

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: SI03 - Event #: 001 Ship: -Tully UTC Date (dd|mmm|yyyy): 21 | AUG | 2013

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

}

Closed @ surface

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

Bottom Depth: 226 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	2236	1536
Bottom	2241	
End	2253	

Positional Information

Start  
 Lat: 48 ° 35.604 N  
 Lon: 123 ° 36.042 W

Bottom  
 Lat: 48 ° 35.61 N  
 Lon: 123 ° 30.02 W

End  
 Lat: 48 ° 35.62 N  
 Lon: 123 ° 29.94 W

Extra comments:  
 24 WAS SLOW TO CLOSE  
 AFTER FIRING

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-48 Station: P1 Event #: 02 Ship: Tully UTC Date (dd|mmm|yyyy): 22|08|13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments								
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	DIC	Oxy	pH									
1	1	8	Bot-10	✓	111	x				xx	xx	xxx								
2	2	9	30 / Max	✓		x		xx	xx											
3	3	10	5	✓		x	x	xx	xx	x	xx	xxx								
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

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

Bottom Depth: 118 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1155	0455
Bottom	1158	
End	1203	

Positional Information

Start	Lat: <u>48 ° 34.51</u> N	Lon: <u>125 ° 29.99</u> W
Bottom	Lat: <u>48 ° 34.52</u> N	Lon: <u>125 ° 29.99</u> W
End	Lat: <u>48 ° 34.59</u> N	Lon: <u>125 ° 29.97</u> W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P2 Event #: 03 Ship: Tully UTC Date (dd:mmm:yyyy): 22:08:13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments								
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-Fr	Chl	HPLC										
1		11	100	✓	100	x	x	x	xx	x										
2		12	75	✓		x			x	x										
3		13	50	✓		x			x	x										
4		14	40	✓		x			x	x										spigot was in
5		15	30	✓		x			x	x										
6		16	25	✓		x			x	xx										
7		17	20	✓		xx	xx	xx	x	x										
8		18	15	✓		x			x	x										
9		19	10	✓		x			x	x										
10		20	5	✓		x	x	x	x	x										
11		21	0	✓		x	x	x	x	x										
12		22	Max-10	✓	30					xx	xx		xx							
13		23	Max	✓	15					xx	xx		xx							
14		24	5	✓						xx	xx		xx							
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

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

Bottom Depth: 116 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1421	0721
Bottom	1424	
End	1436	

Positional Information  
 Start  
 Lat: 48 ° 35 98 N  
 Lon: 126 ° 00 03 W

Bottom  
 Lat: 48 ° 35 98 N  
 Lon: 126 ° 00 04 W

End  
 Lat: 48 ° 35 99 N  
 Lon: 126 ° 00 00 W

Extra comments:  
 DMS cast; out-of-order  
 1 2 3 4 5 12 6 7  
 8 13 9 10 14 11

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P2 Event #: 05 Ship: Tully UTC Date (d: mmm/yyyy): 22 Aug 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								HJ N Gas	UVic	Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut-F	Nut-C	Sal	DIC	pH	PIC				
1	1	25	Bot-10	✓	105	x	x				x	x			
2	2	26	100	✓	100	x	x				x	x	x		
3	4	27	75	✓	74	x	x				xx	x			
4	5	28	75	✓	74	x	x				x	x	x		
5	6	29	50	✓	50	x	x				x	xxx	x		
6	9	30	25	✓	24	x	xx				x	x	x		
7	10	31	10	✓	10	x	x				x	x	x		
8	11	32	5	✓	5	x	x			x	x	x	x		
9	3	33	100	✓	100				x					xx	
10	7	34	50	✓	50				x					xx	
11	8	35	30	✓	30				x					xx	
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 116 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1511	0811
Bottom	1514	
End	1525	

Positional Information  
 Start  
 Lat: 48° 35.97 N  
 Lon: 126° 00.05 W

Bottom  
 Lat: 48° 35.96 N  
 Lon: 126° 00.05 W

End  
 Lat: 48° 35.97 N  
 Lon: 126° 00.04 W

Extra comments:  
 Deep cast  
 OUT-OF-ORDER:  
1-2-3-4-5-10-11-6-7-8

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P3 Event #: 006 Ship: Tully - UTC Date (dd:mmm:yyyy): 22 08 13 -

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		36	30 / Max	✓ 30	x		xx	xx	
2		37	5	✓	x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

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

Bottom Depth: 816 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	17 10	10 10
Bottom	17 24	
End	17 42	

Positional Information

Start	Lat: <u>48</u> ° <u>37.48</u> N
Start	Lon: <u>126</u> ° <u>19.98</u> W

Bottom

Bottom	Lat: <u>48</u> ° <u>37.47</u> N
Bottom	Lon: <u>126</u> ° <u>20.02</u> W

End

End	Lat: <u>48</u> ° <u>37.48</u> N
End	Lon: <u>126</u> ° <u>20.00</u> W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P4 Event #: 07 Ship: Tully UTC Date (dd|mmm|yyyy): 22|Aug|2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments				
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-F	Chl	HPLC	Phyto	Chl-E		Chl-L			
1		50	300	✓	300	x			x								
2		51	200	✓		x	x	x	x								
3		52	175	✓		x	x	x	x								
4		53	100	✓		x	x	x	x	x							FILTER FELL FACE-UP
5		54	75	✓		x			x	x					x		SPIGOT DRIPPING
6		55	50	✓		x			x	x					x		
7		56	40	✓		x			x	x					x		
8		57	30	✓		x			x	x					x		
9		58	25	✓		x			x	x					x		
10		59	20	✓		xx	xx	xx	x	x					x		
11		60	15	✓		x			x	x					x		
12		61	10	✓		x			xx	x					x		
13		62	5	✓		x	x	x	x	x					x		
14		63	0			x	x	x	x	xx					x		
15		64	30	✓						xx	xx			xx	x		
16		65	15	✓						xx	xx			xx	x		
17		66	5	✓						xx	xx	xxx		xx	x		CHL: Lost.
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 1320 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	<u>2119</u>	<u>1419</u>
Bottom	<u>2126</u>	
End	<u>2146</u>	

Positional Information  
 Start  
 Lat: 48 ° 39.0 N  
 Lon: 126 ° 39.98 W

Bottom  
 Lat: 48 ° 38.999 N  
 Lon: 126 ° 39.98 W

End  
 Lat: 48 ° 38.998 N  
 Lon: 126 ° 39.989 W

Extra comments:  
 DMS cast; out-of-order.  
 1 ... 7 - (8 - 15) - 9 - 10 - (11 - 16) - 12  
 (13 - 17) - 14

ORDER OF SAMPLING  
 HPLC FIRST  
 CHL  
 E  
 L

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P4 Event #: 008 Vessel: JPT UTC Date (dd|mmm|yyyy): 22 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)													Comments	
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	<del>Oxy</del>	Nut.	Sal	Chl a	gas	POC	DOC	DCU	Ligand	TDM	Flux	genomic	Bac Prod.		
1	1	38		1020		UBC	UBC		UBC	UBC	UBC	UBC	UBC	UBC	UBC	UBC	UBC	UBC	trigger @ various depths
2	2	39		1000		✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
3	3	40		1000					✓		✓								✓
4	4	41		1000		bag 2													
5	5	42		1000		bag 9													tubing not rinsed
6	6	43		1000		bag 3													plu
7	7	44		1000		bag 4													plu
8	8	45		1000		bag 7													
9	9	46		1000		bag 6													
10	10	47		1000		bag 8													
11	11	48		1000		bag 1													
12	12	49		1000		bag 5													has some air / has also some water from bottle !!
13			no bottle	leaking															leaking niskin has some from niskin !!
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

Profile type:  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 1321.51 m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	22:01	15:01
Bottom (BO)	22:39	15:39
End (EN)	23:02	16:02

Positional Information

Start	Lat: <u>48° 39.400</u> N	Lon: <u>126° 39.980</u> W
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Bottom

Bottom	Lat: <u>48° 39.0266</u> N	Lon: <u>126° 39.9943</u> W
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Finish

Finish	Lat: <u>48° 38.9932</u> N	Lon: <u>126° 40.0001</u> W
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Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR - MAITE

# Water Properties Group

# Sampling Log

*collected 0908*

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

Cruise ID: 2013-18 Station: P4 Event #: 009 Ship: Tully UTC Date (dd/mm/yyyy): 22 08 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target Pressure	Confirmed Pressure	Oxy	Nut-F	Nut-C	Sal	DIC	pH	PIC	UBC				
				✓	MG/CS	MR	NR	MG	MR/AB	GC	ESM	AM/SL				
1		79	Bot-10	✓	1318	x	x	x		x	x	x				
2		80	1250	✓		x	x	x	x	x	x					
3		81	1250	✓		xx	x	x	xx	xx	x					
4		82	1000	✓		x	x	x	xx	x	x					
5		83	800	✓		x	x	x	x	x	x					
6		84	600	✓		x	xx	xx		x	xxx					
7		85	400	✓	400	x	x	x		x	x					
8		86	300	✓	300	x	x			x	x					
9		87	250	✓	249	x	x			x	x					
10		88	200	✓	200	xx	x			x	x					
11		89	175	✓	175	x	x			x	x					
12		90	150	✓	150	x	x			x	x					
13		91	125	✓	124	x	xx			x	x					
14		92	100	✓	100	x	x			x	x					
15		93	75	✓	75	xx	x			x	x					
16		94	50	✓	49	x	x			x	x					
17		95	25	✓	24	x	x			x	xxx					
18		96	10	✓	10	x	x			x	x					
19		97	5	✓	4.7	x	x		x	x	x					
20																
21																
22																
23																
24																

