom	0326	2026
End	0405	2105

Positional Information
Start
Lat: 49 ° 7.36 N
Lon: 132 ° 39.96 W

Bottom
Lat: 49 ° 7.31 N
Lon: 132 ° 39.95 W

End
Lat: 49 ° 7.31 N
Lon: 132 ° 39.94 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P15

Event #: 37

Ship: Tully

UTC Date (dd|mmm|yyyy): 20 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal R	Chl	HPLC	
1	1	262	Max	27	x		xx	xx	
2	2	263	5		x		xx	xx	
3	3	264	5					x	
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): SR

Bottom Depth:	3400 m
Transmisso Cleaned:	☒ Y ☐ N

Time	UTC	Local
Start	0819	0119
Bottom	0851	0151
End	0924	0224

Positional Information		
Start	Lat: 49 ° 11.93	N
	Lon: 133 ° 39.97	W
Bottom	Lat: 49 ° 11.93	N
	Lon: 133 ° 39.88	W
End	Lat: 49 ° 11.98	N
	Lon: 133 ° 40.02	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P16

Event #: 38

Ship: Tully

UTC Date (dd|mmm|yyyy): 20 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials													Comments
			Target Pressure	Confirmed ☒ Pressure	DORC		Nina S											
1	1	265	3000	☒			x											
2	2	266	3000	☒			x											
3	3	267	3000	☒		x												
4	4	268	300			x												
5	5	269	0			x												
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): SR

Bottom Depth: 3622 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1332	0632
Bottom	1420	0720
End	1508	

Positional Information

Start Lat: 49 ° 17.00 N

Start Lon: 134 ° 40.02 W

Bottom Lat: 49 ° 17.18 N

Bottom Lon: 134 ° 40.05 W

End Lat: 49 ° 17.30 N

End Lon: 134 ° 40.09 W

Extra comments:

DORCs + NINA cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P16 Event #: 39 Ship: Tully UTC Date (dd|mmm|yyyy): 20 | Aug | 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Nut Fr	Nut C	Sal R	TMUVIC	unf	TH	AL125	ALn125	Cu SD	TM U80		Zn			
1	1	270	2100	✓ 2100	x	x	x	x	x						x				
2	2	271	1950	✓ 1949	x	x	x	x	x						x				
3	3	272	1600	✓ 1600	x	y		xx	x						x				
4	4	273	1300	✓ 1298	x	x			x	x					x				
5	5	274	1100	✓ 1100	x	x			x	x					x				
6	6	275	700	✓ 699	x	x			x	x					x				
7	7	276	500	✓ 500	x	x			x	x					x				
8	8	277	300	✓ 300	x				x	x					x				
9	9	278	150	✓ 149	x				x	x					x				
10	10	279	75	✓ 75					x										
11	11	280	75	✓ 74	x				x	x	x	x	x	x	x				
12	12	281	50	✓ 50					x										
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth:	3622 m
Transmisso Cleaned:	NAY / N

Time	UTC	Local
Start	1604	
Bottom	1634	
End	1724	

Positional Information
Lat: 49 ° 16.95 N
Lon: 134 ° 39.72 W

Start

Bottom

End

Lat: 49 ° 17.07 N
Lon: 134 ° 40.01 W

Lat: 49 ° 17.25 N
Lon: 134 ° 39.83 W

Extra comments:

TMR Cast-1

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P16

Event #: 40

Ship: Tully

UTC Date (dd|mmm|yyyy): 20 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure											
1		282	3.6%	46											
2		283	3.6%	46											
3		284	7.5%	36											
4		285	7.5%	36											
5		286	13%	29											
6		287	13%	29											
7		288	29%	27											
8		289	29%	27											
9		290	55%	8											
10		291	55%	8											
11		292	100%	Surf											
12		293	100%	Surf											
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 3622 m
 Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1751	1051
Bottom	1759	
End	1809	

Positional Information

Start	Lat: 49 ° 17.04 N
	Lon: 134 ° 39.92 W
Bottom	Lat: 49 ° 17.05 N
	Lon: 134 ° 39.92 W
End	Lat: 49 ° 17.04 N
	Lon: 134 ° 39.96 W

Extra comments:
 Light cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P16

Event #: 41

Ship: Tully

UTC Date (dd:mmm:yyyy): 20 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Oxy	Nut-C	Nut-F	Sal-R	DIC	pH	DOC	PIC	UBC					
				✓		MG	IN ²	CS	CS	CS	MP	GC	N ²	EM				
1	1	294	Bot-10	✓	3660	x	x	x		x	x		x	x				
2	2	295	3500	✓		x	xx	xx	x	x	x	x	x					
3	3	296	3000	✓		xx	x	x	x	xx	x	x	x					
4	4	297	3000	✓		x	x	x	xx	x	x			x				
5	5	298	2500	✓		x	x	x	x	x	x	x						
6	6	299	2000	✓		x	x	x	x	x	x	x	x	x				
7	7	300	1500	✓		x	x	x	x	x	x	x	x	x				
8	8	301	1250	✓		x	xx	xx	x	x	xxx			x				
9	9	302	1000	✓		xxxx	x	x	xx	x	x	x	x	x				
10	10	303	800	✓		x	x	x		x	x		x	x				
11	11	304	600	✓		x	x	x		x	x	x	x	x				
12	12	305	400	✓		x	x	x		x	x		x	x				
13	13	306	300	✓		x	x			x	x		x	x				
14	14	307	250	✓		x	x			x	x	x	x					
15	15	308	200	✓		x	x			x	x		x	x				
16	16	309	175	✓		xx	x			x	xxx							
17	17	310	150	✓		x	x			x	x		x	x				
18	18	311	125	✓		x	x			x	x							
19	19	312	100	✓		x	x			x	x	x	x	x				
20	20	313	75	✓		x	xx			x	x		x					
21	21	314	50	✓		x	x			x	x	x	x	x				
22	22	315	25	✓		xx	x			x	x		x	x				
23	23	316	10	✓		x	x			x	x	x	x	x				
24	24	317	5	✓		x	x			x	x							

Version: 25 Nov 2011

Transmissometers to be removed

Profile type:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): <u>SR</u>

Bottom Depth:	<u>3622</u> m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	<u>1841</u>	<u>1141</u>
Bottom	<u>1943</u>	<u>1243</u>
End	<u>2109</u>	<u>1409</u>

Positional Information
Start
Lat: <u>49</u> ° <u>16.98</u> N
Lon: <u>134</u> ° <u>39.80</u> W

