

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: 59 Event #: 01 Ship: Tully UTC Date (dd mmm yyyy): 13 09 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	OXY	Nut-fr	DIC	Sal		CHL	HPLC	Phyto	DA	HAB	UVic		
1		1	Bot-10	✓ 219	x	x	x										
2		2	200	✓ 201	x	x	xx								x		
3		3	175	✓ 176	xx	x											
4		4	150	✓ 152	x	x	x								x		
5		5	125	✓ 126	x	xx											Stop AT 148 ~ 2min
6		6	100	✓ 101	x	x	x										
7		7	75	✓ 75	x	x	x										
8		8	50	✓ 50	x	x	x			x					x		
9		9	40	✓ 40	xx	x				x							
10		10	30	✓ 30	x	xx	x			x							
11		11	20	✓ 19	x	x	xx			xx					x		
12		12	10	✓ 10	x	x	x			x					x		
13		13	5	✓ 5	x	x	x	x		x		xx		x	x		
14		14	0	✓ 1.6	x	x	x			xx	xx						fluor:
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Profile type:
ROS TRM X-Niskin other?
Watchkeeper(s): MGBottom Depth: 220 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0058	1758
Bottom	0105	
End	0123	

Positional Information
Start
Lat: 48 ° 36.96 N
Lon: 123 ° 14.60 WBottom
Lat: 48 ° 37.10 N
Lon: 123 ° 14.69 WEnd
Lat: 48 ° 37.42 N
Lon: 123 ° 14.72 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040

Station: JF2

Event #: 04

Ship: Tully

UTC Date (dd mmm yyyy): 13 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	YS										
1		15	20	✓ 20	x										
2		16	20	✓	x										
3		17	20	✓	x										
4		18	20	✓	x										
5		19	20	✓	x										
6		20	20	✓	x										
7		21	20	✓	x										
8		22	20	✓	x										
9		23	20	✓	x										
10		24	20	✓	x										
11		25	20	✓	x										
12		26	20	✓	x										
13		27	20	✓	x										
14		28	20	✓	x										
15		29	20	✓	x										
16		30	20	✓	x										
17		31	20	✓	x										
18		32	20	✓	x										
19		33	20	✓	x										
20		34	20	✓	x										
21		35	20	✓	x										
22		36	20	✓	x										
23		37	20	✓	x										
24		38	20	✓	x										

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

Bottom Depth: 185 m
Transmissio Cleaned: (Y) / N

	UTC	Local
Start	0736	
Bottom	0739	
End	0744	

Positional Information

Lat:	48 ° 18 . 04 N
Lon:	123 ° 59 . 99 W

Start

Bottom

Lat: 48 ° 18 06 N
Lon: 124 ° 00 . 00 W

End

Lat: 48 ° 18 06 N
Lon: 124 ° 00 . 03 W

Extra comments:
Water for Yuanji Sun

Water Properties Group

Sampling Log . Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-040 Station: JF2 Event #: 05 Ship: Tully UTC Date (dd mmm yyyy): 13 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials													Comments	
			Target Pressure	Confirmed		YS													
				✓	Pressure														
1		39	160	✓	160		x												
2		40	160	✓			x												
3		41	160	✓			x												
4		42	160	✓			x												
5		43	160	✓			x												
6		44	160	✓			x												
7		45	160	✓			x												
8		46	160	✓			x												
9		47	160	✓			x												
10		48	160	✓			x												
11		49	160	✓			x												
12		50	160	✓			x												
13		51	160	✓			x												
14		52	160	✓			x												
15		53	160	✓			x												
16		54	160	✓			x												
17		55	160	✓			x												
18		56	160	✓			x												
19		57	160	✓			x												
20		58	160	✓			x												
21		59	160	✓			x												
22		60	160	✓			x												
23		61	160	✓			x												
24		62	160	✓			x												

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

Bottom Depth: 185 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0814	0114
Bottom	0817	
End	0822	

Positional Information

Lat:	48 ° 18.07	N
Lon:	124 ° 00 04	W

▼

Lat:	48 ° 18.08	N
Lon:	124 ° 00.02	W

▼

Lat:	48 ° 18.09	N
Lon:	124 ° 00.08	W

Extra comments:
Water for Yuanji Sun

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: JF2 Event #: 07 Ship: Tully UTC Date (dd.mmm.yyyy): 13 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-F	Chl	HPLC	DIC	DA	Phyto	HAB	Gases			
				✓	170	HK/LK	HM	YS/ST	YS/ST	ST	LK/SK	HM	HM	LK			
1		63	Bot-5	✓		x		x		x							
2		64	150	✓		x		x		x							
3		65	125	✓		x x		x									
4		66	100	✓		x		x		x x							
5		67	75	✓		x		x		x							
6		68	50	✓		x		x x	x	x							
7		69	30	✓		x		x	x	x							
8		70	20	✓		x		x	x x	x x							
9		71	10	✓		x		x	x	x							
10		72	5	✓		x	x	x	x	x				x x			
11		73	0	✓		x		x	x	x x	x	x x	x				
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: 105 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0859	0159
Bottom	0902	
End	0915	

Positional Information

Start	Lat: 48 ° 18.13 N
	Lon: 124 ° 00 33 W
Bottom	Lat: 48 ° 18.12 N
	Lon: 124 ° 00 38 W
End	Lat: 48 ° 18 13 N
	Lon: 124 ° 00 48 W

Extra comments:
IOS

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P1 Event #: 10 Ship: Tully UTC Date (dd mmm yyyy): 13 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Sal	Nut-Fr	HPLC	CHL	Phyto	DA	DIC	Gases	HAB		
1		74	Bot-10	✓ 110	x		x					x x				
2		75	30	✓	x		x		x x			x				
3		76	5	✓	x x	x	x					x	x x			
4		77	5	✓			x	x 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): HM +

Bottom Depth: 119 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1707	1007
Bottom	1709	
End	1714	