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

Bottom Depth: 1319 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	<u>2344</u>	<u>1644</u>
Bottom	<u>0004</u>	
End	<u>0041</u>	

Positional Information  
 Start  
 Lat: 48 ° 39.007 N  
 Lon: 126 ° 39.967 W

Bottom  
 Lat: 48 ° 39.007 N  
 Lon: 126 ° 39.97 W

End  
 Lat: 48 ° 39.01 N  
 Lon: 126 ° 39.98 W

Extra comments:  
Deep cast



# Water Properties Group

# Rosette Log

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

Cruise ID: 2013-18 Station: P4 Event #: 010 Ship: JPT UTC Date (dd|mmm|yyyy): 23 | Aug | 2013

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken									Comments					
		Flask Serial #	Value mL · L <sup>-1</sup>	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	chl	chl	chl	chl	chl	chl		chl	chl	chl	chl	chl
1	67			1200	1200							X	X							
2	68			1000	1000							X	X				X			
3	69			900	900							X	X							
4	70			600	600							X	X				X			
5	71			400	400							X	X							
6	72			200	200							X	X							
7	73			120	120												X			
8	74			100	100							X	X				X			
9	75			75	75							X	X							
10	76			50	50							X	X							
11	77			25	25							X	X							
12	78			10	10							X	X							
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

Watchkeeper(s): CS NS

Bottom Depth: 1320 m

Transmisso Cleaned: Y / N

	UTC	Local
Time Start	02:27	19:27
Time Bottom	03:02	20:02
Time End	03:42	20:42

Positional Information

Start

Lat: 48 ° 38.99 N

Lon: 126 ° 39.99 W

Bottom

Lat: 48 ° 39.04 N

Lon: 126 ° 39.011 W

End

Lat: 48 ° 38.98 N

Lon: 126 ° 40.02 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

TMR-2 NS/CS

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P4 Event #: 13 Ship: Tully UTC Date (dd|mmm|yyyy): 23 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed ✓ Pressure	UBC	Sal IOS	Nut-Fr	Nut-C	Oxy UVic	ONAr UVic	NG UVic									
1	1	98	Bot-10	✓	1312															
2	2	99	Bot-10	✓		x	x	x	x											
3	3	100	Bot-10	✓																
4	6	101	1000	✓																
5	7	102	1000	✓		x	x	x	x											
6	8	103	1000	✓																
7	9	104	500	✓																
8	10	105	500	✓		x	x	x	x											
9	11	106	500	✓																
10	15	107	10	✓																
11	16	108	10	✓		x	x	x												
12	17	109	10	✓																
13																				
14																				
15	4	110	Bot-10	✓			x			xx	xx	xx								
16	5	111	1000	✓			x			xx	xx	xx								
17	13	112	100	✓			x					xx								
18	14	113	30	✓			x					xx								
19	18	114	5							xx	xx									
20																				
21	12	115	200	✓		x														
22																				
23																				
24																				

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

Bottom Depth: 1322 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	<u>0644</u>	<u>2344</u>
Bottom	<u>0706</u>	
End	<u>0740</u>	

Positional Information  
 Start  
 Lat: 48 ° 39.028 N  
 Lon: 126 ° 40.060 W

Bottom  
 Lat: 48 ° 39.01 N  
 Lon: 126 ° 40.01 W

End  
 Lat: 48 ° 38.95 N  
 Lon: 126 ° 40.06 W

Extra comments:  
 UBC + ONAr; OUT-OF-ORDER  
 1 - 2 - 3 - 15 - 16 - 4 - 5 - 6 - 7 - 8 -  
 9 - 21 - 17 - 18 - 10 - 11 - 12 - 19

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18

Station: R4

Event #: 015

Ship: Tully

UTC Date (dd:mmm:yyyy): 23: 08: 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments	
			Target Pressure	Confirmed Pressure	Nina	UNC	Nari						
1		117	5	45	x								
2		118	5	45	x								
3		119	5	45	x								
4		120	MLD	30	x								
5		121	MLD	30	x								
6		122	MLD	30	x								
7		123	Max	5	x								
8		124	Max	5	x								
9		125	Max	5	x								
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

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

Bottom Depth: 1322 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1529	0829
Bottom	1533	
End	1541	

Positional Information  
 Start  
 Lat: 48 ° 38.98 N  
 Lon: 126 ° 40.04 W

Bottom  
 Lat: 48 ° 38.97 N  
 Lon: 126 ° 40.01 W

End  
 Lat: 48 ° 39.00 N  
 Lon: 126 ° 39.96 W

Extra comments:  
 Light cast  
 OUT-OF-ORDER

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P4 Event #: 016 Vessel: JPT UTC Date (dd|mmm|yyyy): 23 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)												Comments	
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	CHL	TM	UVC	UVC	UVC	UVC	Fe	H <sub>2</sub> O <sub>2</sub>	UVC		Col
1		126	1100	✓ 1100										X	X			Spot base
2		127	800	✓ 800		X	X		X	X	X	X	X	X	X		X	
3		128	700	✓ 700		X	X		X	X	X	X	X	X	X		X	
4		129	500	✓ 500		X	X		X	X	X	X	X	X	X		X	
5		130	425	✓ 425		X	X		X	X	X	X	X	X	X		X	
6		131	350	✓ 350		X	X		X	X	X	X	X	X	X		X	
7		132	200	✓ 200		X	X			X	X			X	X			
8		133	100	✓ 100		X	X			X	X			X	X			
9		134	75	✓ 75		X	X			X	X			X	X			
10		135	50	✓ 50		X	X			X	X			X	X	X		
11		136	25	✓ 25		X	X			X	X			X	X			
12		137	10	✓ 10		X	X			X	X			X	X	X		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
 NS

Bottom Depth: 1320.86 m  
 Transmissio Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	16 : 01	9 : 01
Bottom (BO)	16 : 27	9 : 27
End (EN)	16 : 42	9 : 42

Positional Information  
 Start  
 Lat: 48° 39.004 N  
 Lon: 126° 39.954 W

Bottom  
 Lat: 48° 39.002 N  
 Lon: 126° 39.941 W

Finish  
 Lat: 48° 38.90 N  
 Lon: 126° 40.03 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
 TMR-3

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P5 Event #: - 18 Ship: Tully UTC Date (dd|mmm|yyyy): 23 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		138	30 / Max	✓	x		xx	xx	
2		139	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): MG

Bottom Depth: 2089 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1904	1204
Bottom	1931	
End	1954	

Positional Information  
 Start  
 Lat: 48 ° 41.51 N  
 Lon: 127 ° 10.03 W

Bottom  
 Lat: 48 ° 41.52 N  
 Lon: 127 ° 9.95 W

End  
 Lat: 48 ° 41.54 N  
 Lon: 127 ° 9.99 W

Extra comments:  
PAR STILL ON  
CURVE LOOKS GOOD  
DOWN / UP

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P6 Event #: 19 Ship: Tully UTC Date (dd|mmm|yyyy): 23 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments	
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC						
1		140	30 / Max	✓	x		xx	xx						
2		141	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): MG

Bottom Depth: 2547 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	<u>2216</u>	<u>1516</u>
Bottom	<u>2252</u>	
End	<u>2329</u>	

**Positional Information**

Start	Lat: <u>48</u> ° <u>44.63</u> N	Lon: <u>127</u> ° <u>39.95</u> W
Bottom	Lat: <u>48</u> ° <u>44.64</u> N	Lon: <u>127</u> ° <u>39.90</u> W
End	Lat: <u>48</u> ° <u>44.66</u> N	Lon: <u>127</u> ° <u>39.88</u> W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P7 Event #: 20 Ship: Tully UTC Date (dd:mmm:yyyy): 24 / 08 / 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		142	30 / Max	✓	x		xx	xx	
2		143	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): MG

Bottom Depth: 2506 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	<u>0224</u>	<u>1924</u>
Bottom	<u>0306</u>	
End	<u>0330</u>	

**Positional Information**

Start	Lat: <u>48</u> ° <u>46.59</u> N	Lon: <u>128</u> ° <u>9.99</u> W
Bottom	Lat: <u>48</u> ° <u>46.61</u> N	Lon: <u>128</u> ° <u>10.05</u> W
End	Lat: <u>48</u> ° <u>46.55</u> N	Lon: <u>128</u> ° <u>9.98</u> W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P8 Event #: 23 Ship: Tully UTC Date (dd|mmm|yyyy): 24 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments					
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut Fr	Nut C	pH	Chl	HPLC	PIC	Oxy UVic	ONAr UVic	NG UVic			
1	1	144	2000	✓	2000	x	x	x	x				x					
2	4	145	1500	✓		x	x	x	x				x					
3	5	146	1250	✓		x	x	x	x				x					
4	6	147	1000	✓		x	x	x	x				x					
5	8	148	800	✓		x	x	x	x				x					
6	9	149	600	✓		x		x	x				x					
7	10	150	400	✓		x		x	x				x					
8	11	151	300	✓		x		x					x					
9	12	152	250	✓		x	x	x					x					
10	13	1531	200	✓		x		x					x					
11	14	154	175	✓		x		x					x					
12	15	155	150	✓		x		x					x					
13	16	156	125	✓		x		x					x					
14	17	157	100	✓		x		x				x	x					
15	18	158	75	✓		x		x				x	x					
16	19	159	50	✓		x		x				x	x					
17	21	160	25	✓		x	x	x				x	x					
18	23	161	10	✓		x		x				x	x					
19	24	162	5	✓		x	x	x				x	x					
20	20	163	50	✓								x	x					
21	22	164	20/Max	✓								x	x					
22	2	165	2000	✓			x							x	x	x		
23	3	166	1500	✓			x							x	x			
24	7	167	1000	✓			x							x	x	x		