Start

Bottom

End

Bottom
Lat: <u>49</u> ° <u>16.91</u> N
Lon: <u>134</u> ° <u>39.71</u> W

End
Lat: <u>49</u> ° <u>16.81</u> N
Lon: <u>134</u> ° <u>39.66</u> W

Extra comments:

Deep cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P16

Event #: 42

Ship: Tully

UTC Date (dd/mmm/yyyy): 20 08 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials													Comments
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-Fr		Chl	HPLC	Phyto	ONAr					
1	1	318	300	✓		x			x									
2	2	319	200	✓		x	x	x	x									
3	3	320	100	✓		x	x	x	x									
4	4	321	75	✓		x			x		x							
5	7	322	50	✓		x			x		x							
6	8	323	40	✓		x			x x		x							
7	9	324	30	✓		x			x		x x							
8	10	325	25	✓		x			x		x							
9	11	326	20	✓		x x	x x	x x	x		x							
10	12	327	15	✓		x			x		x							
11	13	328	10	✓		x			x		x							
12	14	329	5	✓		x	x	x	x		x							
13	18	330	0	✓		x	x	x	x		x							
14	5	331	Max-10	✓	68						x x	x x						
15	6	332	Max	✓	58						x x	x x						
16	15	333	5	✓							x x	x x						
17	16	334	5	✓								x						
18	17	335	5	✓										x				
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 3624 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2216	1516
Bottom	2222	1522
End	2243	1543

Positional Information
Start
Lat: 49 ° 16.96 N
Lon: 134 ° 39.96 W

Bottom
Lat: 49 ° 16.95 N
Lon: 134 ° 39.96 W

End
Lat: 49 ° 16.93 N
Lon: 134 ° 39.99 W

Extra comments:
DMS cast; out-of-order.
CHL SPIKE AT 58

1, 2, 3, 4, 14, 15, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17, 18, 13

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P16 Event #: 45 Ship: Tully UTC Date (dd|mmm|yyyy): 20|Aug|2012

Cruise ID: 2012-13			Station: F10		Event: 1										Comments			
Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials													
			Target Pressure	Confirmed ☒ Pressure	Sal	NutFr		TM Uvic	TM IOS	unfilt	Zn	Fe(II)	O ₂	DaveS				
1		336	35									X	X					
2		337	110															
3		338	25									X	X					
4		339	10									X	X	XX				
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

<http://www.pac>

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

Bottom Depth: m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0110	
Bottom	0116	
End		

Positional Information

Start	Lat: 49 ° 17.00	N
	Lon: 134 ° 40.05	W
Bottom	Lat: 49 ° 17.02	N
	Lon: 134 ° 40.05	W
End	Lat: °	N
	Lon: °	W

Extra comments:
Pumping

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P16

Event #: 46

Ship: Tully

UTC Date (dd/mm/yyyy): 24 Aug 2012

Niskin #		Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments	
				Target Pressure	Confirmed ✓ Pressure	Sal	Nut Fr	Nut-C	TMUV:don't	Zn	Fe(II)	TMURC	Mn125	AL125	Cu500	DaveS			
1			340	1800	✓ 1800	X	X	X	X	X		X	X	X	X				
2			341	1400	✓ 1400	X	X	X	X	X		X	X	X	X				
3			342	1200	✓ 1200		X	X	X	X		X	X	X	X				
4			343	1000	✓ 1000		X	X	X	X		X	X	X	X				
5			344	800	✓ 800		X	X	X	X		X	X	X	X				
6			345	600	✓ 600		X	X	X	X		X	X	X	X				
7			346	400	✓ 400		X	X	X	X		X	X	X	X				
8			347	200	✓ 200		X		X	X		X	X	X	X				
9			348	100	✓ 100		X		X	X		X	X	X	X				
10			349	50	✓ 50		X		X	X		X	X	X	X				
11			350	25	✓ 24.5		X		X	X		X	X	X	X				
12			351	10	✓ 10.5		X		X	X		X	X	X	X				
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

Version: 25 Nov 2011

Transmissometer to be cleaned before each cast, do not use if not working

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

Bottom Depth:	3620 m
Transmisso Cleaned:	N/A Y / N

Time	UTC	Local
Start	0330	
Bottom	0358	
End	0437	

Positional Information
Start
Lat: 49 ° 17.10 N
Lon: 134 ° 40.0 W

Start

Bottom

End

Bottom
Lat: 49 ° 16.99 N
Lon: 134 ° 40.06 W

End
Lat: 49 ° 17.05 N
Lon: 134 ° 40.22 W

Extra comments:
TMR cast 2

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P17

Event #: 47

Ship: Tully

UTC Date (dd/mmm/yyyy): 21 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments				
			Target Pressure	Confirmed Pressure	Nut-F		Chl	HPLC									
1	1	352	Max	✓ 23	x		xx	xx									
2	2	353	5		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): SR

Bottom Depth:	3524 m
Transmisso Cleaned:	Y / ☒ N

Time	UTC	Local
Start	0847	0147
Bottom	0919	
End		

Positional Information	
Start	
Lat: 49 ° 20.98 N	
Lon: 135 ° 39.68 W	

Bottom	
Lat: 49 ° 21.17 N	
Lon: 135 ° 39.53 W	

End	
Lat: 49 ° 21.17 N	
Lon: 135 ° 39.53 W	

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P18

Event #: 48

Ship: Tully

UTC Date (dd|mmm|yyyy): 21 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments									
			Target Pressure	Confirmed ☒ Pressure	Nut-F	Sal R	Chl	HPLC														
1	1	354	Max	47	x		xx	xx														
2	2	355	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): SR

Bottom Depth: 3818 m
 Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1353	0653
Bottom	1422	0722
End	1458	

Positional Information

Start	Lat: 49° 26.08 N	Lon: 136° 39.89 W
Bottom	Lat: 49° 26.18 N	Lon: 136° 39.95 W
End	Lat: 49° 26.24 N	Lon: 136° 39.95 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P19

Event #: 49

Ship: Tully

UTC Date (dd:mmm/yyyy): 21 08 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure		Nut-F		Chl	HPLC						
1	1	356	Max	☒	60	x		x x	x x						
2	2	357	5	☒		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): Mg

Bottom Depth: 3909 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1910	1210
Bottom	1943	1243
End	2018	1318

Positional Information		
Start	Lat: 49 ° 29.96	N
	Lon: 137 ° 38.83	W
Bottom	Lat: 49 ° 29.96	N
	Lon: 137 ° 38.82	W
End	Lat: 49 ° 29.98	N
	Lon: 137 ° 39.83	W