Positional Information
Start
Lat: 48 ° 34.51 N
Lon: 125 ° 30.00 W

Bottom
Lat: 48 ° 34 51 N
Lon: 125 ° 30 02 W

End
Lat: 48 ° 34 51 N
Lon: 125 ° 30 02 W

Extra comments:
Phyto: lugol and Form

Water Properties Group

Sampling Log . Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-040 Station: P2 Event #: 11 Ship: Tully UTC Date (dd mmm yyyy): 13 09 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments		
			Target	Confirmed	DMS	DMSP	DMSP	Nut-Fr	Chl	HPLC	UVic	Bugs	Phyto	HAB				
			Pressure	✓ Pressure														
					t MA	d MA	cu	cu (2)	pl (2)	TV	TV	ul	ul					
1		78	100	✓ 107								x						
2		79	100	✓ 100		x	x	x	x		x							
3		80	75	✓ 75				x	x		x							
4		81	50	✓ 50				x	x		x							
5		82	50	✓ 50								x						
6		83	40	✓ 40				x	x									
7		84	30	✓ 30				x	xx	xx							Fluo	0.11
8		85	25	✓ 25				x	x	xx							Fluo	1.07
9		86	20	✓ 20	xx	xx	xx	x	x	xx	x						Fluo	3.26
10		87	15	✓ 15				xx	xx	xx							Fluo	2.45
11		88	10	✓ 10				x	x	xx	x						Fluo	2.39
12		89	5	✓ 5		x	x	x	x	xx	x		xx	x			Fluo	1.50
13		90	5	✓ 5								x						
14		91	0	✓ 2.2	x	x	x	x	x									
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

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

Time	UTC	Local
Start	1939	1239
Bottom	1941	
End	1955	

Positional Information
Lat: 48 ° 35.95 N
Lon: 125 ° 59.97 W

Lat: 48 ° 35.94 N
Lon: 125 ° 59.97 W

Lat: 48 ° 35.90 N
Lon: 126 ° 0.00 W

Extra comments:
DMS + UVic
Phyto: lugol and Form

Water Properties Group

Sampling Log

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

Cruise ID: 2018-40 Station: P2 Event #: 14 Ship: Tully UTC Date (dd mmm/yyyy): 13 SEP 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments	
			Target Pressure	Confirmed ✓ Pressure	Oxy	Nut-F	Nut-C	Sal	DIC	TOC	TOC	Gels	Gases	DOC	CDOM		
					MR	JAY		MR	JWTV	SJ	DH	MR	TV	CL	OW		
1		92	Bot-10	✓ 109	x	x			x	x	x	x		x	xx		
2		93	100	✓ 100	xx	x			x		x	x					
3		94	75	✓ 75	x	x			xx		x	x					
4		95	75	✓ 75	x	x			x								
5		96	50	✓ 50	x	x			x	x	x	x		x	x		
6		97	25	✓ 25	x	xx			x		x	x					
7		98	10	✓ 10	x	x			x		x	x					
8		99	5	✓ 5	xx	x		x	x		x	x	xx				
9		100	0	✓ 2.1						x				xx	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): MR

Bottom Depth: 116 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	<u>2037</u>	<u>1337</u>
Bottom	<u>2040</u>	
End	<u>2051</u>	

Positional Information

Lat:	<u>48 ° 35.98</u>	<u>N</u>
Lon:	<u>126 ° 00.06</u>	<u>W</u>

▼

Lat:	<u>48 ° 35.98</u>	<u>N</u>
Lon:	<u>126 ° 00.07</u>	<u>W</u>

▼

Lat:	<u>48 ° 36.00</u>	<u>N</u>
Lon:	<u>126 ° 00.01</u>	<u>W</u>

Extra comments:
Deep cast

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P3 Event #: 15 Ship: Tully UTC Date (dd|mmm|yyyy): 13|09|18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed	Nut-F	Sal	Chl	HPLC	Gases	Phyto	HAB							
			Pressure	✓ Pressure					UBC									
1		101	5	✓	5	x	x	xx	xx	xx	xx	x						
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:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): MG

Bottom Depth:	808	m
Transmissio Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	2227	1527
Bottom	2240	
End	2256	

Positional Information		
Lat:	48 ° 37.54	N
Lon:	126 ° 19.98	W

Start

Lat:	48 ° 37.59	N
Lon:	126 ° 19.95	W

Bottom

Lat:	48 ° 37.60	N
Lon:	126 ° 19.88	W

End

Extra comments:
Phyto: lugol and Form

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P4 Event #: 16 Ship: Tully UTC Date (dd:mmm yyyy): 14 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	DMS	DMSP	DMSP	Nut-Fr	Chl	HPLC	Phyto	UVic	DA	bugs	HAB		
					HA	HA	HA	WB	WB	HA/HA	HA	TV	HA	TV	HA		
1		102	300	✓	300	x			x								
2		103	250	✓	250				xx				x				
3		104	200	✓	200	x	x	x	x								
4		105	150	✓	150	x	x	x	x				x				
5		106	100	✓	100	x			x	x							
6		107	100	✓	100									x			
7		108	75	✓	75	x			x	x							
8		109	60	✓	60				x	x	xx						Fluo 0.256
9		110	50	✓	50									x			
10		111	50	✓	50	x			x	x	xx		x				Fluo 0.403
11		112	40	✓	40	x			x	xx	xx						Fluo 6.623
12		113	30	✓	30	x	x	x	x	x	xx						Fluo 1.685
13		114	25	✓	25	x			x	xx							
14		115	20	✓	20	xx	xx	xx	x	x			x				
15		116	15	✓	15	x			x	x	xx						Fluo 3.761
16		117	10	✓	10	x			x	x			x				
17		118	5	✓	5				x	x	xx	xxx		x		x	Fluo 2.845
18		119	5	✓	5										x		
19		120	5	✓	5	x	x	x					x				
20		121	0	✓	2	x	x	x	x	x							
21																	
22																	
23																	
24																	

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

Bottom Depth: 1315 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0032	1732
Bottom	0037	
End	0059	

Positional Information

Lat: 48 ° 39.00	N
Lon: 126 ° 40.03	W

▼

Lat: 48 ° 38.97	N
Lon: 126 ° 39.98	W

▼

Lat: 48 ° 38.96	N
Lon: 126 ° 39.97	W

Extra comments:
 DMS cast

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040

Station: P4

Event #: 17

Ship: Tully

UTC Date (dd mmm yyyy): 14 SEPT 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Nut-C	Nut-F	Sal	TM F	TM UF	Ligs					
1	1	122	1200	1200	x	x	x	x	x						
2	2	123	1200	1199	x	x	x	x	x						tripped by depth
3	3	124	1000	1001	x	x		x	x						"
4	4	125	800	799	x	x		x	x						tripped by P
5	5	126	600	600	x	x	x	x	x						
6	6	127	400	401	xx	xx		x	x						
7	7	128	200	200		x		xx	xx						
8	8	129	100	99		x		x	x	xx					
9	9	130	75	75		x	x	x	x	xx					
10	10	131	50	50		x		x	x	xx					
11	11	132	25	25		x		x	x	xx					
12	12	133	10	10		x		x	x	xx					
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 1309 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0108	1808
Bottom	0132	
End	0205	

Positional Information

Lat:	48° 38' 44.35" N
Lon:	126° 39' 9.70" W

▼

Lat:	48° 39' 02" N
Lon:	126° 39' 96" W

▼

Lat:	48° 39' 07" N
Lon:	126° 40' 13" W

Extra comments:
 TMR

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P4 Event #: 18 Ship: Tully UTC Date (dd/mm/yyyy): 14 Sep 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Oxy	Nut-F	Nut-C	Sal	DIC	Cr	CW TOC	DNA	gases	SAGs	CW Gels	EEA	CAR		
				✓	ME/24	W/24	W/24	ME	SS/24	15	DH		WB	SS		ST	ST		
1		134	Bot-10	✓	1321	x	x	x		x	x	x	x		x	x			
2		135	1250	✓	1249	x	x	x	x	xx			x		x				
3		136	1250	✓	1249	xx	x	x	xx	x		x				x			
4		137	1000	✓	1000	x	x	x	xx	x	x	x			x	x	x		
5		138	800	✓	800	x	x	x	x	x		x	x		x	x			
6		139	600	✓	600	x	xx	xx		x		x	x		x	x			
7		140	500	✓	500	x	x	x									x		
8		141	400	✓	400	x	x	x		x	x	x	x		x	x			
9		142	300	✓	300	x	x			x		x	x		x	x			
10		143	250	✓	250	x	x			x		x				x			
11		144	200	✓	200	x	x			x	x	x	x		x	x			
12		145	175	✓	175	xx	x			x		x				x			
13		146	150	✓	150	x	x			x		x	x		x	x			
14		147	125	✓	125	x	xx			x		x				x			
15		148	100	✓	100	x	x			x	x	x	x		x	x	x		
16		149	75	✓	75	x	x			x	x	x				x			
17		150	50	✓	50	x	x			x		x	x		x	x			
18		151	25	✓	24	x	x			x	x	x	x		x	x			
19		152	10	✓	10	x	x			x		x	x		x	x	x		
20		153	5	✓	5	xx	x		x	x		x		xx		x			
21		154	5	✓	5						x						x	x	
22																			
23																			
24																			

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

Bottom Depth: 1310 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0220	1920
Bottom	0243	
End	0324	

Positional Information

Lat:	48° 39.06	N
Lon:	126° 40.12	W

Start

Bottom

End

Lat: 48° 39.03 N
Lon: 126° 40.13 W

Lat: 48° 38.90 N
Lon: 126° 40.11 W

Extra comments:
Deep cast
Will have loop for DO x2

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P4 Event #: 22 Ship: Tully UTC Date (dd|mmm yyyy): 14 | 09 | 18

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials												Comments	
			Target	Confirmed	Pressure	UBC													
			Pressure	✓															
1		155	Bot-10	✓	1316		x X												
2		156	Bot-10	✓															
3		157	Bot-10	✓															
4		158	Bot-10	✓															
5		159	1000	✓	1001		x X												
6		160	1000	✓															
7		161	1000	✓															
8		162	1000	✓															
9		163	500	✓	500		x X												
10		164	500	✓															
11		165	500	✓															
12		166	500	✓															
13		167	10	✓	10		x X												
14		168	10	✓															
15		169	10	✓															
16		170	10	✓															
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth:	1310	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	0537	2237
Bottom	0600	
End	0627	

Positional Information
Start
Lat: 48 ° 39.07 N
Lon: 126 ° 40.17 W

Start

Bottom
Lat: 48 ° 39.06 N
Lon: 126 ° 40.06 W

Bottom

End
Lat: 48 ° 39.03 N
Lon: 126 ° 39.91 W

End

Extra comments:
UBC cast

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040

Station: P4

Event #: 23

Ship: Tully

UTC Date (dd mmm yyyy): 14 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials														Comments
			Target Pressure	Confirmed Pressure	Size	13C	15	15N	Dark	32Si	Part	d Si	NH4	urea	nuts	phyto	ONAr	O2	
				✓	CHL	15NO3	NH4	urea	Blank		Si								
1		171	5	✓															
2		172	OXY MAX	✓ 25													xx	xx	
3																	xx	xx	
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17		173	0.1%	✓ 75	x	x	x	x		x	x	x	x	x	x	x			
18		174	1%	✓ 35	x	x	x	x		x	x	x	x	x	x	x			
19		175	15%	✓ 15	x	x	x			x	x	x	x	x	xxx				
20		176	30%	✓ 10	x	x	x	x		x	x	x	x	x	x	x			
21		177	55%	✓ 5	x					x					x				
22		178	55%	✓ 5		x	x	x		x		x	x	x		x			
23		179	100%	✓ 2	x				x		x								
24		180	100%	✓ 2		x	x	x		x		x	x	x	x				

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

Bottom Depth:	1303 m
Transmisso Cleaned:	☒ Y / ☐ N

Time	UTC	Local
Start	0700	0000
Bottom	0703	
End	0712	

Positional Information	
Start	Lat: 48 ° 38 . 99 N Lon: 126 ° 39 . 88 W

Bottom	Lat: 48 ° 38 . 96 N Lon: 126 ° 39 . 86 W
--------	---

End	Lat: 48 ° 38 . 86 N Lon: 126 ° 39 . 95 W
-----	---

Extra comments:
Productivity cast
Before sunrise IF possible
OUT-OF-ORDER
17, 18, 2, 19, 20, 21, 22, 1, 23, 24

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P5 Event #: 24 Ship: Tully UTC Date (dd mmm yyyy): 14 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	Nut-F	Sal	Chl	HPLC	Gases	UBC					
1		181	5	☒	x	x	xx	xx	xx						
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: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): HM +

Bottom Depth: 2086 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0929	0229
Bottom	1003	
End	1036	

Positional Information

Lat:	48	°	41	50	N
Lon:	127	°	09	94	W

▼

Lat:	48	°	41	66	N
Lon:	127	°	09	76	W

▼

Lat:	48	°	41	05	N
Lon:	127	°	09	68	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P6 Event #: 25 Ship: Tully UTC Date (dd mmm yyyy): 14 SEP 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target	Confirmed	Nut-F	Sal	Chl	HPLC	Gases						
			Pressure	√ Pressure					UBC						
1		182	5	✓	x	x	xx	xx	xx						
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:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): HM

Bottom Depth: 2569 m
Transmisso Cleaned: ☒ N

Time	UTC	Local
Start	1249	0549
Bottom	1322	
End	1355	

Positional Information
Start
Lat: 48° 44.65 N
Lon: 127° 40.00 W

Bottom
Lat: 48° 44.56 N
Lon: 127° 39.76 W

End
Lat: 48° 44.54 N
Lon: 127° 39.59 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P7 Event #: 26 Ship: Tully UTC Date (dd mmm yyyy): 14 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target	Confirmed	Nut-F	Sal	Chl	HPLC	Gases	UBC						
			Pressure	√ Pressure												
1		183	5		x	x	xx	xx	xx							
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: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): H.M. +

Bottom Depth: 2501 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	16 11	09
Bottom	16 43	
End	17 18	

Positional Information 46
Start
Lat: 48 ° 45 58 N
Lon: 128 ° 10 08 W

▼ 46
Bottom
Lat: 48 ° 45 52 N
Lon: 128 ° 09 08 W

▼ 46
End
Lat: 48 ° 45 48 N
Lon: 128 ° 09 42 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P8 Event #: 28 Ship: Tully UTC Date (dd mmm yyyy): 14 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials																Comments
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut Fr	Nut C	Chl	HPLC		TOC-D	UBC	UVic	Gels	Phyto	HAB				
				✓		MP/KS		TV	TV	JS	JS		CW	gases	TV	CW	TV	TV			
1		184	2000	✓	2006	x	x x	x	x				x			x				oops! ?	
2		185	1500	✓	1500	x	x	x	x				x			x					
3		186	1250	✓	1251	x	x	x x	x x				x			x					
4		187	1000	✓	1000	x	x x	x	x				x			x					
5		188	800	✓	800	x	x	x	x				x			x					
6		189	600	✓	600	x x		x	x				x			x					
7		190	400	✓	400	x		x	x				x			x					
8		191	300	✓	300	x		x					x			x					
9		192	250	✓	250	x		x					x		x	x					
10		193	200	✓	200	x		x					x			x					
11		194	175	✓	175	x		x					x			x					
12		195	150	✓	150	x		x x					x		x	x					
13		196	100	✓	100	x x		x		x			x			x					
14		197	75	✓	75	x		x		x			x			x					
15		198	60	✓	60	x		x		x	x x										
16		199	50	✓	51	x		x		x	x x	x		x		x					
17		200	40	✓	40	x		x		x	x x										
18		201	30	✓	30	x		x		x	x x										
19		202	25	✓	26	x		x		x x		x				x					
20		203	20	✓	20	x		x		x x				x							
21		204	15	✓	15	x		x		x	x x										
22		205	10	✓	10	x		x		x		x		x		x					
23		206	5	✓	5	x x	x	x				x	x x			x					
24		207	5		5			x		x	x x			x			x x	x			

Version: 25 Nov 2011

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

Bottom Depth: 2514 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1933	1233
Bottom	2007	
End	2105	

Positional Information

Lat:	48 ° 49.07	N
Lon:	128 ° 39.93	W

Start

Lat:	48 ° 49.05	N
Lon:	128 ° 40.07	W

Bottom

Lat:	48 ° 48.98	N
Lon:	128 ° 40.26	W

End

Extra comments:
Will also have loops for Oxy x2
Phyto: L&F

Water Properties Group

Sampling Log . Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-040 Station: P9 Event #: 33 Ship: Tully UTC Date (dd mmm yyyy): 15 09 2018

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed	Pressure	Nut-F	Sal	Chi	HPLC										
			✓	Pressure															
1		208	5	✓	5	x	x	xx	xx										WRONG DEPTH IN FILE
2																			
3																			OXY SPIKE @ 405 ↑
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: 2336 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0122	1722
Bottom	0156	
End	0231	

Positional Information

Start

Lat: 48 ° 51.36 N

Lon: 129 ° 09.98 W

Bottom

Lat: 48 ° 51.45 N

Lon: 129 ° 09.86 W

End

Lat: 48 ° 51.52 N

Lon: 129 ° 09.87 W

Extra comments:

Plus loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P10 Event #: 34 Ship: Tully UTC Date (dd mmm/yyyy): 15 09 18

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒	Pressure	Nut-F	Sal	Chl	HPLC	Gases						
1		209	5	✓	5	x	x	xx	xx	xx						
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: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): MG

Bottom Depth: 2041 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0530	2230
Bottom	0547	
End	0605	

Positional Information
Start
Lat: 48 ° 53.51 N
Lon: 129 ° 46.29 W

Bottom
Lat: 48 ° 53.45 N
Lon: 129 ° 40.35 W

End
Lat: 48 ° 53.42 N
Lon: 129 ° 40.39 W

Extra comments:
Plus loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P11 Event #: 35 Ship: Tully UTC Date (dd mmm yyyy): 15 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed	Nut-F	Sal	Chl	HPLC	Gases									
			Pressure	✓ Pressure					UBC									
1		210	5	✓ 5	x	x	xx	xx	xx									
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: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): HM +

Bottom Depth: 2750 m

Transmisso Cleaned: ☒ Y ☐ N

	UTC	Local
Start	0817	0117
Bottom	0834	
End	0851	

Positional Information

Start

Lat: 48 ° 55 . 96 N

Lon: 130 ° 09 . 93 W

Bottom

Lat: 48 ° 55 . 80 N

Lon: 130 ° 10 . 05 W

End

Lat: 48 ° 55 . 68 N

Lon: 130 ° 10 . 08 W

Extra comments:

Plus loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P12 Event #: 36 Ship: Tully UTC Date (dd mmm yyyy): 15 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	UBC												
1		211	2000	✓	x												
2		212	2000	✓													
3		213	2000	✓													
4		214	2000	✓													
5		215	1000	✓	x												
6		216	1000	✓													
7		217	1000	✓													
8		218	1000	✓													
9		219	500	✓	x												
10		220	500	✓													
11		221	500	✓													
12		222	500	✓													
13		223	10	✓	x												
14		224	10	✓													
15		225	10	✓													
16		226	10	✓													
17			10	✓													
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 3234 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1100	0400
Bottom	11 33	
End	1210	

Positional Information
Start
Lat: 48 ° 58 . 18 N
Lon: 130 ° 40 . 04 W

Bottom
Lat: 48 ° 58 07 N
Lon: 130 ° 40 04 W

End
Lat: 48 ° 57 98 N
Lon: 130 ° 39 92 W

Extra comments:
UBC cast

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P12 Event #: 37 / 38 Ship: Tully UTC Date (dd mmm yyyy): 15 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments			
			Target Pressure	Confirmed ✓ Pressure	Size	13C	15	15N	Dark	32Si	Part	d Si	NH4	urea	nuts	phyto				
					CHL	15NO3	NH4	urea	Blank		Si								17O	
1		227	5	✓ 5													xx	xx		
2		228	OXY MAX	✓ 55													xx	xx		
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17		229	0.1%	✓ 60m	x	x	x	x		x	x	x	x	x	x	x				
18		230	1%	✓ 45m	x	x	x	x		x	x	x	x	x	x					
19		231	15%	✓ 15m	x	x	x			x	x	x	x	x	x	x				
20		232	30%	✓ 8m	x	x	x	x		x	x	x	x	x	x					
21		233	55%	✓ 5m	x						x					x				
22		234	55%	✓ 5m		x	x	x		x		x	x	x	xxx					
23		235	100%	2m	x				x		x									
24		236	100%	2m		x	x	x		x		x	x	x	x					

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

Bottom Depth: 3233 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1236	0536
Bottom	1239	
End	1250	

Positional Information

Lat:	48 ° 50.20	N
Lon:	130 ° 39.82	W

Bottom

Lat:	48 ° 58.20	N
Lon:	130 ° 39 81	W

End

Lat:	48 ° 50.18	N
Lon:	130 ° 39.76	W

Extra comments:
Productivity cast
Before sunrise IF possible
OUT-OF-ORDER
17, 2, 18, 19, 20, 21, 22, 1, 23, 24

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P12 Event #: 41 Ship: Tully UTC Date (dd mmm yyyy): 15 SEP 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target Pressure	Confirmed	Nut-F	Sal	TM F	TM UF	Ligs							
				✓ Pressure												
1		237	300		299	x	x	x	x							
2		238	200		200	x		xx	xx							
3		239	150		149	x		x	x							
4		240	100		100	x		x	x							
5		241	75		73	x		x	x							
6		242	50		46	x		x	x							
7		243	40		40	x		x	x	xxxx						
8		244	25		20	xx		x	x							
9		245	10		10	x		x	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): JC

Bottom Depth: 3233 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1503	0803
Bottom	1511	
End	1519	

Positional Information

Lat:	48° 58.18	N
Lon:	130° 39.99	W

▼

Lat:	48° 58.18	N
Lon:	130° 39.99	W

▼

Lat:	48° 58.17	N
Lon:	130° 40.01	W

Extra comments:
TMR Shallow

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P12

Event #: 42

Ship: Tully

UTC Date (dd mmm yyyy): 15 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials														Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	TOC	TOC	Gels	SAGs	DNA	Gases	EEA	DOC	Cr	
				✓															
1		246	Bot-10	✓	3273	x		x	x	x	xx	x	x	x			x	x	
2		247	3000	✓		x	xx	x	xx	x		x	x	x		x		x	
3		248	2500	✓		xx	xx	x	x	x		x						x	
4		249	2000	✓		x	x	xx	xx	x		x	x	x				x	
5		250	1500	✓		x	xx	x	x	x		x	x	x				x	
6		251	1250	✓		x	x	x	x	x		x	x	x				x	
7		252	1000	✓		x	xx	x	x	x		x	x	x		x		x	
8		253	800	✓		x		x	x	x		x	x	x				x	
9		254	600	✓		x		x	x	x		x	x	x				x	
10		255	500	✓		x		x	x							x			
11		256	400	✓		x		x	x	x		x	x	x				x	
12		257	300	✓		xx		x	x	x		x	x	x				x	
13		258	250	✓		x		x	x	x		x						x	
14		259	200	✓		x		x	x	x		x	x	x				x	
15		260	175	✓		xx		x	x	x		x							
16		261	150	✓		x		x	x	x		x	x	x				x	
17		262	125	✓		x		x	x	x		x							
18		263	100	✓		x		x	x	x		x	x	x		x		x	
19		264	75	✓		x		x	x	x		x							
20		265	50	✓		x		x	x	x	x	x	x	x			x	x	
21		266	25	✓		x		xx	x	x		x	x	x				x	
22		267	10	✓		xx		x	x	x		x	x	x		x		x	
23		268	5	✓		x	x	x		x		x			xx			x	
24		269	0	✓		x		x			x						xx		

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

Bottom Depth: 3233 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1527	0827
Bottom	1620	
End	1735	

Positional Information

Lat:	48 ° 58 .16	N
Lon:	130 ° 40 .00	W

Start

Bottom

End

Lat: 48 ° 58 .17 N
Lon: 130 ° 40 .03 W

Lat: 48 ° 58 13 N
Lon: 130 ° 39 93 W

Extra comments:
Deep cast
Will have loops for DO x2

Water Properties Group

Sampling Log

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

Cruise ID:

2018-040

Station:

P12

Event #:

44

Ship:

Tully

UTC Date (dd mmm yyyy): 15 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-Fr	Chl	HPLC	DA	Phyto	HAB	UVic			
				✓		MR	MA	MA	MA	ALL	TV	TV	TV	TV			
1		270	300	✓	300	x			x								
2		271	250	✓	250				x					x			
3		272	200	✓	200	x	x	x	x								
4		273	150	✓	150	x	x	x	x					x			
5		274	100	✓	100	x			x	x							
6		275	75	✓	75	x			x	x							
7		276	60	✓	60				x	x	xx						Fluo 1.856
8		277	50	✓	50	x			x	xx	xx			x			Fluo 2.916
9		278	40	✓	40	x			x	x	xx						Fluo 2.906
10		279	30	✓	30	x	x	x	x	x	xx						Fluo 0.708
11		280	25	✓	25	x			xx	x							
12		281	20	✓	21	xx	xx	xx	x	x				x			
13		282	15	✓	15	x			x	x	xx						Fluo 0.378
14		283	10	✓	10	x			x	x				x			
15		284	5	✓	5	x	x	x	x					x			
16		285	5	✓	5					x	xx	xx	x				Fluo 0.317
17		286	0	✓	1.76	x	x	x	x	xx							
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth:	3233	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	2043	1343
Bottom	2049	
End	2111	

Positional Information		
Lat:	48 ° 58.24	N
Lon:	130 ° 39.95	W

Start

Lat:	48 ° 58.23	N
Lon:	130 ° 39.92	W

Bottom

Lat:	48 ° 58.22	N
Lon:	130 ° 39.82	W

End

Extra comments:
DMS cast
Phyto: L&F

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P12 Event #: 45 Ship: Tully UTC Date (dd mmm yyyy): 15 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target	Confirmed	Nut-C	Nut-F	Sal	TM F	TM UF							
			Pressure	✓ Pressure												
1		288	2000	2000	x	x	x	x	x							
2		289	1800	1800	x	x	x	x	x							
3		290	1600	1600	xx	xx	x	x	x							
4		291	1400	1400	x	x	x	x	x							
5		292	1200	1200	x	x	x	x	x							
6		293	1100	1100	x	x		x	x							
7		294	1000	1000	x	x		x	x							
8		295	800	800	x	x		x	x							
9		296	600	600	x	x		xx	xx							
10		297	400	400	x	x		x	x							
11		298	250	250		x		x	x							
12		299	130	130		x		x	x							
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

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

Bottom Depth: 3233 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2120	1420
Bottom	2158	
End	2241	

Positional Information

Lat:	48 ° 58.19	N
Lon:	130 ° 39.77	W

▼

Lat:	48 ° 58.00	N
Lon:	130 ° 39.52	W

▼

Lat:	48 ° 58.15	N
Lon:	130 ° 39.24	W

Extra comments:
TMR Deep

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P13 Event #: 47 Ship: Tully UTC Date (dd mmm yyyy): 16 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments				
			Target	Confirmed	Nut-F	Sal	Chl	HPLC	Gases	Oxy	UVic						
			Pressure	✓ Pressure													
1		300	900	✓ 901						x x							
2		301	900	✓ 901						x x							
3		302	900	✓ 901						x x							
4		303	900	✓ 901						x x							
5		304	900	✓ 901						x x							
6		305	900	✓ 901						x x							
7		306	5	✓ 5	x	x	x x	x x									
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 3123 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0255	1955
Bottom	0330	
End	0407	

Positional Information

Lat:	49 ° 02.58	N
Lon:	131 ° 40.05	W

▼

Lat:	49 ° 02.50	N
Lon:	131 ° 40.20	W

▼

Lat:	49 ° 02.55	N
Lon:	131 ° 40.42	W

Extra comments:
Plus loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040

Station: P14

Event #: 48

Ship: Tully

UTC Date (dd mmm yyyy): 16 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments
			Target Pressure	Confirmed Pressure	CHL	HPLC	Nut	Sal	Oxy	TOC	Gases	Gels	Phyto	HAB		
1		307	Bot-10	✓	3351			x		x		x				
2		308	3000	✓				x	x	x		x				
3		309	2500	✓				x x	x	x		x				
4		310	2250	✓				x	x	x		x				
5		311	2000	✓				x	x x	x		x				
6		312	1750	✓				x	x	x		x				
7		313	1500	✓				x x	x	x		x				
8		314	1250	✓				x	x	x		x				
9		315	1000	✓				x x	x	x		x				
10		316	800	✓				x	x	x		x				
11		317	600	✓				x	x	x		x				
12		318	400	✓				x	x	x		x				
13		319	300	✓				x	x	x		x				
14		320	250	✓				x	x	x		x				
15		321	200	✓				x	x	x		x				
16		322	175	✓				x	x	x		x				
17		323	150	✓				x	x x	x		x				
18		324	125	✓				x	x	x		x				
19		325	100	✓				x	x	x		x				
20		326	75	✓				x	x	x		x				
21		327	50	✓				x	x	x		x				
22		328	25	✓				x	x	x		x				
23		329	10	✓				x	x x	x		x				
24		330	5	✓				x x	x x	x		x x	x	x x	x	

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

Bottom Depth:	3313	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	0933	0133
Bottom	0930	
End	1046	

Positional Information		
Lat:	49 ° 07.45	N
Lon:	132 ° 40.08	W

Lat:	49 ° 07.38	N
Lon:	132 ° 39.81	W

Lat:	49 ° 07.02	N
Lon:	132 ° 39.70	W

Extra comments:
TOC & Gels cast
Phyto: L & F

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P15 Event #: ~~49~~ 50 Ship: Tully UTC Date (dd mmm/yyyy): 16 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Nut-F	Sal	Chl	HPLC	Gases UBC									
1		331	5	✓		x	x	x x	x x	x x								
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: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): HM +

Bottom Depth: 3408 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1513	0813
Bottom	1550	
End	1622	

Positional Information

Start Lat: 49 ° 11 . 97 N

Start Lon: 133 ° 40 . 00 W

Bottom Lat: 49 ° 11 95 N

Bottom Lon: 133 ° 39 64 W

End Lat: 49 ° 11 . 97 N

End Lon: 133 ° 39 . 78 W

Extra comments:

Plus loops for 1x Sal, 2x Chl

Water Properties Group

DMS
Sampling Log

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

Cruise ID: 2018-040 Station: P16 Event #: 51 Ship: Tully UTC Date (dd mmm yyyy): 16 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-Fr	Chl	HPLC	Phyto	HAB	UVic	EEA	CAR			
					MA	MA	MA	W	JPZ	TV	TV	TV	TV	SA	CH	ST		
1		332	500	✓ 500										x				
2		333	300	✓ 300	x			x										
3		334	250	✓ 250				x					x					
4		335	200	✓ 200	x	x	x	x										
5		336	150	✓ 150	x	x	x	x					x					
6		337	100	✓ 100	x			x	x					x				
7		338	75	✓ 75	x			x	x									
8		339	60	✓ 60				x	x	xx							Fluo 0.84	
9		340	50	✓ 50	x			x	x	xx			x				Fluo 1.319	
10		341	40	✓ 40	x			x	x	xx							Fluo 1.013	
11		342	30	✓ 30	x	x	x	x	x	xx							Fluo 0.989	
12		343	25	✓ 25	x			xx	xx									
13		344	20	✓ 20	xx	xx	xx	x	x				x					
14		345	15	✓ 15	x			x	x	xx							Fluo 0.683	
15		346	10	✓ 10	x			x	x				x	x				
16		347	5	✓ 5	x	x	x	x					x	x	x			
17		348	5	✓ 5					x	xx	xx	x					Fluo 0.403	
18		349	0	✓ 1.8	x	x	x	x	xx									
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 3634 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2044	1344
Bottom	2053	
End	2123	

Positional Information

Lat:	49 ° 16.94	N
Lon:	134 ° 40.00	W

Start

Bottom

Lat: 49 ° 16.89 N
Lon: 134 ° 40.02 W

End

Lat: 49 ° 16.83 N
Lon: 134 ° 40.02 W

Extra comments:

DMS cast

Phyto: L&F

TMR-2000

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P16 Event #: 52 Ship: Tully UTC Date (dd:mmm:yyyy): 16 SEP 2018

			Rosette Operation		Samples Taken / Sampler's Initials										Comments			
Niskin #	Firing #	Sample #	Target Pressure	Confirmed Pressure	Nut-C	Nut-F	Sal	TM F	TM UF									
1		350	2000	2000	x	x	x	x	x									
2		351	1800	1800	x	x	x	x	x									
3		352	1600	1600	x	x	x	xx	xx									
4		353	1400	1399	x	x	x	x	x									
5		354	1200	1200	x	x	x	x	x									
6		355	1100	1100	x	x		x	x									
7		356	1000	1000	x	x		x	x									
8		357	800	800	xx	xx		x	x									
9		358	600	600	x	x		x	x									
10		359	400	400	x	x		x	x									
11		360	250	250		x		x	x									
12		361	130	130		x		x	x									
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Watchkeeper(s): JZ

Bottom Depth: 3634 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2134	1434
Bottom	2209	
End	2239	

Positional Information

Start Lat: 49° 16.83 N

Start Lon: 134° 40.04 W

Bottom Lat: 49° 16.84 N

Bottom Lon: 134° 40.01 W

End Lat: 49° 16.93 N

End Lon: 134° 39.88 W

Extra comments:

TMR Deep

Water Properties Group

DEEP
Sampling Log

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

Cruise ID:

2018-040

Station:

P16

Event #:

53

Ship:

Tully

UTC Date (dd mmm yyyy):

16 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	TOC	OXY	Gels	Gases	SAGs	DNA	EEA	
				✓													
1		362	Bot-10	✓	3686	x		x	x		x	x	x		x	x	
2		363	3500	✓	3500	x	xx	x	x		x						
3		364	3500	✓	3500	x	x	x	x		x	x	x				
4		365	3000	✓	3000	x	xx	x	x		x	x	x		x	x	
5		366	2500	✓	2500	xx	x	x	x		x	xx	x				
6		367	2000	✓	2000	x	xx	x	x		x	x	x		x	x	
7		368	1500	✓	1500	x	x	x	x		x	x	x		x	x	
8		369	1250	✓	1250	x	xx	x	x		x	x	x		x	x	
9		370	1000	✓	1000	x	xx	x	x		x	x	x		x	x	
10		371	800	✓	800	x		x	x		x	x	x		x	x	
11		372	600	✓	600	xx		xx	xx		x	x	x		x	x	
12		373	400	✓	400	x		x	x		x	x	x		x	x	
13		374	300	✓	301	x		x			x	x	x		x	x	
14		375	250	✓	250	x		x			x	x	x				
15		376	200	✓	200	x		x			x	x	x		x	x	
16		377	175	✓	175	x		x			x	x	x				
17		378	150	✓	150	x		x			x	x	x		x	x	
18		379	125	✓	125	xx		x			x	x	x				
19		380	100	✓	100	x		x		x	x	x	x		x	x	
20		381	75	✓	75	x		xx		x	x	xx	x				
21		382	50	✓	50	x		x		x	x	x	x		x	x	
22		383	25	✓	25	x		x		xx	x	x	x		x	x	
23		384	10	✓	10	xx		x		x	x	x	x		x	x	
24		385	5	✓	5	x	x	x		x	x	x	x	xx			

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

Bottom Depth: 3634 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2256	1556
Bottom	2358	
End	0125	

Positional Information

Start
Lat: 49 ° 16.95 N
Lon: 134 ° 39.92 WBottom
Lat: 49 ° 16.98 N
Lon: 134 ° 39.90 WEnd
Lat: 49 ° 17.02 N
Lon: 134 ° 40.02 W

Extra comments:

Deep cast

Will also have loops for Oxy x2

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P16 Event #: 54 Ship: Tully UTC Date (dd mmm yyyy): 17 SEP 2018

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments		
			Target Pressure	Confirmed ✓ Pressure		Nut-F	Sal	TM F	TM UF	Ligs									
1		386	300		300		x x	x	x	x									
2		387	200		200		x		x	x									
3		388	150		145		x		x	x									
4		389	100		100		x		x	x									
5		390	75		75		x		x	x									
6		391	50		50		x		x x	x x									
7		392	40		40		x		x	x	x x x x								
8		393	25		25		x		x	x									
9		394	10		10		x		x	x									
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 3634 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0134	1834
Bottom	0141	
End	0149	

Positional Information

Lat:	49° 17.06	N
Lon:	134° 40.05	W

▼

Lat:	49° 17.06	N
Lon:	134° 40.12	W

▼

Lat:	49° 17.09	N
Lon:	134° 40.17	W

Extra comments:
TMR Shallow

Water Properties Group

Sampling Log

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

Cruise ID:

2018-040

Station:

P16

Event #:

58

Ship:

Tully

UTC Date (dd mmm yyyy): 17 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials													Comments	
			Target	Confirmed	Size	13C	15	15N	Dark	32Si	Part	d Si	NH4	urea	nuts	phyto	ONAr		O2
			Pressure	✓ Pressure	CHL	15NO3	NH4	urea	Blank	Si									17O
1		395	5	✓													xx	xx	
2		396	OXY MAX	✓ 45													xx	xx	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17		397	0.1%	✓ 75	x	x	x	x		x	x	x	x	x	xxx	x			
18		398	1%	✓ 40	x	x	x	x		x	x	x	x	x	x				
19		399	15%	✓ 20	x	x	x			x	x	x	x	x	x	x			
20		400	30%	✓ 15	x	x	x	x		x	x	x	x	x	x				
21		401	55%	✓ 10	x						x					x			
22		402	55%	✓ 10		x	x	x		x		x	x	x	x				
23		403	100%	2	x				x		x								
24		404	100%	2		x	x	x		x		x	x	x	x				

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

Watchkeeper(s): HM +

Bottom Depth: 3633 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0849	0149
Bottom	0853	
End	0904	

Positional Information

Start

Lat: 49 ° 17.01 N

Lon: 134 ° 39.96 W

Bottom

Lat: 49 ° 17.00 N

Lon: 134 ° 39.93 W

End

Lat: 49 ° 16.99 N

Lon: 134 ° 39.82 W

Extra comments:

Productivity cast

Before sunrise IF possible

OUT-OF-ORDER

17, 18, 2, 19, 20, 21, 22, 1, 23, 24

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P17 Event #: 59 Ship: Tully UTC Date (dd mmm yyyy): 17 9 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	Nut-F	Sal	Chl	HPLC	Gases	UBC					
1		405	5		x	x	xx	xx							
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:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): HM+

Bottom Depth: 3642 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1334	0634
Bottom	1411	
End	1443	

Positional Information

Start	Lat: 49 ° 21 . 00 N
	Lon: 135 ° 40 . 92 W
Bottom	Lat: 49 ° 21 00 N
	Lon: 135 ° 40 . 90 W
End	Lat: 49 ° 20 . 99 N
	Lon: 135 ° 39 . 06 W

Extra comments:
Plus loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P18 Event #: 608 61 Ship: Tully UTC Date (dd mmm yyyy): 17 09 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed	CHL	HPLC	Nut	Sal	Oxy	Gels	Gases	TOC						
			Pressure	✓ Pressure														
					JW	JW	JW	ALL	PG/H	CW	WB	CW						
1		406	Bot-10	✓	3888				x	x		x						THINK I DID NOT PUT THE
2		407	3500	✓	3500			x	x	x		x						DEPTH IN FILE
3		408	3000	✓	3000			xx	x	x		x						
4		409	2500	✓	2500			x	x	x		x						
5		410	2000	✓	2001			x	x	x		x						
6		411	1750	✓	1750				x	x		x						
7		412	1500	✓	1500				x	x		x						
8		413	1250	✓	1250				xx	x		x						
9		414	1000	✓	1001				x	x		x						
10		415	800	✓	800				x	x		x						
11		416	600	✓	600				x	x		x						
12		417	400	✓	400				xx	x		x						
13		418	300	✓	300				x	x		x						
14		419	250	✓	250				x	x		x						
15		420	200	✓	200				x	x		x						
16		421	175	✓	175				x	x		x						
17		422	150	✓	150				x	x		x						
18		423	125	✓	125				xx	x		x						
19		424	100	✓	100				x	x		x						
20		425	75	✓	76				x	x		x						
21		426	50	✓	50				x	x		x						
22		427	25	✓	25				x	x		x						
23		428	10	✓	10				x	x		x						
24		429	5	✓	5	xx	xx	x	x	x	xx	x						

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

Bottom Depth: 3833 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1903	1203
Bottom	2009	
End	2139	

Positional Information

Lat:	49 ° 26.23	N
Lon:	136 ° 40.09	W

Start

Bottom

End

Lat: 49 ° 26.42 N
Lon: 136 ° 40.07 W

Lat: 49 ° 26.44 N
Lon: 136 ° 39.54 W

Extra comments:
TOC & Gels cast

Water Properties Group

Sampling Log

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

Cruise ID: 2018-040 Station: P19 Event #: 63 Ship: Tully UTC Date (dd: mmm: yyyy): 18: 09: 18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Nut-F	Sal	Chl	HPLC	Gases UBC	NH4 Uvic					
1			2000	✓	2005					x					
2		430	5	✓	6	x	x	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: 3929 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0215	1915
Bottom	0248	
End	0319	

Positional Information
Start
Lat: 49 ° 30.03 N
Lon: 137 ° 39.97 W

Bottom
Lat: 49 ° 30.06 N
Lon: 137 ° 40.08 W

End
Lat: 49 ° 30.06 N
Lon: 137 ° 40.17 W

Extra comments:
Plus loops for 1x Sal, 2x Chl