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

Bottom Depth: 2522 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	08:16	01:16
Bottom	08:47	
End	09:42	

Positional Information

Start  
 Lat: 48 ° 49.016 N  
 Lon: 128 ° 39.998 W

Bottom  
 Lat: 48 ° 49.92 N  
 Lon: 128 ° 48.14 W

End  
 Lat: 48 ° 48.94 N  
 Lon: 128 ° 40.13 W

Extra comments:  
 Firing out of order  
 1 - 22 - 23 - 2 - 3 - 4 - 24 - 5 - 6 - ...  
 ... 14 - 15 - 16 - 20 - 17 - 21 - 18 - 19



# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P9 Event #: 24 Ship: Tully UTC Date (dd:mmm:yyyy): 24 8 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments	
			Target Pressure	Confirmed <input checked="" type="checkbox"/> Pressure	Nut-F	Sal	Chl	HPLC		
1		168	50 / Max	<input checked="" type="checkbox"/>	50	x		xx	xx	
2		169	5			x	x	xx	xx	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

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

Bottom Depth: 2347 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1211	0511
Bottom	1245	
End	1323	

Positional Information

Start	Lat: <u>48 ° 51 . 39</u> N	Lon: <u>129 ° 69 . 97</u> W
Bottom	Lat: <u>48 ° 51 41</u> N	Lon: <u>129 ° 09 98</u> W
End	Lat: <u>48 ° 51 41</u> N	Lon: <u>129 ° 09 99</u> W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P10 Event #: -25 Ship: Tully UTC Date (dd|mmm|yyyy): 24 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		170	50 / Max	✓ 50	x		xx	xx	
2		171	5	✓ 5	x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

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

Bottom Depth: 2643 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1555	0855
Bottom	1629	
End	1703	

Positional Information  
 Start  
 Lat: 48 ° 53.54 N  
 Lon: 129 ° 39.93 W

Bottom  
 Lat: 48 ° 53.59 N  
 Lon: 129 ° 39.98 W

End  
 Lat: 48 ° 53.66 N  
 Lon: 129 ° 40.01 W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18

Station: P11

Event #: 26

Ship: Tully

UTC Date (dd|mmm|yyyy): 24 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		172	50 / Max		x		xx	xx	
2		173	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): MG

Bottom Depth: 2755 m  
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1930	1230
Bottom	2008	
End	2103	

Positional Information  
 Start  
 Lat: 48 ° 55.97 N  
 Lon: 130 ° 10.01 W

Bottom  
 Lat: 48 ° 56.15 N  
 Lon: 130 ° 10.26 W

End  
 Lat: 48 ° 55.96 N  
 Lon: 130 ° 10.33 W

Extra comments:  
 FISHER'S FIRST

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P12 Event #: 29 Ship: Tully UTC Date (dd|mmm|yyyy): 24 | 08 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments		
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-F	Chl	HPLC	Chl-E			
				✓	MR	t MA	d MA	SAM						
1		174	300	✓	x			x						
2		175	200	✓	x	x	x	x						
3		176	175	✓	x	x	x	xx						
4		177	100	✓	x	x	x	x		x				
5		178	75	✓	x			x		x				
6		179	50	✓	x			x		x				
7		180	40	✓	x			x		xx				
8		181	30	✓	x			x		x				
9		182	25	✓	x			x		x				
10		183	20	✓		xx	xx	xx	x	x				
11		184	15	✓	x			x		x				
12		185	10	✓	x			x		x				
13		186	5	✓	x	x	x	x		x				
14		187	0	✓	x	x	x	x		x				
15		188	50	✓						xx	xx		xx	
16		189	20 / Max	✓						xx	xx		xx	
17		190	5	✓						xx	xx		xx	
18														
19														
20														
21														
22														
23														
24														

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

Bottom Depth: 3231 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	2328	1628
Bottom	2333	
End	2354	

Positional Information  
 Start  
 Lat: 48 ° 58.20 N  
 Lon: 130 ° 39.98 W

Bottom  
 Lat: 48 ° 58.20 N  
 Lon: 130 ° 39.97 W

End  
 Lat: 48 ° 58.17 N  
 Lon: 130 ° 39.98 W

Extra comments:  
 DMS cast; out-of-order.  
 1 ... (6-15) - 7 - 8 - 9 - (10? - 16?) - 11  
 12 - (13 - 17) - 14

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P12 Event #: 30 Vessel: JPT UTC Date (dd|mmm|yyyy): 25 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)											Comments		
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	<del>Oxy</del>	Nut UBC	Sal UBC	Chla	TAM WVC	Unfit WVC	Hnl	Hn2	Cd	Phn				
1		191	2000	✓ 2000														very leaky bottle!!
2		192	1600	✓ 1600														
3		193	1300	✓ 1300														
4		194	1100	✓ 1100										X	X			
5		195	800	✓ 800										X				
6		196	600	✓ 600										X	X			
7		197	450	✓ 450										X				
8		198	400	✓ 400										X	X			
9		199	300	✓ 300										X				
10		200	200	✓ 200														
11		201	100	✓ 100														
12		202	50	✓ 50														
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 3231.52 m  
 Transmissio Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	<u>00:00</u>	<u>17:00</u>
Bottom (BO)	<u>00:35</u>	<u>17:35</u>
End (EN)	<u>01:53</u>	<u>18:53</u>

Positional Information  
 Start  
 Lat: 48° 58.20 N  
 Lon: 130° 39.95 W

Bottom  
 Lat: 48° 58.20 N  
 Lon: 130° 40.06 W

Finish  
 Lat: 48° 58.11 N  
 Lon: 130° 40.13 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-1

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P12 Event #: 31 Ship: Tully UTC Date (dd:mmm:yyyy): 25 08 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments		
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	pH	PIC	UBC			
1		203	Bot-10	✓	3276	x		x	x	x	x	x		x	
2		204	3000	✓		x		x	x	xx	x	x			
3		205	3000	✓		xx	xx	x	x	x	x		x		
4		206	2500	✓		x	x	xx	xx	x	x				
5		207	2000	✓		x	x	x	x	x	x		x		
6		208	1500	✓		x	x	x	x	x	xx		x		
7		209	1250	✓		x	x	x	x	x	xxx		x		
8		210	1000	✓		xx	xx	x	x	x	x		x		
9		211	800	✓		x		x	x	x	x		x		
10		212	600	✓		x		x	x	x	x		x		
11		213	400	✓		x		x	x	x	x		x		
12		214	300	✓		x		x		x	x		x		
13		215	250	✓		x		x		x	x				
14		216	200	✓		x		x		x	xxx		x		
15		217	175	✓		x		x		x	x				
16		218	150	✓		xx		x		x	x		x		
17		219	125	✓		x		x		x	xx				
18		220	100	✓		x		xx		x	x		x		
19		221	75	✓		x		x		x	x				
20		222	50	✓		xx		x		x	x		x		
21		223	25	✓		x		x		x	x		x		
22		224	10	✓		x		x		x	x		x		
23		225	5	✓		x	x	x		x	x				
24															

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

Bottom Depth: 3231 m  
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0229	1929
Bottom	0328	
End	0437	

Positional Information

Start	Lat: 48 ° 58.24 N	Lon: 130 ° 39.98 W
Bottom	Lat: 48 ° 58.20 N	Lon: 130 ° 40.04 W
End	Lat: 48 ° 58.20 N	Lon: 130 ° 40.01 W

Extra comments:  
 Deep cast

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P12 Event #: 32 Ship: Tully UTC Date (dd:mmm/yyyy): 25 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments	
			Target Pressure	Confirmed Pressure	OXY	Sal	ONAr	NG		
				✓	UVic	IOS	UVic	UVic		
1		226	Bot-10	✓	3275	x x	x	x x	x x	
2		227	3000	✓		x x	x	x x	x x	
3		228	2500	✓		x x	x	x 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): MG

Bottom Depth: 3228 m  
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	<u>0604</u>	<u>2304</u>
Bottom	<u>0647</u>	
End	<u>0748</u>	

Positional Information  
 Start  
 Lat: 48 ° 58.20 N  
 Lon: 130 ° 39.95 W

Bottom  
 Lat: 48 ° 58.21 N  
 Lon: 130 ° 39.97 W

End  
 Lat: 48 ° 58.22 N  
 Lon: 130 ° 39.96 W

Extra comments:  
Deep ONAr cast

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P12 Event #: 35 Ship: Tully UTC Date (dd|mmm|yyyy): 25 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	UBC	Sal	Nut-Fr	Nut-C	Oxy	ONAr	NG								
1	1	229	2000	✓															
2	2	230	2000	✓		x	x	x	x										
3	3	231	2000	✓															
4	7	232	1000	✓															
5	8	233	1000	✓		x	x	x	x										
6	9	234	1000	✓															
7	10	235	500	✓															
8	11	236	500	✓		x	x	x	x										
9	12	237	500	✓															
10	13	238	10																
11	14	239	10			x	x	x											
12	15	240	10																
13																			
14																			
15	4	241	2000	✓			x			xx	xx	xx							
16	5	242	1500	✓			x			xx	xx								
17	6	243	1000	✓			x			xx	xx	xx							
18	16	244	5							xx	xx								
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 3229 m  
 Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0959	0259
Bottom	1029	
End	1112	