Extra comments:
FLAT, GLASSY

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P20 Event #: 51 Ship: Tully UTC Date (dd|mmm|yyyy): 22 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Nut Fr	Nut C	Sal R	TMUV	urfit	Zn	TKUBC	AL125	Mn125	6.500				
1	1	358	2100	✓ 2090	X	X	X	X	X	X								
2	2	359	1950	✓ 1950	X	X	X	X	X	X								
3	3	360	1600	✓ 1600				X		X								
4	4	361	1600	✓ 1599	X	X		X	X	X								
5	5	362	1300	✓ 1300	X	X		X	X	X								
6	6	363	1100	✓ 1100	X	X		X	X	X								DIDN'T CLOSE
7	7	364	700	✓ 700	X	X		X	X	X								
8	8	365	500	✓ 498	X	X		X	X	X								
9	9	366	300	✓ 300	X			X	X	X								
10	10	367	150	✓ 150	X			XX	X	X								
11	11	368	75	✓ 75	X			X	X	X	X	X	X	X				
12	12	369	50	✓ 50.9				X	X	X								
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 3948 m
Transmisso Cleaned: N/A Y / N

Time	UTC	Local
Start	0058	
Bottom	0134	
End	0213	

Positional Information
Start
Lat: 49 ° 33.97 N
Lon: 138 ° 39.92 W

Bottom
Lat: 49 ° 34.01 N
Lon: 138 ° 39.97 W

End
Lat: 49 ° 33.99 N
Lon: 138 ° 39.87 W

Extra comments:
TMR Cast-1

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P20

Event #:

52

Ship:

Tully

UTC Date (dd|mmm|yyyy):

22 | Aug | 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed	Oxy	Nut-C	Nut-F	Sal-R	DIC	pH		PIC	UBC					
			Pressure	✓ Pressure	MG/N ⁺	GC/MA	GC/NA	N ²	MR/MA	GC		ET	AC/DO					
1	1	370	Bot-10	✓	4025	x	x	x		x	x		x	x				Vent open
2	2	371	3500	✓		xx	x	x	x	x	x		x					
3	3	372	3000	✓		x	x	x	x	xx	x		x					
4	4	373	3000	✓		x	x	x	xx	x	x			x				
5	5	374	2500	✓		x	xx	xx	x	x	x							
6	6	375	2000	✓		x	x	x	x	x	x		x	x				
7	7	376	1500	✓		x	x	x	x	x	x		x	x				
8	8	377	1250	✓		x	x	x	x	x	xxx			x				
9	9	378	1000	✓		xxxx	x	x	xx	x	x		x	x				
10	10	379	800	✓		x	x	x		x	x		x	x				
11	11	380	600	✓		x	xx	xx		x	x		x	x				
12	12	381	400	✓		x	x	x		x	x		x	x				
13	13	382	300	✓		x	x			x	x		x	x				
14	14	383	250	✓		x	x			x	x		x					
15	15	384	200	✓		x	x			x	x		x	x				
16	16	385	175	✓		x	x			x	xxx							
17	17	386	150	✓		x	x			x	x		x	x				
18	18	387	125	✓		x	x			x	x							
19	19	388	100	✓		xx	x			x	x		x	x				
20	20	389	75	✓		x	xx			x	x		x					
21	21	390	50	✓		x	x			x	x		x	x				
22	22	391	25	✓		x	x			x	x		x	x				
23	23	392	10	✓		x	x			x	x		x	x				
24	24	393	5	✓		xx	x			x	x							

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

Bottom Depth:	3947	m
Transmisso Cleaned:	Y / N	

Time	UTC	Local
Start	0301	2001
Bottom	0411	2711
End	0547	0247

Positional Information
Start
Lat: 49 ° 34.01 N
Lon: 138 ° 39.83 W

Bottom
Lat: 49 ° 34.00 N
Lon: 138 ° 39.87 W

End
Lat: 49 ° 33.90 N
Lon: 138 ° 39.74 W

Extra comments:
Deep cast
CHL MAX 48

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P20 Event #: 55 Ship: Tully UTC Date (dd mmm/yyyy): 22 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ☒ Pressure	DORC		HPLC										
1	1	394	3000		x												
2	2	395	300		x												
3	6	396	0		x												
4	3	397	5				x										
5	4	398	5				x										
6	5	399	5				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): SR

Bottom Depth: 3946 m
 Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0834	
Bottom	0923	
End	1043	

Positional Information

Start	Lat: <u>49° 34.06</u> N	Lon: <u>138° 39.82</u> W
Bottom	Lat: <u>49° 34.07</u> N	Lon: <u>138° 39.66</u> W
End	Lat: <u>49° 34.05</u> N	Lon: <u>138° 39.92</u> W

Extra comments:
 DORCs + HPLC cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P20 Event #: 56 Ship: Tully UTC Date (dd|mmm|yyyy): 22 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	Sal	NutFr		TM Uvic	TM IOS	unfilt	Zn	Fe(II)	TM Uvic		
1		400	35										X		
2		401	max										X		
3		402	25										X		
4		403	10												
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):

Bottom Depth: 3946 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1554	
Bottom	1608	
End	1746	

Positional Information
Start
Lat: 49 ° 34 08 N
Lon: 138 ° 39 93 W

Bottom
Lat: 49 ° 34 06 N
Lon: 138 ° 39 94 W

End
Lat: 49 ° 33 92 N
Lon: 138 ° 39 96 W

Extra comments:
Pumping

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P20 Event #: 57 Ship: Tully UTC Date (dd|mmm|yyyy): 22 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ☒ Pressure				HPLC exp									
1		404	3.6%	42													
2		405	3.6%	42													
3		406	7.5%	30													
4		407	7.5%	30													
5		408	13%	20													
6		409	13%	20													
7		410	29%	18													
8		411	29%	18													
9		412	55%	6													
10		413	55%	6													
11		414	100%	surf													
12		415	100%	surf													
13		416	5					x									
14		417	5					x									
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth:	3946 m
Transmisso Cleaned:	☒ Y ☐ N

Time	UTC	Local
Start	1750	1053
Bottom	1757	
End	1809	

Positional Information	
Start	Lat: 49 ° 33.93 N
	Lon: 138 ° 39.94 W

Bottom	Lat: 49 ° 33.93 N
	Lon: 138 ° 39.93 W

End	Lat: 49 ° 33.94 N
	Lon: 138 ° 39.92 W

Extra comments:
Light cast + HPLC
Rosette out of order

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P20

Event #: 58

Ship: Tully

UTC Date (dd|mmm|yyyy): 22 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-Fr		Chl	HPLC	Phyto	ONAr					
				✓		t	d											
1	1	430	300	✓		x			x									
2	2	431	200	✓		x	x	x	xx									
3	3	432	100	✓		x	x	x	x									
4	4	433	75	✓		x			x		x							
5	7	434	50	✓		x			x		x							
6	8	435	40	✓		x			x		x							
7	9	436	30	✓		x			x		xx							
8	10	437	25	✓		x			x		x							
9	11	438	20	✓		xx	xx	xx	x		x							
10	12	439	15	✓		x			x		x							
11	13	440	10	✓		x			x		x							
12	14	441	5	✓		x	x	x	x		x							
13	17	442	0	✓		x	x	x	x		x							
14	5	443	Max-10	✓	65						xx	xx						NOT FIRED
15	6	444	Max	✓	55						xx	xx						
16	15	445	5	✓							xx	xx		x				
17	16	446	OX	✓		x	x	x	x		x			x				
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Version: 25 Nov 2011

Transmissometer test

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

Bottom Depth: 3947 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1830	1130
Bottom	1836	1136
End	1857	1157

Positional Information
Start Lat: 49 ° 33.94 N
Lon: 138 ° 39.94 W

Start

Bottom

End

Lat: 49 ° 33.91 N
Lon: 138 ° 39.95 W

Lat: ° 33.93 N
Lon: ° 39.98 W

Extra comments:
DMS cast; out-of-order.

Version: 25 Nov 2011

Transmissometer to be cleaned before each cast, do not use Ammonia products

REVERSED IN ORDER <http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/>

1, 2, 3, 4, 5, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24

Note Samples 442 came from Niskin 17. GG.

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P20

Event #:

59

Ship: Tully

UTC Date (dd|mmm|yyyy): 22 | Aug | 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	Sal	Nut Fr	Nut-C	THURC	unfilt	Zn	Fe(II)	THURC	AL125	Mn125	Cu500		
1		418	1800	✓ 1800	x	x	x	x	x	x	x	x	x	x	x		
2		419	1400	✓ 1400	x	x	x	x	x	x	x	x	x	x	x		
3		420	1200	✓ 1200		x	x	x	x	x	x	x	x	x	x		
4	x	421	1000	✓ 1000		x	x	x	x	x	x	x	x	x	x		
5		422	800	✓ 800		x	x	x	x	x	x	x	x	x	x		
6	x	423	600	✓ 599		x	x	x	x	x	x	x	x	x	x		
7		424	400	✓ 400		x	x	x	x	x	x	x	x	x	x		
8		425	200	✓ 200		x		x	x	x	x	x	x	x	x		
9		426	100	✓ 100		x		x	x	x	x	x	x	x	x		
10		427	50	✓ 50		x		x	x	x	x	x	x	x	x		
11		428	25	✓ 25.3		x		x	x	x	x	x	x	x	x		
12		429	10	✓ 10.6		x		x	x	x	x	x	x	x	x		
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 3946 m
Transmisso Cleaned: N/A Y / N

Time	UTC	Local
Start	1922	
Bottom	1948	
End	2025	

Positional Information

Lat:	49 ° 33.94	N
Lon:	138 ° 40.02	W

Start

Bottom

End

Lat:	49 ° 33.97	N
Lon:	138 ° 40.02	W

Lat:	49 ° 33.97	N
Lon:	138 ° 40.03	W

Extra comments:

TMR cast 2

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P21 Event #: 600 Ship: Tully UTC Date (dd|mmm|yyyy): 23 | 08 | 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure		Nut-F		Chl	HPLC						
1	1	447	Max	☒	50	x		x x	x x						
2	2	448	5	☒		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): MG

Bottom Depth: 3940 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0056	1756
Bottom	0130	1831
End	0207	1907

Positional Information
Lat: 49 ° 37.94 N
Lon: 139 ° 39.86 W

Lat: 49 ° 37.92 N
Lon: 139 ° 39.91 W

Lat: 49 ° 37.96 N
Lon: 139 ° 39.92 W

Extra comments:
POWER DOWN, NO HYDRAULICS
AT THE KAIL
POWER BACK IN CLOSET @ 0208
POWER OUT TILL 0258

Sampling Log

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

Cruise ID:

2012-13

Station:

P22

Event #:

61

Ship:

Tully

UTC Date (dd mmm yyyy): 23 Aug 2012

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): SR

Bottom Depth:	3920	m
Transmisso Cleaned:	Y	N

Time	UTC	Local
Start	0744	0044
Bottom	0819	
End		

Positional Information			
Start	Lat:	49° 41.95	N
	Lon:	140° 40.04	W

Bottom	Lat:	49 ° 42.07	N
	Lon:	140 ° 39.82	W

End	Lat:	° 42.17	N
	Lon:	°	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P23 Event #: 62 Ship: Tully UTC Date (dd/mm/yyyy): 23 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	Nut-F		Chl	HPLC							
1	1	453	Max	✓ 6A	x		xx	xx							
2	2	454	5		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): SR

Bottom Depth: 4031 m
Transmisso Cleaned: Y / ☒ N

Time	UTC	Local
Start	1316	0618
Bottom	1348	0648
End	1419	0719

Positional Information
Start
Lat: 49 ° 45.93 N
Lon: 141 ° 39 83 W

Bottom
Lat: 49 ° 45.88 N
Lon: 141 ° 39.78 W

End
Lat: 49 ° 45.86 N
Lon: 141 ° 39.79 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P24 Event #: 63 Ship: Tully UTC Date (dd|mmm|yyyy): 23 | 08 | 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure													
1		455	3.6%	✓ 40													
2		456	3.6%	✓ 40													
3		457	7.5%	✓ 30													
4		458	7.5%	✓ 30													
5		459	13%	✓ 23													
6		460	13%	✓ 23													
7		461	29%	✓ 20													
8		462	29%	✓ 20													
9		463	55%	✓ 6													
10		464	55%	✓ 6													
11		465	100%	✓ Surf													
12		466	100%	✓ Surf													
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 3968 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1853	1153
Bottom	1859	1159
End	1910	1211

Positional Information
Start
Lat: 49 ° 50.12 N
Lon: 142 ° 40.06 W

Bottom
Lat: 49 ° 50.11 N
Lon: 142 ° 40.04 W

End
Lat: 49 ° 50.08 N
Lon: 142 ° 40.05 W

Extra comments:
Light cast

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P24 Event #: 64 Ship: Tully UTC Date (dd:mmm/yyyy): 23 08 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Nut-F	Sal R	Chl	HPLC										
1	1	467	Max	✓	55	x		xx	xx									
2	2	468	5	✓		x	x	xx	xx									
3																		STOP AT 1944 WIRE
4																		INBOUND - ROOM OUT
5																		SHIP HANDOVERING
6																		CONTINUE TO 2005
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): MG