Positional Information  
 Start  
 Lat: 48 ° 58 . 20 N  
 Lon: 130 ° 39 . 99 W

Bottom  
 Lat: 48 ° 58 . 18 N  
 Lon: 130 ° 39 . 95 W

End  
 Lat: 48 ° 58 . 14 N  
 Lon: 130 ° 40 . 02 W

Extra comments:  
 UBC + ONAr; OUT-OF-ORDER  
 1 - 2 - 3 - 15 - 16 - 17 - 4 - 5 - 6 -  
 7 - 8 - 9 - 10 - 11 - 12 - 18



# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: - P12 Event #: 36 Ship: Tully UTC Date (dd|mmm|yyyy): 25 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Nina														
1		257	5		x														
2		258	5		x														
3		259	5		x														
4		260	MLD	25	x														
5		261	MLD	25	x														
6		262	MLD	25	x														
7		263	Max	40	x														
8		264	Max	40	x														
9		265	Max	40	x														
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 3231 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1524	0829
Bottom	1528	
End	1534	

Positional Information  
 Start  
 Lat: 48 ° 58.22 N  
 Lon: 130 ° 39.99 W

Bottom  
 Lat: 48 ° 58.19 N  
 Lon: 130 ° 39.97 W

End  
 Lat: 48 ° 58.16 N  
 Lon: 130 ° 39.96 W

Extra comments:  
 Light cast  
 OUT-OF-ORDER

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P13 Event #: 37 Ship: Tully UTC Date (dd|mmm|yyyy): 25 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		266	50 / Max	✓	x		xx	xx	
2		267	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): MG

Bottom Depth: 2903 m  
 Transmissometer Cleaned:  Y /  N

Time	UTC	Local
Start	2104	1404
Bottom	2145	
End	2226	

Positional Information  
 Start  
 Lat: 49 ° 2.58 N  
 Lon: 131 ° 39.95 W

Bottom  
 Lat: 49 ° 2.53 N  
 Lon: 131 ° 40.08 W

End  
 Lat: 49 ° 2.58 N  
 Lon: 131 ° 39.84 W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P14 Event #: 38 Ship: Tully UTC Date (dd|mmm|yyyy): 26|08|13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		268	50 / Max	✓	x		xx	xx	
2		269	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): MG

Bottom Depth: 3309 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	0317	2017
Bottom	0341	
End	0410	

Positional Information

Start  
 Lat: 49 ° 7.42 N  
 Lon: 132 ° 39.98 W

Bottom  
 Lat: 49 ° 7.43 N  
 Lon: 132 ° 40.03 W

End  
 Lat: 49 ° 7.42 N  
 Lon: 132 ° 39.92 W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P15 Event #: 39 Ship: Tully UTC Date (dd mmm/yyyy): 26 8 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		270	50 / Max	✓ 50	x		xx	xx	
2		271	5	✓	x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

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

Bottom Depth: 3402 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	0846	0146
Bottom	0918	
End	0956	

Positional Information

Start  
 Lat: 49 ° 12.00 N  
 Lon: 133 ° 39.98 W

Bottom  
 Lat: 49 ° 11.99 N  
 Lon: 133 ° 40.01 W

End  
 Lat: 49 ° 12.00 N  
 Lon: 133 ° 40.01 W

Extra comments:

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18

Station: P16

Event #: 40

Vessel: JPT

UTC Date (dd|mmm|yyyy): 26 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	UVC dTM	UVC PMn	UVic TM	unfit	Cd					
1	1	272	1000	✓ 1000		X	X				X	X	X					TMR went down
2	2	273	800	✓ 800		X	✓		XX	X	X	✓						to 50m deep.
3	3	274	700	✓ 700		X	✓		XX		X	X	X					and brought up
4	4	275	550	✓ 550		X	✓		XX	X	X	X	X					to surface, then
5	5	276	400	✓ 400		X	X		XX		X	X	✓					went down to
6	6	277	300	✓ 300		X	X		XX	X	✓	X	✓					1050m to get
7	7	278	250	✓ 250		X	X		XX		XX	X	X					the air out in
8	8	279	100	✓ 100		X	✓		XX	X	✓	X						the pump.
9	9	280	75	✓ 75		X	X		XX		X	✓						
10	10	281	50	✓ 50		X	X		XX	X	✓	✓						
11	11	282	25	✓ 25		X	X		XX		X	✓						
12	12	283	10	✓ 10		X	X		XX	X	X	X						
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:  
 Ros (default) | TrMet/Ros | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 3623 m  
 Transmissio Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	14:29	07:29
Bottom (BO)	14:48	07:48
End (EN)	15:12	08:12

Positional Information  
 Start  
 Lat: 49° 17.00 N  
 Lon: 134° 39.90 W

Bottom  
 Lat: 49° 17.00 N  
 Lon: 134° 39.95 W

Finish  
 Lat: 49° 17.00 N  
 Lon: 134° 39.95 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-1 (N+C)

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18

Station: P16

Event #: 41

Ship: Tully

UTC Date (dd/mm/yyyy): 26 8 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments						
			Target Pressure	Confirmed Pressure	Nina																
1		284	5	✓		x															
2		285	5	✓		x															
3		286	5	✓		x															
4		287	MLD	✓	25	x															
5		288	MLD	✓	25	x															
6		289	MLD	✓	25	x															
7		290	Max	✓	40	x															
8		291	Max	✓	40	x															
9		292	Max	✓	40	x															
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					
18																					
19																					
20																					
21																					
22																					
23																					
24																					

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

Bottom Depth: 3622 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1611	
Bottom	1615	
End	1622	

Positional Information

Start  
 Lat: 49 ° 16 . 99 N  
 Lon: 134 ° 39 . 95 W

Bottom  
 Lat: 49 ° 16 . 98 N  
 Lon: 134 ° 39 . 96 W

End  
 Lat: 49 ° 16 . 99 N  
 Lon: 134 ° 39 . 99 W

Extra comments:  
 Light cast  
 OUT-OF-ORDER

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P16 Event #: 42 Ship: Tully UTC Date (dd-mm-yyyy): 26 8 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	pH	PIC	UBC				
1		293	Bot-10	✓	3682	x		x	x	x	x	x			x	
2		294	3500	✓		x		x	x	xx	x	x				
3		295	3500	✓		x	x	x	x	x	x					
4		296	3000	✓		x	xx	x	x	x	x			x		
5		297	2500	✓		x	x	x	x	x	xxx					
6		298	2000	✓		xx	xx	x	x	x	x			x		
7		299	1500	✓		x	x	xx	xx	x	x			x		
8		300	1250	✓		x	x	x	x	x	x			x		
9		301	1000	✓		x	xx	x	x	x	x			x		
10		302	800	✓		x		x	x	x	x			x		
11		303	600	✓		x		x	x	x	x			x		
12		304	400	✓		x		x	x	x	x			x		
13		305	300	✓		xx		x		x	x			x		
14		306	250	✓		x		x		x	xxx	x				
15		307	200	✓		x		x		x	x			x		
16		308	175	✓		xx		x		x	x					
17		309	150	✓		x		x		x	x			x		
18		310	125	✓		x		x		x	x					
19		311	100	✓		x		x		x	x			x		
20		312	75	✓		xx		x		x	x	xx				
21		313	50	✓		x		xx		x	x	x		x		
22		314	25	✓		x		x		x	x	x		x		
23		315	10	✓		x		x		x	x	x		x		
24		316	5	✓		x	x	x		x	x					

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

Bottom Depth: 3622 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	17:26	10:26
Bottom	18:30	
End	20:03	

Positional Information  
 Start  
 Lat: 49 ° 17.01 N  
 Lon: 134 ° 40 00 W

Bottom  
 Lat: 49 ° 17.00 N  
 Lon: 134 ° 40.06 W

End  
 Lat: 49 ° 17.00 N  
 Lon: 134 ° 39.96 W

Extra comments:  
Deep cast

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18

Station: P16

Event #: 43

Vessel: JPT

UTC Date (dd|mmm|yyyy): 26 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a										
1	1	317	200	✓	200													
2	2	318	200	✓	200		x	x										
3	3	319	200	✓	200													
4	4	320	200	✓	200													
5	5	321	200	✓	200													
6	6	322	200	✓	200													
7	7	323	200	✓	200													
8	8	324	200	✓	200													
9	9	325	200	✓	200													
10	10	326	200	✓	200													
11	11	327	200	✓	200													
12	12	328	200	✓	200													
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 3623 m  
 Transmissio Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	13:43	20:43
Bottom (BO)	13:49	20:49
End (EN)	13:54	20:54

Positional Information

Start	Lat: 49° 17.00 N
	Lon: 134° 39.94 W

Bottom

Bottom	Lat: 49° 17.02 N
	Lon: 134° 39.96 W

Finish

Finish	Lat: 49° 17.03 N
	Lon: 134° 39.99 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-2 (Met)



# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P16 Event #: 44 Ship: Tully - UTC Date (dd:mmm:yyyy): 26 08 13 -

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments				
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-F	CHI	HPLC	Chi-E						
1		329	300	✓	x			x									
2		330	200	✓	x	x	x	x									
3		331	175	✓	x	x	x	xx									
4		332	100	✓	x	x	x	x		x							
5		333	75	✓	x			x		x							
6		334	50	✓	x			x		x							
7		335	40	✓	x			x		xx		xx					
8		336	30	✓	x			x		x							
9		337	25	✓	x			x		x							
10		338	20	✓	xx	xx	xx	x		x							
11		339	15	✓	x			x		x							
12		340	10	✓	x			x		x							
13		341	5	✓	x	x	x	x		x							
14		342	0	✓	x	x	x	x		x							
15		343	50	✓						xx	xx		xx				
16		344	20 / Max	✓						xx	xx		xx				
17		345	5	✓						xx	xx		xx				
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 3622 m  
 Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	21 34	14 34
Bottom	21 40	
End	22 00	