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

Time	UTC	Local
Start	1934	1234
Bottom	2014	1314
End	2052	1352

Positional Information
Start
Lat: 49 ° 50.05 N
Lon: 142 ° 40.17 W

Bottom
Lat: 49 ° 50.12 N
Lon: 142 ° 40.30 W

End
Lat: 49 ° 50.03 N
Lon: 142 ° 40.12 W

Extra comments:
2 FUR SEALS

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P25 Event #: 65 Ship: Tully UTC Date (dd/mmm/yyyy): 24 08 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓	Pressure	Nut-F	Sal R	Chl	HPLC		DIC	pH						
1	1	469	2000	✓			x				x x x	x x x						
2	2	470	2000	✓			x				x x x	x x x						
3	3	471	2000	✓			x				x x x	x x x						
4	4	472	2000	✓			x				x x x	x x x						
5	5	473	2000	✓			x				x x x	x x x						
6	6	474	2000	✓			x											
7	7	475	2000	✓			x											
8	8	476	2000	✓			x											
9	9	477	2000	✓			x											
10	10	478	2000	✓			x											
11	11	479	2000	✓			x											
12	12	480	2000	✓			x											
13	13	481	2000	✓			x											
14	14	482	2000	✓			x											
15	15	483	2000	✓			x											
16	16	484	2000	✓			x											
17	17	485	2000	✓			x											
18	18	486	2000	✓			x											
19	19	487	2000	✓			x											
20	20	488	2000	✓			x											
21	21	489	2000	✓			x											
22	22	490	2000	✓			x											
23	23	491	Max	✓	45	x		xx	xx									
24	24	492	5	✓		x		xx	xx									

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

Bottom Depth: 4122 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0156	1856
Bottom	0232	1932
End	0311	2011

Positional Information
 Start
 Lat: 50 ° 0.05 N
 Lon: 143 ° 36.13 W

Bottom
 Lat: 49 ° 59.93 N
 Lon: 143 ° 36.04 W

End
 Lat: 49 ° 59.80 N
 Lon: 143 ° 35.91 W

Extra comments:
 Calibration cast

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P26

Event #: 66

Ship:

Tully

UTC Date (dd|mmm|yyyy): 24 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials													Comments
			Target Pressure	Confirmed Pressure	OXY	Sal R	Nut Fr	NutCo	DIC	Alk	pH	PIC	FCM	DNA	Gases	WGA		
				✓	GR/N ₂	SR	GC	N ²	MR/MA	MR/MA	GC	EM						
1	1	507	Bot-10	✓	4293	x		xx	x	x	x	x	x	x	xx	x		
2	2	508	4000	✓		xx	x	xx	1+4	xx	x	x	x	x	xx	x		
3	3	509	3500	✓		x	x	xx	x	x	x							
4	4	510	3000	✓		x	xx	xx	x	x	x	x	x	x	xx	x		
5	5	511	2500	✓		x	x	xx	xx	x	x	xxx						
6	6	512	2000	✓		x	x	xx	x	x	x	x	x	x	xx	x		
7	7	513	1500	✓		x	x	xx	x	x	x	x	x	x	xx	x		
8	8	514	1250	✓		xx	x	xx	x	x	x	x		x	x	xx	x	
9	9	515	1000	✓		x	xx	xx	1+4	x	x	x	x	x	xx	x		
10	10	516	800	✓	803	x	x	xxx	xx	x	x	x	x	x	xx	x		
11	11	517	600			x	x	xx	1+4	x	x	x	x	x	xx	x		
12	12	518	400			x	x	xx	1+4	x	x	x	x	x	xx	x		
13	13	519	300			x	x	xx		x	x	x	x	x	xx	x		
14	14	520	250			xxx	x	2+4		x	x	x	x					
15	15	521	200			x	x	xx		x	x	x	x	x	xx	x		
16	16	522	175			x	x	xx		x	x	x						
17	17	523	150			x	x	xx		x	x	x	x	x	xx	x		
18	18	524	125			xxx	x	xx		x	x	x						
19	19	525	100			x	x	xx		x	x	x	x	x	xx	x		
20	20	526	75			x	x	xx		x	x	xxx	x					
21	21	527	50			x	x	xx		x	x	x	x	x	xx	x		
22	22	528	25			x	x	xx		x	x	x	x	x	xx	x		
23	23	529	10	✓	11	x	x	2+4		x	x	x	x	x	xx	x		
24	24	530	5			x	x	xx		x	x	x						

Profile type:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): <u>SR</u>

Bottom Depth:	<u>4280</u> m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	<u>1250</u>	<u>0552</u>
Bottom	<u>1406</u>	
End	<u>1541</u>	

Positional Information
Lat: <u>50° 0.22</u> N
Lon: <u>144° 52.29</u> W

Bottom
Lat: <u>50° 0.15</u> N
Lon: <u>144° 52.25</u> W

End
Lat: <u>50° 0.09</u> N
Lon: <u>144° 52.57</u> W

Extra comments:
Deep cast

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P26

Event #: 68

Ship: Tully

UTC Date (dd|mmm|yyyy): 24 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Nut Fr	Nut C	Sal R	Temp	Zn	Al	Mn	Co	Cd	unfilt	
1	1	495	2100	✓ 2100	X	X	X	X	X	X			X		
2	2	496	1950	✓ 1950	X	X	X	X	X	X			X		
3	3	497	1600	✓ 1600	X	X		X	X	X			X		
4	4	498	1300	✓ 1300	X	X		X	X	X			X		
5	5	499	1100	✓ 1100	X	X		X	X	X			X		
6	6	500	700	✓ 700	X	X		X	X	X			X		
7	7	501	500	✓ 500	X	X		X	X	X			X		
8	8	502	500	✓ 499				X	X						
9	9	503	300	✓ 300	X			X	X	X			XX		
10	10	504	150	✓ 148	X			X	X	X			XX		
11	11	505	75	✓ 75	X			X	X	X	X	X	XX		
12	12	506	50	✓ 50	X								XXXX		
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 4226 m
 Transmisso Cleaned: YAY / N

Time	UTC	Local
Start	1707	
Bottom	1742	
End	1823	

Positional Information

Lat:	50 ° 00.00	N
Lon:	144 ° 57.95	W

Bottom

Lat:	50 ° 00.01	N
Lon:	144 ° 59.7	W

End

Lat:	50 ° 00.01	N
Lon:	145 ° 00.104	W

Extra comments:
 TMR Cast-1

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P26 Event #: 69 Ship: Tully UTC Date (dd mmm/yyyy): 24 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure											
1	1	544	3.6%	✓	32										
2	2	545	3.6%	✓	32										
3	3	546	7.5%	✓	25										
4	4	547	7.5%	✓	25										
5	5	548	13%	✓	20										
6	6	549	13%	✓	20										
7	7	550	29%	✓	18										
8	8	551	29%	✓	18										
9	9	552	55%	✓	7										
10	10	553	55%	✓	7										
11	13	554	100%	✓	3										
12	11	555	100%	✓	3										
13	12	556	5	✓											
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Watchkeeper(s): MG