Positional Information  
 Start  
 Lat: 49° 17.00 N  
 Lon: 134° 40.00 W

Bottom  
 Lat: 49° 17.01 N  
 Lon: 134° 40.04 W

End  
 Lat: 49° 17.02 N  
 Lon: 134° 39.99 W

Extra comments:  
 DMS cast; out-of-order.  
 1 ... (6-15)-7-8-9-(10?-16?)-11  
 12-(13-17)-14

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P16 Event #: 47 Ship: Tully UTC Date (dd|mmm|yyyy): 26 | AUG | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	ONAr	NG	
1	1	346	2000	✓ 2000	xx	x	xx	xx	
2	2	347	1500	✓	xx	x	xx		
3	3	248	1000	✓	xx	x	xx	xx	
4	4	349	5	✓	xx		xx		
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): HR / MV

Bottom Depth: 3622 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	2346	1646
Bottom	0022	
End	0658	

Positional Information

Start	Lat: 49° 17.09 N	Lon: 134° 40.00 W
Bottom	Lat: 49° 17.10 N	Lon: 134° 40.16 W
End	Lat: 49° 17.02 N	Lon: 134° 40.11 W

Extra comments:  
Deep ONAr cast  
2000

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18

Station: P16

Event #: 48

Vessel: J.P. TULLY

UTC Date (dd|mmm|yyyy): 27 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments					
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chlor	Fe(II)	H <sub>2</sub> O <sub>2</sub>										
1	1	350	1000	✓	1000			X												TMR → down to
2	2	351	800	✓	800			X												15m, to surface
3	3	352	700	✓	700			X												down to max.
4	4	353	550	✓	550			X												pressure for
5	5	354	400	✓	400			X												O <sub>2</sub> sensor
6	6	355	300	✓	300			X												
7	7	356	250	✓	250															
8	8	357	100	✓	100															
9	9	358	75	✓	75															
10	10	359	50	✓	50															
11	11	360	25	✓	25															
12	12	361	10	✓	10															
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

Profile type:  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
NS

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

Time	UTC	Local
Start (BE)	01:38	06:38
Bottom (BO)	01:58	06:58
End (EN)	02:25	07:25

Positional Information

Start	Lat: <u>49° 17.09</u> N
	Lon: <u>134° 40.11</u> W

Bottom

Lat: <u>49° 17.09</u> N
Lon: <u>134° 40.12</u> W

Finish

Lat: <u>49° 17.01</u> N
Lon: <u>134° 39.98</u> W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-3

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P16 Event #: 50 Ship: Tully UTC Date (dd:mmm:yyyy): 27 08 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	ONAr	NG	
1		362	Bot-10	✓ 3685	xx	x	xx	xx	
2		363	3000	✓	xx	x	xx	xx	
3		364	2500	✓	xx	x	xx		
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: 3623 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	0301	2001
Bottom	0409	
End	0519	

Positional Information  
 Start  
 Lat: 49 ° 16.99 N  
 Lon: 134 ° 40.00 W

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

End  
 Lat: 49 ° 17.03 N  
 Lon: 134 ° 39.98 W

Extra comments:  
Deep ONAr cast

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18

Station: P16

Event #: 51

Vessel: TULLY

UTC Date (dd|mmm|yyyy): 27 | 08 | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	POC	Fluor	HPLC	Du	Cu spec	R/Fm				
1		365		10		UBC		UBC	UBC	UBC	UBC	UBC	UBC	UBC				
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

P16 in water for cu

Profile type: PUMPING  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
H. M.

Bottom Depth: 3622 m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	12 : 30	4 : 30
Bottom (BO)	/	/
End (EN)	14 : 00	7 : 00

Positional Information

Start	Lat: <u>49° 16.80</u> N
	Lon: <u>134° 40.00</u> W

Bottom

Lat: . . N
Lon: . . W

Finish

Lat: <u>49° 16.92</u> N
Lon: <u>134° 39.97</u> W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
PUMPING

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18

Station: P16

Event #: 52

Vessel: J.P. TULLY

UTC Date (dd|mmm|yyyy): 27 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments					
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chla	UVC dTM	UVC pth	UVic Unfit	UVic TM								
1	1	366	2000	✓	2000		X	X		XX		X	X	X						CTD → down to
2	2	367	1800	✓	1800		X	X		XX			X	X						15m, to the 5m
3	3	368	1600	✓	1600		X	X		XX		X	X	X						and then down
4	4	369	1400	✓	1400		X	X		XX			X	X						to 2015m for
5	5	370	1100	✓	1100		X	X		XX			X	X						Sampling
6	6	371	1000	✓	1000		X	X		XX		X	-	X						Still have O2 problem
7	7	372	900	✓	900		X	X		XX			X	X						
8	8	373	600	✓	600		X	X		XX			X	X						
9	9	374	250	✓	250		X	X		-		X	-	X						
10	10	375	200	✓	200		X	X		XX			X	X						
11	11	376	150	✓	150		X	X		XX			X	X						
12	12	377	150	✓	150		X	X		-			-	X						
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

Profile type:  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 3622 m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N  
 Time UTC Local  
 Start (BE) 14:17 07:17  
 Bottom (BO) 14:50 07:50  
 End (EN) 15:28 08:28

Positional Information  
 Start  
 Lat: 49° 17.08 N  
 Lon: 134° 40.05 W  
 Bottom  
 Lat: 49° 17.03 N  
 Lon: 134° 40.01 W  
 Finish  
 Lat: 49° 17.04 N  
 Lon: 134° 39.99 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR - 4

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P17 Event #: 53 Ship: Tully UTC Date (dd/mmm/yyyy): 27 / 08 / 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		378	30 / Max	✓ MAX 30	x		xx	xx	
2		379	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): MG

Bottom Depth: 3705 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1944	1244
Bottom	2019	
End	2106	

Positional Information  
 Start  
 Lat: 49 ° 20.97 N  
 Lon: 135 ° 39.99 W

Bottom  
 Lat: 49 ° 21.01 N  
 Lon: 135 ° 40.00 W

End  
 Lat: 49 ° 21.03 N  
 Lon: 135 ° 40.02 W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P18 Event #: 54 Ship: Tully UTC Date (dd/mm/yyyy): 28 08 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		380	50 / Max	✓	x		xx	xx	
2		381	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): MG

Bottom Depth: 3819 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	0119	1819
Bottom	0157	
End	0235	

Positional Information  
 Start  
 Lat: 49 ° 26.07 N  
 Lon: 138 ° 39.99 W

Bottom  
 Lat: 49 ° 26.06 N  
 Lon: 138 ° 39.96 W

End  
 Lat: 49 ° 25.97 N  
 Lon: 138 ° 40.04 W

Extra comments:



# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P19 Event #: 55 Ship: Tully UTC Date (dd mmm/yyyy): 28 8 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments		
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC							
1		382	50 / Max	✓ 50	x		xx	xx							
2		383	5	✓	x	x	xx	xx							
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 3902 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	0651	2351
Bottom	0726	
End	0803	

Positional Information  
 Start  
 Lat: 49° 30.01 N  
 Lon: 137° 39.99 W

Bottom  
 Lat: 49° 30.01 N  
 Lon: 137° 40.00 W

End  
 Lat: 49° 29.99 N  
 Lon: 137° 40.00 W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18

Station: - P20

Event #: 56

-Ship: Tully

UTC Date (dd|mmm|yyyy): 28 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	ONAr	NG	
1		384	2000	✓ 2000	xx	x	xx	xx	
2		385	1500	✓	xx	x	xx		
3		386	1000	✓	xx	x	xx	xx	
4		387	5		xx		xx		
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

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

Bottom Depth: 3946 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1212	0512
Bottom	1248	
End	1327	

Positional Information  
 Start  
 Lat: 49 ° 34 . 67 N  
 Lon: 138 ° 40 . 05 W

Bottom  
 Lat: 49 ° 34 . 21 N  
 Lon: 138 ° 39 . 96 W

End  
 Lat: 49 ° 34 . 31 N  
 Lon: 138 ° 40 . 09 W

Extra comments:  
 2000m ONAr cast

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P20 Event #: 57 Vessel: TULLY UTC Date (dd|mmm|yyyy): 28 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)											Comments	
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	UVC TM	UVic TM	Unfit	(d)	TEC	Mwp)			
1	1	388	1000	✓	1000		X	X		XX	X	X	X	X			TMR → down to 15m
2	2	389	800	✓	800		X	X		XX					X		to 5m and then
3	3	390	700	✓	700		X	X		XX			X				down to 10.5m
4	4	391	550	✓	550		X	X		XX			X		X		for sampling
5	5	392	400	✓	400		X	X		XX			X				
6	6	393	300	✓	300		X	X		XX			X		X		
7	7	394	250	✓	250		X	X		XX			X				
8	8	395	100	✓	100		X	X		XX					X		
9	9	396	75	✓	75		WA	WA		WA	WA	WA	WA				Both didn't fire
10	10	397	50	✓	50		WA	WA		WA	WA	WA			X		Both leaky? Empty
11	11	398	25	✓	25		X	X		XX							
12	12	399	10	✓	10		X	X		XX					X		did not #8 trigger
13																	#9 was empty
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

On next deployment, all ball valves were rotated already for long lowered position, but basin tells me the bottles went down open => what happened?? look @ salinities!!