Bottom Depth: 4226 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1855	1155
Bottom	1901	1208
End	1915	1215

Positional Information

Start Lat: 50 ° 0.15 N

Start Lon: 145 ° 0.20 W

Start

Bottom

End

Bottom Lat: 50 ° 0.14 N

Bottom Lon: 145 ° 0.19 W

End Lat: 50 ° 0.15 N

End Lon: 145 ° 0.20 W

Extra comments:

Light + HPLC cast

GET OF ORDER

1 ✓ 2 3 ✓ 4 5 ✓ 6 7 ✓ 8 9 ✓ 10 13 11 ✓ 12

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P26 Event #: 70 Ship: Tully UTC Date (dd mmm yyyy): 24 08 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials														Comments			
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-Fr		Chl	HPLC	Phyto		OXY	ONAr	17O						
				✓	t	d								UVIc	UVIc							
1	1	557	300	✓		x			x													
2	2	558	200	✓		x	x	x	x													
3	5	559	100	✓		x	x	x	x													
4	6	560	75	✓		x			x		x											
5	7	561	50	✓		x			x		x											
6	9	562	40	✓		x			xx		x											
7	11	563	30	✓		x			x		xx											
8	12	564	25	✓		x			x		x											
9	15	565	20	✓		xx	xx	xx	x		x											
10	16	566	15	✓		x			x		x											
11	17	567	10	✓		x			x		x											
12	18	568	5	✓		x	x	x	x		x											
13	24	569	0	✓		x	x	x	x		x											
14	10	570	Max-10	✓	40						xx	xx										
15	13	571	Max	✓	25						xx	xx										
16	19	572	5	✓							xx	xx	xxx									
17	20	573	5	✓								x										
18	21	574	5	✓								x										
19	22	575	5	✓								x										
20	3	576	200	✓										xx		xx						
21	4	577	100	✓										xx		xx						
22	8	578	50	✓										xx		xx						
23	14	579	25	✓										xx		xx						
24	23	580	5	✓										xx	xx	xx						

Version: 25 Nov 2014

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

Bottom Depth: 4225 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1934	1234
Bottom	1940	1940
End	2002	

Positional Information

Lat:	50 ° 0.15	N
Lon:	145 ° 0.15	W

Start

Lat:	50 ° 0.16	N
Lon:	145 ° 0.17	W

Bottom

Lat:	50 ° 0.18	N
Lon:	145 ° 0.22	W

End

Extra comments:
DMS + ONAr 4 cast; out-of-order.

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

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: PA-006 Event #: 71 Ship: Tully UTC Date (dd|mmm|yyyy): 24 | 08 | 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials						Comments
			Target Pressure	Confirmed Pressure	Oxy	ONAr	17O	DIC	UVIc	UVIc	
1		581	5	✓	xx	xx	xx	xx	x		
2		582	2	✓	xx	xx	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): MG

Bottom Depth: 4202 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2109	1409
Bottom	2111	1411
End	2113	1413

Positional Information

Start Lat: 50 ° 0.22 N

Start Lon: 144 ° 52.44 W

Bottom Lat: 50 ° 0.23 N

Bottom Lon: 144 ° 52.44 W

End Lat: 50 ° 0.21 N

End Lon: 144 ° 52.43 W

Extra comments:

Cast "2" at mooring

Water Properties Group

CTD TO 500
Sampling Log

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

Cruise ID:

2012-13

Station:

PA-006

Event #:

72

Ship:

Tully

UTC Date (dd|mmm|yyyy):

24 | 08 | 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ☒ Pressure	Oxy UVlc	ONAr UW	DIC UVlc	DOC UVlc	Sal IOS	HPLC exp								
1	1	583	250	☒		x x			x x	x								
2	2	584	200	☒		x x			x x	x								
3	3	585	150	☒		x x			x x	x								
4	4	586	125	☒		x x			x x	x								
5	5	587	100	☒		x x			x x	x								
6	6	588	75	☒		x x		x	x x	x								
7	7	589	50	☒		x x		x	x x	x								
8	8	590	30	☒		x x		x	x x	x								
9	9	591	20	☒		x x		x	x x									
10	10	592	10	☒		x x		x x	x x									
11	11	593	5	☒		x x	x x	x	x x									
12	14	594	2	☒		x x	x x	x	x x	x								
13	12	595	5	☒						x								
14	13	596	5	☒						x								
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth:	4502	m
Transmisso Cleaned:	Y	(N)

Time	UTC	Local
Start	2147	1447
Bottom	2156	1457
End	2219	1519

Positional Information
Lat: 50 ° 0.31 N
Lon: 144 ° 52.43 W

Start

Bottom

End

Lat: 50 ° 0.36 N
Lon: 144 ° 52.46 W

Lat: 50 ° 0.29 N
Lon: 144 ° 52.47 W

Extra comments:

Cast "1" at mooring
OUT OF ORDER

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P26

Event #: 73

Ship: Tully

UTC Date (dd|mmm|yyyy): 24 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Sal	NutFr	Nut	TM	TM	unfilt	Zn	Fe(II)	CD	TM				
1		597	4000		X	X	X	X			X		X	X				
2		598	3500		X	X	X	X			X		X	X				
3		599	3000		X	X	X	X			X		X	X				
4		600	2500		X	X	X	X			X		X	X				
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):				

Bottom Depth:	4225	m
Transmisso Cleaned:	N/A	Y / N

Time	UTC	Local
Start	2330	
Bottom	0043	
End	0243	

Positional Information
Lat: 50 ° 0.00 N
Lon: 144 ° 59.70 W

Bottom
Lat: 50 ° 0.00 N
Lon: 144 ° 59.70 W

End
Lat: 50 ° 0.00 N
Lon: 144 ° 59.70 W

Extra comments:
Go-flos

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P26 Event #: 76 Ship: Tully UTC Date (dd|mmm|yyyy): 25 | 08 | 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target Pressure	Confirmed ✓ Pressure	Sal	Oxy	ONAr	Noble	ONAr	Noble						
					IOS	UVic	UW	UW	Uvic	Uvic				silicate		
														EJ		
1	1	601	Bot-10	✓ 4300	x	xx	xx		xx							
2	2	602	Bot-10	✓ 4300	x			xx		xx						
3	4	603	4000	✓	x	xx	xx			xx						
4	6	604	3700		x	xx	xx			xx						
5	9	605	3000		x	xx	xx			xx						
6																
7	3	606	Bot-10	✓ 4300										x		
8	5	607	4000	✓										x		
9	7	608	3500	3700										x		
10	8	609	3000											x		
11	10	610	2500											x		
12	11	611	2000											x		
13	12	612	1500											x		
14	13	613	1250											x		
15	14	614	1000											x		
16	15	615	800											x		
17	16	616	600											x		
18	17	617	400											x		
19	18	618	300											x		
20																
21																
22																
23																
24																

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

Bottom Depth: 4310 m
 Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0538	2239
Bottom	0657	
End	0822	

Positional Information

Start	Lat: 49 ° 59.93	N
	Lon: 144 ° 59.84	W

Bottom

Lat: 49 ° 59.93	N
Lon: 144 ° 59.84	W

End

Lat: 49 ° 50.93	N
Lon: 144 ° 59.84	W

Extra comments:
 ONAr-3 cast + silicate
 OUT OF ORDER
 CHL MAX 25 → 0 MIXED

1, 2, 7, 3, 8, 4, 9, 10, 5, 11, 12, 13, 14, 15, 16, 17, 18, 19

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P26

Event #: 77

Ship: Tully

UTC Date (dd/mmm/yyyy): 25 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ☒ Pressure		UBC	Sal	Nut Fr	Nut-C		Oxy Uvic	ONAr Uvic	ONAr UW	Noble Uvic	Noble UW		
1	1	619	2000														
2	2	620	2000			x	x	x	x								
3	3	621	2000														
4	8	622	1000														
5	9	623	1000			x	x	x	x								
6	10	624	1000														
7	11	625	500														
8	12	626	500			x	x	x	x								
9	13	627	500														
10	15	628	10														
11	16	629	10			x	x	x									
12	17	630	10														
13																	
14	4	631	2000				x				xx		xx	xx			
15	5	632	1400				x				xx		xx	xx			
16	6	633	1000				x				xx	xx	xx				
17	7	634	1000				x							xx	xx		
18	14	635	500				x				xx		xx	xx			
19																	
20																	
21																	
22																	
23																	
24																	

Profile type:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): <u>SR</u>

Bottom Depth:	<u>4226</u>	m
Transmisso Cleaned:	Y / ☒ N	

Time	UTC	Local
Start	1047	0347
Bottom	1120	
End	1216	

Positional Information
Start
Lat: <u>49</u> ° <u>59.89</u> N
Lon: <u>144</u> ° <u>59.95</u> W

Bottom
Lat: <u>49</u> ° <u>59.89</u> N
Lon: <u>144</u> ° <u>59.95</u> W

End
Lat: <u>49</u> ° <u>59.90</u> N
Lon: <u>144</u> ° <u>59.93</u> W

Extra comments:
UBC + ONAr 1 cast
Out-of-order

123, 15, 16, 17, 4, 5, 6, 7, 8, 9, 18, 10, 11, 12

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P26 Event #: 78 Ship: Tully UTC Date (dd:mmm:yyyy): 25 AUG 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	Sal	Nut Fr	Nut-C	TM	TM	unfor	zn	Fe(II)	Cd	Al	Mn		
				✓					TM	TM	unfor	zn	Fe(II)	Cd	Al	Mn	
				✓					unfor	unfor							
1		532	1800	✓	✓	X	X	X	X	X	X	X	X	X	X	X	
2		533	1400	✓	1399	X	X	X	X	X	X	X	X		X	X	
3		534	1200	✓	1200		X	X	X	X	X	XX	X		X	X	
4		535	1000	✓	1000		X	X	X	X	X	X	X		X	X	
5		536	800	✓	800		X	X	X	X	X	X	X		X	X	
6		537	600	✓	600		X	X	X	X	X	X	X		X	X	
7		538	400	✓	400		X	X	X	X	X	X	X		X	X	
8		539	200	✓	200		X		X	X	X	X	X		X	X	
9		540	100	✓	101		X		X	X	X	X	X		X	X	
10		541	50	✓	51		X		X	X	X	X	X		XX	X	
11		542	25	✓	24		X		X	X	X	X	X		XX	X	
12		543	10	✓	10.5		X		X	X	X	X	X		XX	X	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 4226 m
Transmisso Cleaned: N/A Y / N

Time	UTC	Local
Start	1453	
Bottom	1520	
End	1555	

Positional Information

Lat:	50 ° 0.00	N
Lon:	145 ° 0.00	W

Start

Bottom

Lat:	50 ° 0.00	N
Lon:	145 ° 0.00	W

End

Lat:	50 ° 0.02	N
Lon:	144 ° 59.99	W

Extra comments:

TMR cast 2

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P26 Event #: 79 Ship: Tully UTC Date (dd|mmm|yyyy): 25 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials						Comments							
			Target Pressure	Confirmed ☒ Pressure	Sal R	Oxy	ONAr	Noble	ONAr	Noble								
					IOS	Uvic	UW	UW	Uvic	Uvic								
1	1	640	3400		x	xx	xx			xx								
2	3	641	2700		x	xx	xx			xx								
3	4	642	2400		x	xx	xx		xx									
4	5	643	2400		x			xx		xx								
5	6	644	1700		x	xx	xx			xx								
6																		
7	2	645	3000								xx							
8	7	646	300								xx							
9	8	647	0								xx							
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 4226 m
 Transmisso Cleaned: Y N

Time	UTC	Local
Start	1611	0911
Bottom	1704	
End	1815	

Positional Information
 Start
 Lat: 49° 59.99 N
 Lon: 144° 59.99 W

Bottom
 Lat: 50° 0:00 N
 Lon: 144° 59.98 W

End
 Lat: 50° 0:04 N
 Lon: 144° 59.79 W

Extra comments:
 DORCs + ONAr-2 cast
 OUT OF ORDER

1, 7, 2, 3, 4, 5, 8, 9,

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P26 Event #: 80 Ship: Tully UTC Date (dd/mm/yyyy): 25 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed	Pressure	Sal	NutFr		TM	TM	unfilt	Zn	Fe(II)						
			Pressure	✓		Pressure				Uvic	IOS								
1		636	35m																
2		637	max																
3		638	25m						X			X							
4		639	10m						X			X							
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): pump

Bottom Depth: m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1930	
Bottom		
End	2130	