Profile type:  
Ros (default) | TrMet/Ros | X-Niskin  
Watchkeeper(s):  
NS

Bottom Depth: 3948.70 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	14 : 21	07 : 21
Bottom (BO)	14 : 39	07 : 39
End (EN)	14 : 55	07 : 55

Positional Information

Start	Lat: 49° 33 . 95 N
Start	Lon: 138° 39 . 92 W

Bottom

Bottom	Lat: 49° 34 . 01 N
Bottom	Lon: 138° 39 . 91 W

Finish

Finish	Lat: 49° 33 . 99 N
Finish	Lon: 138° 39 . 93 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-1  
NOC

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P20 Event #: 58 Ship: - Tully UTC Date (dd|mmm|yyyy): 28 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed Pressure	Nina															
1		400	5		x															
2		401	5		x															
3		402	5		x															
4		403	MLD	10	x															
5		404	MLD	10	x															
6		405	MLD	10	x															
7		406	Max	40	x															
8		407	Max	40	x															
9		408	Max	40	x															
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

Profile type:  
 ROS  TRM  X-Niskin  other?  
 Watchkeeper(s): 4.07

Bottom Depth: 3947 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1620	0920
Bottom	1625	
End	1631	

Positional Information  
 Start  
 Lat: 49 ° 33.98 N  
 Lon: 138 ° 40.01 W

Bottom  
 Lat: 49 ° 33.99 N  
 Lon: 138 ° 39.99 W

End  
 Lat: 49 ° 33.98 N  
 Lon: 138 ° 40.02 W

Extra comments:  
 Light cast  
 OUT-OF-ORDER

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P20 Event #: - 59 Ship: Tully UTG-Date (dd/mmm/yyyy): 20 8 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	pH	PIC			UBC			
1	1	409	Bot-10	✓	4024	x	x	x	x	x	x	x			x		
2	2	410	3500	✓		x	x	x	x	xx	x						
3	3	411	3500	✓		xx	x	x	x	x	x						
4	4	412	3000	✓		x	xx	x	x	x	x			x			
5	5	413	2500	✓		x	x	xx	xx	x	x						
6	6	414	2000	✓		x	xx	x	x	x	x			x			
7	7	415	1500	✓		x	x	x	x	x	x			x			
8	8	416	1250	✓		x	x	x	x	x	xxx			x			
9	9	417	1000	✓		x	xx	x	x	x	x			x			
10	10	418	800	✓		xx	x	x	x	x	x			x			
11	11	419	600	✓		x	x	x	x	x	x			x			
12	12	420	400	✓		x	x	x	x	x	x			x			
13	13	421	300	✓		x	x	x		x	x			x			
14	14	422	250	✓		x	x	x		x	x						
15	15	423	200	✓		xx	x	x		x	x	xx		x			
16	16	424	175	✓		x	x	x		x	x						
17	17	425	150	✓		x	x	x		x	xxx	x		x			
18	18	426	125	✓		x	x	xx		x	x						
19	19	427	100	✓	100	x	x	x		x	x	x		x			
20	20	428	75	✓		x	x	x		x	x	x					
21	21	429	50	✓		x	x	x		x	x	x		x			
22	22	430	25	✓	Max	x	x	x		x	x	x		x			
23	23	431	10	✓		xx	x	x		x	x	x		x			
24	24	432	5	✓		x	x	x		x	x						

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

Bottom Depth: 3947 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1721	1021
Bottom	1828	
End	2002	

Positional Information  
 Start  
 Lat: 49 ° 33.98 N  
 Lon: 138 ° 40.03 W

Bottom  
 Lat: 49 ° 33.98 N  
 Lon: 138 ° 40.01 W

End  
 Lat: 49 ° 33.97 N  
 Lon: 138 ° 40.05 W

Extra comments:  
Deep cast

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P20 Event #: 60 Ship: Tully UTC Date (dd:mmm:yyyy): 28 08 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-F		Chl	HPLC		Chl-E					
1		433	300	✓	x			x										
2		434	200	✓	x	x	x	x										
3		435	175	✓	x	x	x	xx										
4		436	100	✓	x	x	x	x		x								
5		437	75	✓	x			x		x								
* 6		438	50	✓	x			x		x								
7		439	40	✓	x			x		xx			xx					
8		440	30	✓	x			x		x								
9		441	25	✓	x			x		x								
? 10		442	20	✓	xx	xx	xx	x		x								
11		443	15	✓	x			x		x								
12		444	10	✓	x			x		x								
✓ 13		445	5	✓	x	x	x	x		x								
14		446	0	✓	x	x	x	x		x								
* 15		447	50	✓						xx	xx		xx					
? 16		448	20 / Max	✓						xx	xx		xx					
✓ 17		449	5	✓						xx	xx		xx					
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 3947 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	<u>2119</u>	
Bottom	<u>2124</u>	
End	<u>2146</u>	

Positional Information  
 Start  
 Lat: 49 ° 33.98 N  
 Lon: 138 ° 40.03 W

Bottom  
 Lat: 49 ° 33.99 N  
 Lon: 138 ° 40.03 W

End  
 Lat: 49 ° 33.98 N  
 Lon: 138 ° 40.04 W

Extra comments:  
**DMS cast; out-of-order.**  
 1 ... (6 - 15) - 7 - 8 - 9 (10? - 16?) - 11  
 12 (13 - 17) - 14

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P20 Event #: 63 Vessel: TULLY UTC Date (dd|mmm|yyyy): 29 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl.a	UCL TM	UVC TM	unfilt	TetA	Ph(p)					
1	1	450	2000	✓	2000					XX	Y	X	X	X				
2	2	451	1800	✓	1800					XX	X	X						
3	3	452	1600	✓	1600					XX	X	X						
4	4	453	1400	✓	1400					XX	X	X						
5	5	454	1200	✓	1200					XX	X	X						
6	6	455	1100	✓	1100					XX	Y	X						
7	7	456	1000	✓	1000					X	-	-						
8	8	457	900	✓	900					XX	X	X						→ bottle fired with
9	9	458	600	✓	600					XX	X	X						Seasave at 900m,
10	10	459	300	✓	300			N/A		-	-	-						Deck Unit "receive"
11	11	460	200	✓	200					XX	X	X						blinked at 890m.
12	12	461	50	✓	50					XX	X	X						
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:  
 Ros (default) | TrMet/Ros | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 3947 m  
 Transmissio Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	00:58	17:58
Bottom (BO)	01:32	18:32
End (EN)	02:29	19:29

Positional Information

Start	Lat: 49° 33.98 N	Lon: 138° 40.13 W
-------	------------------	-------------------

Bottom

Bottom	Lat: 49° 33.99 N	Lon: 138° 40.05 W
--------	------------------	-------------------

Finish

Finish	Lat: 49° 33.98 N	Lon: 138° 39.85 W
--------	------------------	-------------------

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-2  
N+C

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P20 Event #: 64 Ship: Tully UTC Date (dd|mmm|yyyy): 29 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	ONAr	NG	
1	1	462	4000	✓	xx	x	xx	xx	
2	2	463	3500	✓	xx	x	xx		
3	3	464	3000	✓	xx	x	xx	xx	
4	4	465	2500	✓	xx	x	xx		
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): ang

Bottom Depth: 3947 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	0308	2008
Bottom	0412	
End	0521	

Positional Information  
 Start  
 Lat: 49 ° 34.00 N  
 Lon: 138 ° 40.11 W

Bottom  
 Lat: 49 ° 34.01 N  
 Lon: 138 ° 40.02 W

End  
 Lat: 49 ° 34.01 N  
 Lon: 138 ° 40.00 W

Extra comments:  
Deep ONAr cast



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P20 Event #: 65 Vessel: TULLY UTC Date (dd|mmm|yyyy): 29 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a										
1		466																
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type: PUMPING  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):

Bottom Depth: \_\_\_\_\_ m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	06:20	:
Bottom (BO)	:	:
End (EN)	08:45	:

Positional Information  
 Start  
 Lat: 49° 34.07 N  
 Lon: 138° 40.34 W

Bottom  
 Lat: \_\_\_\_\_ N  
 Lon: \_\_\_\_\_ W

Finish  
 Lat: 49° 34.06 N  
 Lon: 138° 40.31 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
PUMPING

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P22 - Event #: 67 Ship: Tully - UTC Date (dd|mmm|yyyy): 29 | 08 | 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials						Comments				
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	Nut-C						
1	1	469	600	✓	x					x					Nutrients Carboy
2	2	470	50 / <del>Max</del>	✓	x		xx	xx							
3	3	471	5	✓	x	x	xx	xx							
4	4	472	5	✓	x										Nutrients Carboy
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: 3876 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1851	1151
Bottom	1924	
End	2001	

Positional Information

Start  
 Lat: 49 ° 42.02 N  
 Lon: 140 ° 40.07 W

Bottom  
 Lat: 49 ° 42.00 N  
 Lon: 140 ° 40.06 W

End  
 Lat: 49 ° 42.06 N  
 Lon: 140 ° 40.20 W

Extra comments:



# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18

Station: P24

Event #: 72

Ship: Tully

UTC Date (dd/mm/yyyy): 30 08 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		497	50 / Max	✓ 50	x		xx	xx	
2		498	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): MG

Bottom Depth: 3967 m

Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	0640	2340
Bottom	0716	
End	0752	

Positional Information

Start Lat: 49 ° 50.19 N

Start Lon: 142 ° 39.99 W

Bottom Lat: 49 ° 50.19 N

Bottom Lon: 142 ° 40.03 W

End Lat: 49 ° 50.18 N

End Lon: 142 ° 39.98 W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P25 Event #: 73 Ship: Tully UTC Date (dd/mm/yyyy): 30/8/13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		499	50 / Max	✓ 50	x		xx	xx	
2		500	5		x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

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

Bottom Depth: 4121 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1204	0504
Bottom	1237	
End	1313	

Positional Information

Start  
 Lat: 50° 00' 01" N  
 Lon: 143° 36' 29" W

Bottom  
 Lat: 50° 00' 02" N  
 Lon: 143° 36' 26" W

End  
 Lat: 50° 00' 01" N  
 Lon: 143° 36' 26" W

Extra comments:

# Water Properties Group

# Sampling Log

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

Cruise ID:- 2013-18 Station: P35 Event #: 75 Ship: Tully - UTC Date (dd|mmm|yyyy): 30 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments
			Target Pressure	Confirmed Pressure	Nut-F	Sal	Chl	HPLC	
1		501	50 / Max	✓ 50	x		xx	xx	
2		502	5	✓	x	x	xx	xx	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

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

Bottom Depth: 4128 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1646	0946
Bottom	1723	
End	1759	

Positional Information  
 Start  
 Lat: 49 ° 59.97 N  
 Lon: 144 ° 18.20 W

Bottom  
 Lat: 49 ° 59.99 N  
 Lon: 144 ° 18.21 W

End  
 Lat: 49 ° 59.99 N  
 Lon: 144 ° 18.24 W

Extra comments:

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P26 Event #: 76 Vessel: TULLY UTC Date (dd|mmm|yyyy): 30 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)											Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a fette	UIC TM	UBC TM	unRH	Cd	pHn						
1	1	503	1200	✓	1200		X	X	X	X	XX	X		X					TMR → down to
2	2	504	1100	✓	1100		X	X	X	X	XX	X							20m. to 5m
3	3	505	900	✓	900		X	X	X	X	XX	X							then down to
4	4	506	800	✓	800		X	X	X	X	XX	X		X					1215m for
5	5	507	600	✓	600		X	X	X	X	XX	X							Sampling
6	6	508	400	✓	400		X	X	X	X	XX	X							
7	7	509	250	✓	250		X	X	X	X	XX	X	X						
8	8	510	200	✓	200		X	X	X	X	XX	X	X						
9	9	511	100	✓	100		X	X	X	X	XX	X		X					
10	10	512	50	✓	50		X	X	X	X	XX	X		X					
11	11	513	25	✓	25		X	X	X	X	XX	X							
12	12	514	10	✓	10		X	X	X	X	XX	X		X					
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

Profile type:  
 Ros (default) | TrMet/Ros | X-Niskin  
 Watchkeeper(s):  
NS

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

Time	UTC	Local
Start (BE)	21:15	14:15
Bottom (BO)	22:04	15:04
End (EN)	22:54	15:54

Positional Information

Start	Lat: <u>50° 00.01</u> N
	Lon: <u>145° 00.15</u> W

Bottom

	Lat: <u>50° 00.01</u> N
	Lon: <u>145° 00.14</u> W

Finish

	Lat: <u>50° 00.06</u> N
	Lon: <u>145° 00.29</u> W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-1

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P26 Event #: 77 Ship: Tully UTC Date (dd mmm/yyyy): 30 08 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments				
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-F	Chl	HPLC	Phyto	Chl-E	Chl-L		Oxy UVic	Sal IOS	<sup>17</sup> O UVic			
1		515	300	✓	x			x												
* 2		516	200	✓	x	x	x	x												
3 *		517	175	✓	x	x	x	xx												
✓ 4		518	100	✓	x	x	x	x	x									x		
5		519	75	✓	x			x	x									x		
+ 6		520	50	✓	x			x	x									x		
7		521	40	✓	x			x	xx				xx					x		
8		522	30	✓	x			x	x									x		
9		523	25	✓	x			x	x									x		
10		524	20	✓	xx	xx	xx	x	x									x		
11		525	15	✓	x			x	x									x		
12		526	10	✓	x			x	x									x		
o 13		527	5	✓	x	x	x	x	x									x		
14		528	0	✓	x	x	x	x	x									x		
+ 15		529	50	✓					xx	xx			xx					x		
16		530	20 / Max	✓					xx	xx			xx					x		
o 17		531	5	✓					xx	xx	xxx		xx					x		
18																				
19																				
* 20		532	200	✓														xx	x	x
21 *		533	150	✓														xx	x	x
✓ 22		534	100	✓														xx	x	xx
23																				
24																				

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

Bottom Depth: 4226 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	2314	1614
Bottom	2322	
End	2348	

Positional Information  
 Start  
 Lat: 50 ° 0.06 N  
 Lon: 144 ° 59.88 W

Bottom  
 Lat: 50 ° 0.07 N  
 Lon: 144 ° 59.82 W

End  
 Lat: 50 ° 0.08 N  
 Lon: 144 ° 59.80 W

Extra comments:  
 DMS + <sup>17</sup>O cast; out-of-order.  
 1-(2-20)-3-21-(22-4)-5-(6-15)-  
 7-8-9-(10-16)-11-12-(13-17)-14



# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18

Station: P26

Event #: 78

Ship: Tully

UTC Date (dd|mmm|yyyy): 31|08|2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials			Comments
			Target Pressure	Confirmed Pressure	Oxy UVic	Sal IOS	<sup>17</sup> O UVic	
1		535	75	✓	xx	x	xx	
2		536	50	✓	xx	x	xx	
3		537	25	✓	xx	x	xx	
4		538	5	✓	xx	x	xx	
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): MLG

Bottom Depth: 4226 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	0119	1819
Bottom	0122	
End	0131	

Positional Information  
 Start  
 Lat: 50 ° 0.09 N  
 Lon: 144 ° 59.89 W

Bottom  
 Lat: 50 ° 0.12 N  
 Lon: 144 ° 59.84 W

End  
 Lat: 50 ° 0.15 N  
 Lon: 144 ° 59.69 W

Extra comments:  
Shallow <sup>17</sup>O cast.

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18

Station: P26

Event #:- 79

Ship: Tully

HTC Date (dd/mmm/yyyy): 31 08 2013

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments						
			Target Pressure	Confirmed Pressure	UBC	Sal	Nut-Fr	Nut-C	Oxy	ONAr	NG							
				✓						UVic	UVic	UVic						
1	3	539	2000	✓														
2	4	540	2000	✓		x	x	x	x									
3	5	541	2000	✓														
4	6	542	2000	✓														
5	7	543	2000	✓														
6	10	544	1000	✓														
7	11	545	1000	✓		x	x	x	x									
8	12	546	1000	✓														
9	13	547	1000	✓														
10	14	548	1000	✓														
11	15	549	500	✓														
12	16	550	500	✓		x	x	x	x									
13	17	551	500	✓														
14	18	552	500	✓														
15	19	553	10	✓														
16	20	554	10	✓		x	x	x										
17	21	555	10	✓						xx	xx							
18	22	556	10	✓						xx	xx	xx						
19	1	557	2500	✓			x			xx	xx							
20	2	558	2000	✓			x			xx	xx	xx						
21	8	559	1500	✓			x			xx	xx							
22	9	560	1000	✓			x			xx	xx	xx						
23																		
24																		

Profile type:  
 ROS  TRM  X-Niskin  other?  
 Watchkeeper(s): M6

Bottom Depth: 4226 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	0312	2012
Bottom	0402	
End	0457	

Positional Information

Start	Lat: 49 ° 59.91 N	Lon: 144 ° 59.95 W
Bottom	Lat: 49 ° 59.90 N	Lon: 144 ° 59.97 W
End	Lat: 49 ° 59.81 N	Lon: 145 ° 0.09 W

Extra comments:  
**UBC + ONAr; OUT-OF-ORDER**  
 19 - (20 - 1 - 2 - 3 - 4 - 5) - 21 - (22  
 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: 2013-18 Station: P26 Event #: 83 Ship: Tully UTC Date (dd|mmm|yyyy): 31 | -08 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials				Comments	
			Target Pressure	Confirmed Pressure	OXY UVic	Sal IOS	ONAr UVic	NG UVic		
1	1	561	Bot-10	✓	4317	xx	x	xx	xx	
2	2	562	4000	✓		xx	x	xx	xx	
3	3	563	3500	✓		xx	x	xx		
4	4	564	3000	✓		xx	x	xx	xx	
5	5	565	5m	✓		xx	x	xx		
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

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

Bottom Depth: 4224 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1135	0435
Bottom	1251	
End	1404	

Positional Information

Start	Lat: <u>50</u> ° <u>60</u> . <u>02</u> N
	Lon: <u>145</u> ° <u>00</u> . <u>08</u> W
Bottom	Lat: <u>50</u> ° <u>00</u> . <u>04</u> N
	Lon: <u>145</u> ° <u>00</u> . <u>06</u> W
End	Lat: <u>50</u> ° <u>00</u> . <u>00</u> N
	Lon: <u>144</u> ° <u>59</u> . <u>98</u> W

Extra comments:  
Deep ONAr cast

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P26 Event #: 84 Vessel: TULLY UTC Date (dd|mmm|yyyy): 31 | Aug | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments	
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	UVic TM	UR14	Cd	UBC TM	PMn	FeCl		
1	1	566	2000	✓	2000		x	x		x	x	xx	x		x	TMR → down to
2	2	567	1800	✓	1800		x	x		x	x	xx			x	20m, to 5m
3	3	568	1600	✓	1600		x	x		x	x	xx	x		x	then down to
4	4	569	1400	✓	1400		x	x		x	x	xx			x	2015 m for sampling
5	5	570	1000	✓	1000		x	x							x	→ vent cap was
6	6	571	1000	✓	1000		x	x		x	x	xx	x		x	not screwed
7	7	572	650	✓	650		x	x		x	x	xx			x	tightly
8	8	573	500	✓	500		x	x		x	x				x	
9	9	574	500	✓	500		x	x		x		yx	x		x	→ bottle leaking
10	10	575	350	✓	350		x	x		x	x	xx	x		x	
11	11	576	150	✓	150		x	x		x	x	yx			x	
12	12	577	75	✓	75		x	x		x	x	yx			x	
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Profile type:  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 4225 m  
 Transmissio Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	14:46	07:46
Bottom (BO)	15:08	08:08
End (EN)	15:55	08:55

Positional Information  
 Start  
 Lat: 49° 59.97 N  
 Lon: 144° 59.92 W

Bottom  
 Lat: 49° 59.95 N  
 Lon: 144° 59.94 W

Finish  
 Lat: 49° 59.99 N  
 Lon: 144° 59.96 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-2

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: - P26 Event #: 85 Ship: Tully UTC Date (dd|mmm|yyyy): 31 | 8 | 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed Pressure	Nina															
1		578	5	✓		x														
2		579	5	✓		x														
3		580	5	✓		x														
4		581	MLD	✓	25	x														
5		582	MLD	✓	25	x														
6		583	MLD	✓	25	x														
7		584	Max	✓	40	x														
8		585	Max	✓	40	x														
9		586	Max	✓	40	x														
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

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

Bottom Depth: 4226 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1704	
Bottom	1709	
End	1715	

Positional Information  
 Start  
 Lat: 49 ° 59.94 N  
 Lon: 144 ° 59.99 W

Bottom  
 Lat: 49 ° 59.96 N  
 Lon: 144 ° 59.97 W

End  
 Lat: 49 ° 59.96 N  
 Lon: 144 ° 59.97 W

Extra comments:  
 Light cast  
**OUT-OF-ORDER**

# Water Properties Group

# Sampling Log

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

Cruise ID: - 2013-18 Station: PA-007 Event #: 86 Ship: Tully - UTC Date (dd:mmm/yyyy): 31 8 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials			Comments
			Target Pressure	Confirmed Pressure	Oxy UVic	Sal IOS	ONAr UW	
1		587	10	✓	xx	x	xx	
2		588	6	✓	xx	x	xx	
3		589	3	✓	xx	x	xx	
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

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

Bottom Depth: 496 m  
 Transmisso Cleaned:  / N

Time	UTC	Local
Start	1824	1124
Bottom	1833	
End	1845	

Positional Information  
 Start  
 Lat: 50° 06.86 N  
 Lon: 144° 49.85 W

Bottom  
 Lat: 50° 06.88 N  
 Lon: 144° 49.85 W

End  
 Lat: 50° 06.86 N  
 Lon: 144° 49.84 W

Extra comments:  
 Shallow <sup>17</sup>O cast.



# Water Properties Group

# Rosette Log

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

Cruise ID: 2013-18

Station: D26

Event #: 90

Ship: JPT

UTC Date (dd|mmm|yyyy): Aug | 31 | 2013

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken							Comments			
		Flask Serial #	Value mL · L <sup>-1</sup>	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH <sub>4</sub>	[TA]d	UVC TH		Uvic TM	UHPH	PTM
1	614			4000			x	x				xx	x	y	x	
2	615			3500			x	x				xx	x	x		
3	616			3000			x	y				xx	y	x		
4	617			2500			x	x				xx	x	x		
5	618			300			x	x			x					Amy Cain's AI matrix
6	619			300			x	y			x					
7	620			300			x	x			x					
8																Messenger release time
9																01:10 UTC
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): NS

Bottom Depth: 4226 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	23:20	16:20
Messenger Bottom	01:10	18:10
End	02:34	19:34

**Positional Information**  
 Start  
 Lat: 49 ° 59.96 N  
 Lon: 145 ° 00.15 W

Bottom  
 Lat: 49 ° N  
 Lon: 145 ° W

End  
 Lat: 49<sup>30</sup> ° 00.32 N  
 Lon: 145 ° 00.77 W

**Oxygen Info For This Cast**  
 Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
 Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
 \*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_  
 Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P12 Event #: 99 Vessel: TULLY UTC Date (dd|mmm|yyyy): 03 | Sept | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments				
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	TM UVIC	URFH	URC PMn	URC TM	Te(II)						
1	1	621	2000	✓	2000		x	x		x	x	x	xx	y					TMR went down
2	2	622	1600	✓	1600		x	x					xx	y					to 15m, then up
3	3	623	1300	✓	1300		y	x						y					to 5m, and
4	4	624	1000	✓	1000		y	y						y					then down to
5	5	625	800	✓	800		x	x						y					2015m for
6	6	626	600	✓	600		x	x						x					sampling.
7	7	627	450	✓	450		x	y						y					
8	8	628	400	✓	400		y	y						y					
9	9	629	300	✓	300		x	x						x					
10	10	630	200	✓	200		x	x						x					
11	11	631	100	✓	100		x	y				x	xy	y					
12	12	632	50	✓	50		x	x				x	xx	x					
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

Profile type:  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 3229 m  
 Transmissio Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	14:24	07:24
Bottom (BO)	14:53	07:53
End (EN)	15:28	08:28

Positional Information  
 Start  
 Lat: 48° 58.21 N  
 Lon: 130° 40.09 W

Bottom  
 Lat: 48° 58.13 N  
 Lon: 130° 39.88 W

Finish  
 Lat: 48° 58.23 N  
 Lon: 130° 39.97 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
TMR-1

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P12 Event #: 100 Ship: Tully UTC Date (dd-mm-yyyy): 3 9 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials			Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	ONAr	
1		633	Bot-10	✓ 3274	x x	x	x	
2		634	2500	✓	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): HM

Bottom Depth: 3229 m  
 Transmisso Cleaned:  Y  N

Time	UTC	Local
Start	1539	0839
Bottom	1640	
End	1740	

Positional Information  
 Start  
 Lat: 48 ° 58.15 N  
 Lon: 130 ° 40.09 W

Bottom  
 Lat: 48 ° 58.19 N  
 Lon: 130 ° 40.03 W

End  
 Lat: 48 ° 58.19 N  
 Lon: 130 ° 40.07 W

Extra comments:  
Deep ONAr cast

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2013-18 Station: P12 Event #: 101 Vessel: JPT UTC Date (dd|mmm|yyyy): 03 | Sept | 2013

Bottles & Samples			Rosette Operation		Samples Taken (↓ write samplers' initials under each sample type)										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl/a	TM UVic	unfilt	UBC PHn	UBC TM	Fe(II)					
1	1	635	1800	✓	1800		Y	X		X	X		XX	X				THP → down to
2	2	636	1400	✓	1400		Y	X		X	X		XX	Y				25m, to 5m,
3	3	637	1000	✓	1000		X	Y		X	X		XX	Y				and then to
4	4	638	900	✓	900		X	Y		X	Y		XX	Y				1815m for sampling
5	5	639	700	✓	700		X	X		X	X		XX	Y				
6	6	640	500	✓	500		X	X		X	X		XX	Y				
7	7	641	300	✓	300		X	X		-	-	X	XX	X				
8	8	642	300	✓	300		X	Y		X	X			X				
9	9	643	150	✓	150		X	Y		X	X		XX	X				
10	10	644	75	✓	75		X	Y		X	X		XY	X				
11	11	645	25	✓	25		X	Y		X	X		XX	X				
12	12	646	10	✓	10		X	X		X	X	X	XX	X				
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:  
 Ros (default) | TrMetRos | X-Niskin  
 Watchkeeper(s):  
NS

Bottom Depth: 3231 m  
 Transmissometer Cleaned: Y / N  
 Fluorometer Cleaned: Y / N

Time	UTC	Local
Start (BE)	<u>18 : 08</u>	<u>11 : 08</u>
Bottom (BO)	<u>18 : 44</u>	<u>11 : 44</u>
End (EN)	<u>20 : 17</u>	<u>13 : 17</u>

Positional Information

Start	Lat: <u>48° 58' 18" N</u>	Lon: <u>130° 39' 97" W</u>
Bottom	Lat: <u>48° 58' 20" N</u>	Lon: <u>130° 40' 02" W</u>
Finish	Lat: <u>48° 58' 22" N</u>	Lon: <u>130° 40' 09" W</u>

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
THP-2

# Water Properties Group

# Sampling Log

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

Cruise ID: 2013-18 Station: P4 Event #: 105 Ship: Tully UTC Date (dd mmm yyyy): 4 9 13

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Oxy	PIC	Sal	NH4	Nina										
1		647	Bot-10	✓	1318	x	x												
2		648	1250	✓		x			x										
3		649	1000	✓		xx			xx										
4		650	800	✓		x			xx										
5		651	600	✓		x	x		x										
6		652	400	✓		x													
7		653	300	✓		x													
8		654	250	✓		x					x								NH4 water
9		655	250	✓		x					x								NH4 water
10		656	200	✓		xx													
11		657	100	✓		x													
12		658	50	✓		x													
13		659	25	✓		x													
14		660	10 / Max	✓	36	x	x						x						
15		661	10 / Max	✓	36	x	x						x						
16		662	5	✓		x													
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 1318 m  
 Transmisso Cleaned:  Y /  N

Time	UTC	Local
Start	1352	0652
Bottom	1416	
End	1452	

Positional Information

Start	Lat: <u>48 ° 38 . 98</u> N
	Lon: <u>126 ° 39 . 88</u> W

Bottom

Lat: <u>48 ° 39 . 03</u> N
Lon: <u>126 ° 39 . 99</u> W

End

Lat: <u>48 ° 39 . 04</u> N
Lon: <u>126 ° 39 . 90</u> W

Extra comments:  
 Return cast  
10, 11, 12, 14, 15, 13, 16