Positional Information

Start

Lat: 49° 59.95 N

Lon: 144° 59.94 W

Bottom

Lat: ° N

Lon: ° W

End

Lat: 49° 59.95 N

Lon: 144° 59.97 W

Extra comments:

Pumping

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P26

Event #: 82

Ship: Tully

UTC Date (dd/mm/yyyy): 25 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Sal	Nut Fr	Nut-C	Tm	Zn	D.S.	cd	Co			
1	1	648	1400	✓ 1400	X	X	X					X	Y		
2	2	649	1200	✓ 1200	X	X	Y					X	X		
3	3	650	1000	✓ 1000		Y	Y					X	Y		
4	4	651	900	✓ 900		X	Y	X	Y			X	Y		
5	5	652	800	✓ 800		X	X					X	Y		
6	6	653	600	✓ 600		X	Y					X	Y		
7	7	654	400	✓ 400		X	Y			XX		X	Y		
8	8	655	200	✓ 200		X		X	X			XX	Y		
9	9	656	100	✓ 100		X						XX	Y		
10	10	657	50	✓ 50		X						XX	Y		
11	11	658	25	✓ 25		X						XX	Y		
12	12	659	10	✓ 10		X						XX	Y		
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 4227 m
 Transmisso Cleaned: N/A Y / N

Time	UTC	Local
Start	2356	
Bottom	0016	
End	0043	

Positional Information

Lat:	49 ° 59.93	N
Lon:	144 ° 59.95	W

Bottom

Lat:	50 ° 00.01	N
Lon:	144 ° 59.99	W

End

Lat:	50 ° 00.02	N
Lon:	144 ° 59.99	W

Extra comments:
 TMR cast 3

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P35

Event #:

84

Ship:

Tully

UTC Date (dd:mmm/yyyy):

26 08 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	Nut-F		Chi	HPLC									
1	1	493	Max	✓ 42	x		x x	x x									
2	2	494	5	✓	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): Ma

Bottom Depth: 4128 m
 Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0406	2106
Bottom	0459	2159
End	0558	2258

Positional Information
 Start
 Lat: 50 ° 0.01 N
 Lon: 144 ° 18.44 W

Bottom
 Lat: 50 ° 0.02 N
 Lon: 144 ° 18.39 W

End
 Lat: 49 ° 59.89 N
 Lon: 144 ° 18.81 W

Extra comments:
CHL MIXED TO 40 THEN SPIKE

Water Properties Group

Sampling Log

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

Cruise ID:

2012-13

Station:

P16

Event #:

86

Ship:

Tully

UTC Date (dd/mm/yyyy):

27 AUG 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Sal	Nut Fr	Nut-C								
1	1	660	1800	✓ 1600	x	x	x	x	x						
2	2	661	1400	✓ 1301	x	x	x	x	x						
4	4	662	1200	✓ 1200		x	x	x	x						
5		663	1000	✓ 1001		x	x	x	x						
6		664	800	✓ 900		x	x	x	x						
6		665	600												
7		666	400												
8		667	200												
9		668	100												
10		669	50												
11		670	25												
12		671	10												
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth:	3623 m
Transmisso Cleaned:	N/A Y / N

Time	UTC	Local
Start	2029	
Bottom	2051	
End	2120	

Positional Information	
Start	Lat: 49 ° 16.99 N
	Lon: 134 ° 40.06 W

Bottom	Lat: 49 ° 17.03 N
	Lon: 134 ° 40.02 W

End	Lat: 49 ° 17.10 N
	Lon: 134 ° 40.06 W

Extra comments:
TMR cast on return trip

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13

Station: P4

Event #: 87

Ship: Tully

UTC Date (dd mmm yyyy): 29 08 12

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments									
			Target Pressure	Confirmed Pressure		Oxy	Sal-R	CHL	HPLC													
1	1	672	Bot-10	✓	1327	x																
2	2	673	1250	✓		x x	x															
3	3	674	1000	✓		x x	x x															
4	4	675	800	✓		x x	x x															
5	5	676	600	✓		x x	x															
6	6	677	400	✓		x																
7	7	678	300	✓		x																
8	8	679	250	✓		x																
9	9	680	200	✓		x																
10	10	681	100	✓		x																
11	11	682	75	✓		x x																
12	12	683	50	✓		x																
13	13	684	25	✓		x																
14	16	685	10	✓		x x																
15	17	686	5	✓		x																
16	14	687	Max-10	✓	25			x x	x x													
17	15	688	Max	✓	15			x x	x x													
18	18	689	5	✓				x x	x x													
19																						
20																						
21																						
22																						
23																						
24																						

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

Bottom Depth: 1328 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0507	2207
Bottom	0531	2231
End	0612	2312

Positional Information

Start	Lat: 48 ° 38.99 N
	Lon: 126 ° 40.28 W
Bottom	Lat: 48 ° 38.99 N
	Lon: 126 ° 40.27 W
End	Lat: 48 ° 39.06 N
	Lon: 126 ° 40.25 W

Extra comments:
Second visit
OUT OF ORDER

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: P4 Event #: 88 Ship: Tully UTC Date (dd/mmm/yyyy): 29 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓	Pressure	Sal	NutFr		TM Uvic	TM IOS	unfilt	Zn	Fe(II)	Suppl				
1		690							X		X		X	X				
2		691							X		X		X	X				
3		692							X		X		X	X				
4																		
5																		
6																		
7																		
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9																		
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22																		
23																		
24																		

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

Watchkeeper(s):

Bottom Depth: 1325 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	06:30	
Bottom	07:20	
End		

Positional Information

Start Lat: 48 ° 39.02 N
Lon: 126 ° 40.19 W

Bottom Lat: 48 ° 38.93 N
Lon: 126 ° 40.13 W

End Lat: 48 ° 38.81 N
Lon: 126 ° 40.25 W

Extra comments:

Pumping

Water Properties Group

Sampling Log

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

Cruise ID: 2012-13 Station: LB08 Event #: 90 Ship: Tully UTC Date (dd/mm/yyyy): 29 Aug 2012

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Oxy	Sal-R	CHL	HPLC							
1		693	Bot-5	135	x x										
2		694	Bot-10	126	x x										
3		695	Bot-15	120	x x										
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
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15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Watchkeeper(s): SR

Bottom Depth: 139 m

Transmisso Cleaned: Y / ☒ N

Time	UTC	Local
Start	1328	0628
Bottom	1332	
End	1337	

Positional Information

Start Lat: 48° 25.32 N
Lon: 125° 28.88 W

Bottom Lat: 48° 25.35 N
Lon: 125° 29.01 W

End Lat: 48° 25.35 N
Lon: 125° 29.11 W

Extra comments: