

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: Haro 59 Event #: 2 Ship: Tully UTC Date (dd mmm yyyy): 30 Jun 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	OXY	Nut-fr	Sal	CHL	HPLC	Phyto	DA				
1	1	1	Bot-5	✓ 231	x	x									
2	2	2	200	✓ 200	x	x									
3	3	3	100	✓ 100	x	x									
4	4	4	75	✓ 75	x	x									
5	5	5	50	✓ 50	x	xx									
6	6	6	40	✓ 40	xx	x									
7	7	7	30	✓ 30	x	x		x							
8	8	8	20	✓ 20	x	xx		x							
9	9	9	10	✓ 10	x	x		x							
10	10	10	5	✓ 5	xx	x	x	xx							
11	11	11	0	✓ 3	x	x		x	xx						
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 223 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0518	2218
Bottom	0527	
End	0542	

Positional Information
Start
Lat: 48 ° 35 030 N
Lon: 123 ° 14 670 W

Bottom
Lat: 48 ° 34 730 N
Lon: 123 ° 14 610 W

End
Lat: 48 ° 34 760 N
Lon: 123 ° 14 640 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: JF2 Event #: 4 Ship: Tully UTC Date (dd mmm yyyy): 30 0 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-F	Chl	HPLC	DIC	DA	Phyto	UBC gases					
1		12	Bot-5	✓	180	x		x x										
2		13	100	✓		x		x										
3		14	75	✓		x		x										
4		15	50	✓		x x		x										
5		16	40	✓		x		x										
6		17	30	✓		x		x x	x									
7		18	20	✓		x		x	x x									
8		19	10	✓		x		x	x									
9		20	5	✓		x		x	x									
10		21	5	✓														
11		22	0	✓										xx				
12						x x		x	x	x x		x	x					
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Version: 25 Nov 2011

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

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

Bottom Depth: 187 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	11 02	04 02
Bottom	11 05	
End	11 17	

Positional Information
Start
Lat: 48 ° 17 97 N
Lon: 124 ° 00 11 W

Bottom
Lat: 48 ° 17 98 N
Lon: 124 ° 00 15 W

End
Lat: 48 ° 18 02 N
Lon: 124 ° 00 18 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB01 Event #: 6 Ship: Tully UTC Date (dd|mmm|yyyy): 30 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	DIC	UBC DMS	VAR PROD				
1		23	Bot-10	✓ 24	x		x		x			x						
2		24	20	✓	x		x		xx		xx	x						
3		25	10	✓	x		x		x		xx	x						
4		26	5	✓	x	x	x					xx						
5		27	5	✓					xx	xx	xx							
6		28	5	✓									x					
7		29	5	✓										x				
8		30	5	✓										x				
9		31	5	✓										x				
10		32	CHL	✓ 2.3										x				
11		33	CHL	✓										x				
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:	43	m
Transmisso Cleaned:	2	☒ Y ☐ N

Time	UTC	Local
Start	15 53	08 53
Bottom	15 55	
End	15 59	

Positional Information			
Lat:	48 ° 40	42	N
Lon:	124 ° 59	65	W

Start

Lat:	48 ° 40	44	N
Lon:	124 ° 59	64	W

Bottom

Lat:	48 ° 40	46	N
Lon:	124 ° 59	67	W

End

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB02 Event #: 7 Ship: Tully UTC Date (dd mmm yyyy): 30 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4		Phyto	DA	UBC gases			
			Pressure	✓ Pressure														
1		34	Bot-10	✓	46	x		x	x									
2		35	30	✓		x		x	x x									
3		36	20	✓		x x		x	x		x x							
4		37	10	✓		x		x	x		x x							
5		38	5	✓		x		x x	x	x x	x x		x x x	x				
6		39	5	✓											x x			
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:
ROS TRM X-Niskin other?
Watchkeeper(s): 1-7

Bottom Depth: 54 m
Transmisso Cleaned: 72 (Y) 1 N

Time	UTC	Local
Start	16 29	0929
Bottom	16 31	
End	16 36	

Positional Information

Lat:	48 ° 39 04	N
Lon:	125 ° 02 44	W

Start

Bottom

Lat:	48 ° 39 06	N
Lon:	125 ° 02 43	W

End

Lat:	48 ° 39 06	N
Lon:	125 ° 02 50	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB03 Event #: 8 Ship: Tully UTC Date (dd|mmm|yyyy): 30 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓	Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4			
1		40	5	✓				x		x x	x x				Fluo:
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): 14 m

Bottom Depth: 94 m
Transmisso Cleaned: X2 (Y) 1 N

Time	UTC	Local
Start	17 09	10 09
Bottom	17 11	
End	17 14	

Positional Information
Start
Lat: 48 ° 37 41 N
Lon: 125 ° 05 70 W

Bottom
Lat: 40 ° 37 42 N
Lon: 125 ° 05 75 W

End
Lat: 40 ° 37 44 N
Lon: 125 ° 05 77 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB04 Event #: 9 Ship: Tully UTC Date (dd:mmm:yyyy): 30 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases			
1		41	Bot-10	☒	102	x		x							
2		42	75	☒		x x		x							
3		43	50	☒		x		x x		x					
4		44	30	☒		x		x		x					
5		45	20	☒		x		x		x		x x			
6		46	10	☒		x		x		x x		x x			
7		47	5	☒		x		x		x	x x	x x			Fluo: 7.4
8		48	5	☒								x x			
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 112 m
Transmisso Cleaned: Y2 ☒ Y / ☐ N

Time	UTC	Local
Start	18 18	11 18
Bottom	18 20	
End	1828	

Positional Information

Start	Lat: 48 ° 35 79 N
	Lon: 125 ° 08 68 W
Bottom	Lat: 48 ° 35 79 N
	Lon: 125 ° 08 73 W
End	Lat: 48 ° 35 79 N
	Lon: 125 ° 08 71 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-023

Station:

LB05

Event #:

12

Ship:

Tully

UTC Date (dd mmm yyyy):

30 08 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments	
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4			
1	1	49	5	✓ 4.9			x		x x	x x			Fluo: 6.0	
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): RIP

Bottom Depth: 103 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	2045	1345
Bottom	2048	
End	2052	

Positional Information

Start Lat: 48° 34.0 N

Start Lon: 125° 11.98 W

Bottom Lat: 48° 33.99 N

Bottom Lon: 125° 11.99 W

End Lat: 48° 34.00 N

End Lon: 125° 11.98 W

Extra comments:

started HEX file

11 - changed to

12 (Event 11

is a Bongo cast)

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB06 Event #: 13 Ship: Tully UTC Date (dd|mmm|yyyy): 30|008|2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	MB	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4						
1		50	Bot-10	✓ 105		x		x										
2		51	100	✓ 99.9		xx		x										
3		52	75	✓ 75.4		x		xx										
4		53	50	✓ 50.3		x		x		x								
5		54	30	✓ 30.19		x		x		xx								
6		55	20	✓ 20.33		x		x		x		xx						
7		56	10	✓ 9.95		x		x		x		xx						
8		57	5	✓ 5.0		x		x		x	xx	xx					Fluo:	
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): RIP/MG

Bottom Depth: 114 m
 Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2136	1436
Bottom	2139	
End	2151	

Positional Information
 Start
 Lat: 48° 32.52 N
 Lon: 125° 15.37 W

Bottom
 Lat: 48° 32.249 N
 Lon: 125° 15.355 W

End
 Lat: 48° 32.25 N
 Lon: 125° 15.34 W

Extra comments:
 forgot to record
 Fluo valve at 5m
 bottle

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023

Station: LB08

Event #: 27

Ship: Tully

UTC Date (dd mmm yyyy): 31 09 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	DIC	UBC gases						
1		58	Bot-5	✓	147	x		x					x						
2		59	Bot-10	✓	142	x		x					x						
3		60	125	✓		x x		x				xx				NOT TAKEN ✓			
4		61	100	✓								xx							NH4 blank water
5		62	100	✓		x		x x					x						
6		63	75	✓		x		x					x x						
7		64	50	✓		x		x		x			x						
8		65	30	✓		x		x		x			x x						
9		66	20	✓		x		x		x		x x	x						
10		67	10	✓		x		x		x x		x x	x						
11		68	5	✓		x	x	x					x						
12		69	5	✓				x		x	x x	x x							
13		70	5	✓										xx					
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s): H. n

Bottom Depth: 140 m

Transmissio Cleaned: Y2Y / N

Time	UTC	Local
Start	0719	0019
Bottom	0721	
End	0733	

Positional Information

Start	Lat:	40 ° 25 30	N
	Lon:	125 ° 28 70	W
Bottom	Lat:	40 ° 25 30	N
	Lon:	125 ° 28 71	W
End	Lat:	40 ° 25 30	N
	Lon:	125 ° 28 73	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB09 Event #: 28 Ship: Tully UTC Date (dd|mmm|yyyy): 31|08|19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4					
1		71	Bot-10	✓ 143	x		x									
2		72	125	✓	x		x x									
3		73	100	✓	x		x									
4		74	75	✓	x		x									
5		75	50	✓	x		x		x							
6		76	30	✓	x		x		x x							
7		77	20	✓	x x		x		x		x x					
8		78	10	✓	x		x		x		x x					
9		79	5	✓	x		x		x	x x	x x					Fluo: 2.442
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: 152 m
Transmisso Cleaned: x2 ☒ Y ☐ N

Time	UTC	Local
Start	08 37	01 37
Bottom	08 40	
End	08 49	

Positional Information

Lat:	48 ° 22 02	N
Lon:	125 ° 34 74	W

▼

Lat:	48 ° 22 01	N
Lon:	125 ° 34 71	W

▼

Lat:	48 ° 22 00	N
Lon:	125 ° 34 69	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB10 Event #: 29 Ship: Tully UTC Date (dd mmm yyyy): 31 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4				
1		80	5	✓ 5			x		x x	x x					Fluo:
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: 154 m
Transmisso Cleaned: X Z (Y) I N

Time	UTC	Local
Start	09 37	02 37
Bottom	09 40	
End	09 43	

Positional Information
Start Lat: 40 ° 10 60 N
Lon: 125 ° 41 32 W

Bottom Lat: 40 ° 10 60 N
Lon: 125 ° 41 32 W

End Lat: 40 ° 18 61 N
Lon: 125 ° 41 43 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB11

Event #: 31

Ship: Tully

UTC Date (dd mmm yyyy): 31 Dec 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4							
1	1	81	Bot-10	✓	200	x		x										
2	2	82	175	✓		x		xx										
3	3	83	150	✓		x		x										
4	4	84	125	✓		x		x										
5	5	85	100	✓		x		x										
6	6	86	75	✓		x		x										
7	7	87	50	✓		xx		x		x								
8	8	88	30	✓		x		x		x								
9	9	89	20	✓		x		x		xx		xx						
10	10	90	10	✓		x		x		x		xx						
11	11	91	5	✓		x		x		x	xx	xx						
12																		Fluo: 1.4
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 208 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1059	0359
Bottom	1103	0403
End	1117	0417

Positional Information

Lat:	48 ° 15.14	N
Lon:	125 ° 47.778	W

Start

Lat:	48 ° 15.138	N
Lon:	125 ° 47.778	W

Bottom

Lat:	48 ° 15.107	N
Lon:	125 ° 47.790	W

End

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB12 Event #: 32 Ship: Tully UTC Date (dd mmm/yyyy): 31 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA				
1		92	Bot-10	✓ 502	x		x	x									
2		93	400	✓	x		x x	x x									
3		94	300	✓	x x		x										
4		95	250	✓	x		x										
5		96	200	✓	x		x										
6		97	175	✓	x		x										
7		98	150	✓	x		x										
8		99	125	✓	x		x										
9		100	100	✓	x		x										
10		101	75	✓	x		x										
11		102	50	✓	x		x x		x								
12		103	30	✓	x		x		x x								
13		104	20	✓	x		x		x		x x						
14		105	10	✓	x x		x		x		x x						
15		106	5	✓	x		x		x	x x	x x	x x x	x				Fluo:
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Profile type:
ROS TRM X-Niskin other?

Watchkeeper(s): J. M.

Bottom Depth: 510 m

Transmisso Cleaned: 2 (Y) 1 N

Time	UTC	Local
Start	11 55	0455
Bottom	1204	0504
End	1224	

Positional Information

Start

Lat: 40 ° 12 90 N

Lon: 125 ° 51 80 W

Bottom

Lat: 40 ° 12 91 N

Lon: 125 ° 51 05 W

End

Lat: 40 ° 12 94 N

Lon: 125 ° 51 00 W

Extra comments:

~~Out-of-order~~

1 - 4; 16; 5 - 15

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB13 Event #: 33 Ship: Tully UTC Date (dd|mmm|yyyy): 31 | 8 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4				
1		107	5	✓ 4.9			x		xx	xx					Fluo: 5.0
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. / RLP

Bottom Depth: 920 m
Transmisso Cleaned: 12 (Y) / N

	UTC	Local
Start	1302	0602
Bottom	1318	
End	1335	

Positional Information
Start Lat: 48 ° 10 55 N
Lon: 125 ° 56 02 W

Bottom Lat: 48 ° 10.53 N
Lon: 125 ° 56.11 W

End Lat: 48 ° 10.52 N
Lon: 125 ° 56.18 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB14 Event #: 34 Ship: Tully UTC Date (dd/mm/yyyy): 31/08/19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases						
1		108	Bot-10	✓ 1170	x		x	x										
2		109	1000	✓	xx	xx	x	x										
3		110	750	✓	x	x	x	x										
4		111	500	✓	x	x	xx	xx										
5		112	400	✓	x		x	x										
6		113	300	✓	x		x											
7		114	250	✓	x		x				xx						NH4 blank water	
8		115	200	✓	x		x											
9		116	175	✓	x		x											
10		117	150	✓	x		x											
11		118	125	✓	xx		x											
12		119	100	✓	x		x											
13		120	75	✓	x		x											
14		121	50	✓	x		x		x									
15		122	30	✓	x		xx		x									
16		123	20	✓	x		x		x		xx							
17		124	10	✓	x		x		xx		xx							
18		125	5	✓	x		x		x	xx	xx						Fluo: 0.415	
19		126	5	✓								x						
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 1168 m
Transmisso Cleaned: 2 (Y) / N

Time	UTC	Local
Start	1409	0709
Bottom	1428	
End	1507	0907

Positional Information

Lat:	48° 08' 49"	N
Lon:	125° 59' 99"	W

Bottom

Lat:	49° 08' 50"	N
Lon:	125° 59' 95"	W

End

Lat:	48° 09' 41"	N
Lon:	125° 00' 02"	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023

Station: LB15

Event #: 35
36

Ship: Tully

UTC Date (dd|mmm|yyyy): 31 | 9 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target Pressure	Confirmed ✓	Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UVIC PROD			
1		127	5					x		xx	xx					Fluo:
2		128	5													
3		129	5													
4		130	5													
5		131	5													
6		132	5													
7		133	CHL MAX	✓	48											Fluo = 2.2
8		134	CHL MAX	✓												
9		135	CHL MAX	✓												
10		136	CHL MAX	✓												
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: 1542 m

Transmisso Cleaned: xz (Y) / N

Time	UTC	Local
Start	16 06	09 06
Bottom	16 32	
End	17 01	10 01

Positional Information

Start	Lat: 48 ° 04 41 N
	Lon: 126 ° 08 50 W
Bottom	Lat: 48 ° 04 41 N
	Lon: 126 ° 08 46 W
End	Lat: 48 ° 04 40 N
	Lon: 126 ° 08 40 W

Extra comments:

OUT OF ORDER
7, 8, 9, 10,
123456

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LB16 Event #: 37 Ship: Tully UTC Date (dd mmm yyyy): 31 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC DMS							
1	1	137	5	✓ 5			x		x x	x x								Fluo:	
2	2	130	5	✓ 5								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): AM

Bottom Depth: 1802 m

Transmisso Cleaned: 72 (Y) N

Time	UTC	Local
Start	17 57	10 57
Bottom	18 27	11 27
End	18 58	

Positional Information

Start Lat: 48° 00 55 N

Start Lon: 126° 16 92 W

Bottom Lat: 48° 00 53 N

Bottom Lon: 126° 16 99 W

End Lat: 48° 00 458 N

End Lon: 126° 16 936 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LC11 Event #: 44 Ship: Tully UTC Date (dd mmm yyyy): 1 Sep 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments							
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC DMS	UBC gases									
1	1	139	Bot-10	✓	1441	x		x	x													
2	2	140	1250	✓	1250	x	x	xx	xx													
3	3	141	1000	✓	1000	x	xx	x	x													
4	4	142	750	✓	750	xx	x	x	x													
5	5	143	500	✓	500	x	x	x	x													
6	6	144	400	✓	400	x		x	x													
7	7	145	300	✓	300	x		x														
8	8	146	250	✓	250	x		x														
9	9	147	200	✓	200	x		x														
10	10	148	175	✓	175	xx		x														
11	11	149	150	✓	150	x		x														
12	12	150	125	✓	125	x		xx														
13	13	151	100	✓	100	x		x														
14	14	152	75	✓	75	x		x														
15	15	153	50	✓	50	x		x		xx												
16	16	154	30	✓	30	x		x		x												
17	17	155	20	✓	20	x		x		x		xx										
18	18	156	10	✓	10	xx		x		x		xx										
19	19	157	5	✓	5	x	x	x		x	xx	xx										
20	20	158	5	✓	5							x										
21	21	159	5	✓	5								xx									
22							*								*							
23																						
24																						

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

Bottom Depth: 1453 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0547	2247
Bottom	0613	
End	0651	

Positional Information
Start
Lat: 48 ° 18 950 N
Lon: 126 ° 26 730 W

Bottom
Lat: 48 ° 18 935 N
Lon: 126 ° 26 659 W

End
Lat: 48 ° 18 960 N
Lon: 126 ° 26 524 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LC09 Event #: 47 Ship: Tully UTC Date (dd mmm yyyy): 01 SEP 2019

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials												Comments	
			Target Pressure	Confirmed ✓	Pressure	Oxy		Nut-Fr	Nut-C	CHL	HPLC	NH4		DIC		phyto	DA		Matt
1		160	Bot-10	✓	604	x		x x	x x					x					
2		161	500	✓		x		x	x					x x					
3		162	400	✓		x		x	x					x					
4		163	300	✓		x		x						x x					
5		164	300	✓														x	
6		165	300	✓														x	
7		166	250	✓		x x		x						x					
8		167	200	✓		x		x						x					
9		168	175	✓		x		x											
10		169	150	✓		x		x											
11		170	125	✓		x		x											
12		171	100	✓		x		x x						x					
13		172	75	✓		x		x											
14		173	50	✓		x		x		x				x		X			CHL MAX
15		174	50	✓														x	
16		175	50	✓														x	
17		176	30	✓		x x		x		x x				x					
18		177	20	✓		x		x		x			x x						
19		178	10	✓		x		x		x			x x	x					
20		179	5	✓		x								x					
21		180	5	✓				x		x	x x	x x				x	x		
22							☞								☞				
23																			
24																			

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

Bottom Depth: 601 m
Transmisso Cleaned: 72 (Y) 1 N

Time	UTC	Local
Start	0922	0222
Bottom	0934	
End	0958	

Positional Information

Lat:	48 ° 25 95 N
Lon:	126 ° 13 59 W

Bottom

Lat:	48 ° 25 91 N
Lon:	126 ° 13 69 W

End

Lat:	48 ° 25 88 N
Lon:	126 ° 25 54 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-023

Station:

LC08

Event #:

51

Ship:

Tully

UTC Date (dd mmm yyyy):

01 SEPT 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4		DIC	UBC gases				
1		181	Bot-10	✓ 190	x		x						x					
2		182	175	✓	x		x						x					
3		183	150	✓	x		x											
4		184	125	✓	x		x											
5		185	100	✓	x		x						x x					
6		186	75	✓	x		x x											
7		187	50	✓	x x		x		x				x					
8		188	30	✓	x		x		x				x x					
9		189	20	✓	x		x		x		x x		x					
10		190	10	✓	x		x		x x		x x		x					
11		191	5	✓	x	x							x					
12		192	5	✓			x		x	x x	x x							
13		193	5	✓										xx				
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s): H. H.

Bottom Depth: 198 m

Transmisso Cleaned: 2 (Y) 1 N

Time	UTC	Local
Start	12 52	05 52
Bottom	12 56	
End	13 08	

Positional Information

Start	Lat:	48 ° 29 43	N
	Lon:	126 ° 07 08	W
Bottom	Lat:	40 ° 29 43	N
	Lon:	126 ° 07 05	W
End	Lat:	40 ° 29 45	N
	Lon:	126 ° 07 00	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023

Station: LC06

Event #: 54

Ship: Tully

UTC Date (dd mmm yyyy):

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4				
1		194	Bot-10	✓ 91	x		x								
2		195	75	✓	x		x								
3		196	50	✓	xx		x		x						
4		197	30	✓	x		x		xx						
5		198	20	✓	x		x		x						
6		199	10	✓	x		xx		x		xx				
7		200	5	✓	x		x		x		xx				
8		201	5	✓			x		x	xx	xx				Fluo:
9		202	5	✓											UVIC
10		203	5	✓											UVIC
11		204	5	✓											UVIC
12		205	5	✓											UVIC
13		206	CHL MAX	✓ 12											UVIC
14		207	CHL MAX	✓											UVIC
15		208	CHL MAX	✓											UVIC
16		209	CHL MAX	✓											UVIC
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 91 m
 Transmisso Cleaned: 12 ☒ Y / ☐ N

Time	UTC	Local
Start	1453	0753
Bottom	1455	
End	1505	

Positional Information
 Start
 Lat: 48 ° 36 51 N
 Lon: 125 ° 54 01 W

Bottom
 Lat: 49 ° 36 52 N
 Lon: 125 ° 54 00 W

End
 Lat: 48 ° 36 55 N
 Lon: 125 ° 53 99 W

Extra comments:
 OUT OF ORDER
 1 2 3 4 5 13 14 15 16
 6 7 8 9 10 11 12

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LC04 Event #: 58 Ship: Tully UTC Date (dd mmm yyyy): 1 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases						
1		210	Bot-10	✓ 155	x		x											
2		211	150	✓	x		x											
3		212	125	✓	x		x											
4		213	100	✓	x		x											
5		214	75	✓	x		x											
6		215	50	✓	x		xx		x									
7		216	30	✓	xx		x		xx									
8		217	20	✓	x		x		x		xx							
9		218	10	✓	x		x		x		xx							
10		219	5	✓	x		x		x		xx							
11		220	5	✓								xx					Fluo:	
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: 165 m
Transmisso Cleaned: 72 (Y) / N

Time	UTC	Local
Start	16 45	09 45
Bottom	16 48	
End	16 59	

Positional Information
Start Lat: 48 ° 43 41 N
Lon: 125 ° 40 05 W

Bottom Lat: 48 ° 43 39 N
Lon: 125 ° 40 04 W

End Lat: 48 ° 43 39 N
Lon: 125 ° 40 01 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LC02 Event #: 60 Ship: Tully UTC Date (dd mmm yyyy): 1 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	DIC	phyto	DA			
1		221	Bot-10	✓	100	x		x				x					
2		222	75	✓		x		x				xx					
3		223	50	✓		xx		x	x			x					
4		224	30	✓		x		x	x			xx					
5		225	20	✓		x		xx	x		xx	x					
6		226	10	✓		x		x	xx		xx	x					
7		227	5	✓		x	x					x					
8		228	5	✓				x	x	xx	xx		x	x			Fluo: 1.60
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: 109 m
Transmisso Cleaned: x2 (Y) / N

Time	UTC	Local
Start	18 12	11 12
Bottom	18 15	
End	18 23	

Positional Information

Lat:	48 ° 48 72	N
Lon:	125 ° 30 96	W

▼

Lat:	48 ° 48 73	N
Lon:	125 ° 30 95	W

▼

Lat:	48 ° 48 71	N
Lon:	125 ° 30 96	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LC01 Event #: 61 Ship: Tully UTC Date (dd|mmm|yyyy): 1 | 9 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC DMS	UBC gases					
1	1	229	Bot-10	✓ 87	x		x											
2	2	230	75	✓ 75	x		x x											
3	3	231	50	✓ 50	x x		x		x									
4	4	232	30	✓ 30	x		x		x x									
5	5	233	20	✓ 20	x		x		x		x x							
6	6	234	10	✓ 10	x		x		x x		x x							
7	7	235	5	✓ 5	x		x		x	x x	x x						Fluo: 72	
8	8	236	5	✓ 5								x	xx					
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Version: 25 Nov 2011

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

Bottom Depth: 96 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1848	1148
Bottom	1850	
End	1857	

Positional Information
Start
Lat: 48 ° 50 420 N
Lon: 125 ° 27 790 W

Bottom
Lat: 48 ° 50 410 N
Lon: 125 ° 27 790 W

End
Lat: 48 ° 50 400 N
Lon: 125 ° 27 800 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LD01 Event #: 62 Ship: Tully UTC Date (dd/mmm/yyyy): 1 Sept 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed ✓ Pressure	MB Oxy	Sal-R	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC DMS								
1	1	237	Bot-10	✓ 28	x		x		x											
2	2	238	20	✓ 20	x		x		xx		xx									
3	3	239	10	✓ 10.4	xx		x		xx		xx									
4	4	240	5	✓ 4.8	x		xx		x	xx	xx							Fluo: 14		
5	5	241	5	✓ 5.2								x								
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22				✗							✗						✗			
23																				
24																				

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

Bottom Depth: 36 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	2030	1330
Bottom	2032	
End	2038	

Positional Information
Start
Lat: 49 ° 00.39 N
Lon: 125 ° 43.79 W

Bottom
Lat: 49 ° 00.34 N
Lon: 125 ° 43.85 W

End
Lat: 49 ° 00.12 N
Lon: 125 ° 43.82 W

Extra comments:
Bottom depth (36m)
not entered into
header info

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023

Station: LD02

Event #: 63

Ship: Tully

UTC Date (dd|mmm|yyyy): 1 | 28 | 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4		phyto	DA	UBC gases		
1		242	Bot-10	☒ 35	x		x		x								
2		243	30	☒ 30	x		x		xx								
3		244	20	☒ 19.2	xx		x		x		xx						
4		245	10	☒ 10	x		xx		x		xx						
5		246	5	☒ 5	x		x		x	xx	xx		x	x			Fluo: 19.6
6		247	5	☒ 5											xx		
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Watchkeeper(s):

Bottom Depth: 43 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2125	1425
Bottom	2127	
End	2133	

Positional Information

Start

Lat: 48 ° 58.46 N

Lon: 125 ° 46.93 W

Bottom

Lat: 48 ° 58.46 N

Lon: 125 ° 46.91 W

End

Lat: 48 ° 58.45 N

Lon: 125 ° 46.91 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LD04 Event #: 66 Ship: Tully UTC Date (dd/mmm/yyyy): 1 Sept 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4					
1	1	248	Bot-10	✓ 55	x x		x		x							
2	2	249	30	✓ 30	x		x x		x							
3	3	250	20	✓ 20	x		x		x		x x					
4	4	251	10	✓ 10	x		x		x x		x x					
5	5	252	5	✓ 5	x		x		x	x x	x x				Fluo: 1.2	
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): RJP

Bottom Depth: 63 m
Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Start	2315	1615
Bottom	2317	
End	2324	

Positional Information
Start
Lat: 48° 53.21 N
Lon: 125° 57.01 W

Bottom
Lat: 48° 53.21 N
Lon: 125° 57.01 W

End
Lat: 48° 53.19 N
Lon: 125° 57.03 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LD06 Event #: 69 Ship: Tully UTC Date (dd|mm|yyyy): 2 Sep 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments		
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4		Phyto	UBC gases				
1	1	253	Bot-10	✓ 129	x		x											
2	2	254	100	✓ 100	x		xx											
3	3	256	75	✓ 75	x		x											
4	4	257	50	✓ 50	x		x		x									
5	5	258	30	✓ 30	x		x		x									
6	6	259	20	✓ 20	x		x		xx		xx							
7	7	260	10	✓ 10	x		x		x		xx							
8	8	261	5	✓ 5	xx	x	x		x	xx	xx					Fluo: < 2		
9	9	262	5	✓ 5										xx				
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 137 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	01 03	18 03
Bottom	01 06	
End	01 16	

Positional Information

Start	Lat: 48 ° 46 110 N
	Lon: 126 ° 10 170 W
Bottom	Lat: 48 ° 46 110 N
	Lon: 126 ° 10 160 W
End	Lat: 48 ° 46 130 N
	Lon: 126 ° 10 160 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LD08 Event #: 71 Ship: Tully UTC Date (dd mmm yyyy): 02 09 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target	Confirmed	MB FL	Oxy	Sal	Nut-Fr	Nut-C	CHL	MG	MG	phyto	DA					
			Pressure	✓ Pressure															
1		263	Bot-10	✓	765	x		x	x										
2		264	750	✓	751	x	x	xx	xx										
3		265	500	✓	501	xx	x	x	x										
4		266	400	✓	399	x		x	x										
5		267	300	✓	300	x		x											
6		268	250	✓	250	x		x											
7		269	200	✓	201	x		x											
8		270	175	✓	175	x		x											
9		271	150	✓	150	x		x											
10		272	125	✓	125	x		x											
11		273	100	✓	101	x		x											
12		274	75	✓	75	x		xx											
13		275	50	✓	50	x		x		x									
14		276	30	✓	30	xx		x		xx									
15		277	20	✓	20	x		x		x		xx							
16		278	10	✓	10	x		x		x		xx							
17		279	5	✓	5	x		x		x	xx	xx		x		x			Fluo:
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 770 m
 Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0304	2004 (1)
Bottom	0318	
End	0348	

Positional Information

Lat:	48 ° 39.13	N
Lon:	126 ° 23.37	W

▼

Lat:	48 ° 39.17	N
Lon:	126 ° 23.35	W

▼

Lat:	48 ° 39.25	N
Lon:	126 ° 23.37	W

Extra comments:

Water Properties Group

Sampling Log

Instituté of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2019-023

Station: LD11

Event #: 76

Ship: Tully

UTC Date (dd/mm/yyyy): 21/9/18

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments	
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	DIC	Phyto	UBC DMS	UBC gases			
1		280	Bot-10	✓	1609	x		x	x									
2		281	1500	✓		x	xx	xx	xx									
3		282	1250	✓		x	x	x	x									
4		283	1000	✓		x	x	x	x									
5		284	750	✓		xx	x	x	x									
6		285	500	✓		x	x	x	x									
7		286	400	✓		x	x	x	x									
8		287	300	✓		x	x	x										
9		288	250	✓		x	x	x										
10		289	200	✓		xx	x	x										
11		290	175	✓		x	x	x										
12		291	150	✓		x	x	x										
13		292	125	✓		x	x	x										
14		293	100	✓		x	x	x										
15		294	75	✓		x	x	x										
16		295	50	✓		x	x	x	xx									
17		296	30	✓		x	x	x	x									
18		297	20	✓		x	x	xx	x									
19		298	10	✓		x	x	x	x									
20		299	5	✓		xx	x	x	x	xx	xx							
21		300	5	✓														
22		301	5	✓														
23		302	5	✓														
24																		

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

Bottom Depth: 1593 m
Transmisso Cleaned: *Z Y N

Time	UTC	Local
Start	08 15	01 15
Bottom	08 43	
End	09 26	

Positional Information

Lat:	48 ° 28 09	N
Lon:	126 ° 43 05	W

Bottom

Lat:	48 ° 28 72	N
Lon:	126 ° 43 05	W

End

Lat:	48 ° 28 72	N
Lon:	126 ° 43 00	W

Fluo:
moved samples to
BOT20

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LG09

Event #: 79

Ship: Tully

UTC Date (dd mmm/yyyy): 2 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC DMS	UBC gases		
1		303	Chl Max	✓	5		x	x		xx	xx				
2		304	5	/								x			
3		305	5	/									xx		
4		306	5	/											
5		307	5	/											UVIC
6		308	5	/											UVIC
7		309	5	/											UVIC
8		310	5	/											UVIC
9		311	Chl Max	✓	35										UVIC
10		312	Chl Max	/											UVIC
11		313	Chl Max	/											UVIC
12		314	Chl Max	/											UVIC
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: 2056 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1430	0730
Bottom	1505	0805
End	1540	

Positional Information

Lat:	48 ° 51 24	N
Lon:	127 ° 19 33	W

Bottom

Lat:	48 ° 51 21	N
Lon:	127 ° 19 31	W

End

Lat:	48 ° 51 20	N
Lon:	127 ° 19 37	W

Extra comments:
9, 10, 11, 12, 1-8
OUT OF ORDER

Water Properties Group

Sampling Log

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

Cruise ID: 2019-23 Station: LG06 Event #: 84 Ship: Tully UTC Date (dd:mmm:yyyy): 2 Sept 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA	UBC gases			
1	1	315	Bot-10	✓ 969	x		x	x									Altimeter skewed Bottom - 10
2	2	316	750	✓ 750	x	x	xx	xx									
3	3	317	500	✓ 500	xx		x	x									
4	4	318	400	✓ 400	x		x	x									
5	5	319	300	✓ 300	x		x										
6	6	320	250	✓ 250	x		x										
7	7	321	200	✓ 200	x		x										
8	8	322	175	✓ 175	x		x										
9	9	323	150	✓ 150	x		xx										
10	10	324	125	✓ 125	x		x										
11	11	325	100	✓ 100	x		x										
12	12	326	75	✓ 75	x		x										
13	13	327	50	✓ 49	x		x		x								
14	14	328	30	✓ 30	xx		x		xx								
15	15	329	20	✓ 20	x		x		x		xx						
16	16	330	10	✓ 10	x		x		x		xx						
17	17	331	5	✓ 5	x	x	x		x	xx	xx	xxx	x	xx			Fluo: 0.35
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 957 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2159	1459
Bottom	2218	
End	2255	

Positional Information
Start
Lat: 49 ° 03.50 N
Lon: 127 ° 01.13 W

Bottom
Lat: 49 ° 03.49 N
Lon: 127 ° 01.18 W

End
Lat: 49 ° 03.49 N
Lon: 127 ° 01.23 W

Extra comments:
PLUS LOOP 1 SAL INVT
2 CHL
(event 85)
84.)

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LG04 Event #: 86 Ship: Tully UTC Date (dd|mmm|yyyy): 2 | Sep | 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases						
1	1	332	Bot-10	✓ 139	x		x											
2	2	333	125	✓ 125	x		x											
3	3	334	100	✓ 100	x		x											
4	4	335	75	✓ 75	x		xx											
5	5	336	50	✓ 50	x		x		x									
6	6	337	30	✓ 30	xx		x		x									
7	7	338	20	✓ 20	x		x		x		xx							
8	8	339	10	✓ 10	x		x		x		xx							
9	9	340	5	✓ 5	x		x		xx	xx	xx						Fluo: <2	
10	10	341	5	✓ 5								xx						
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 142 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0035	1735
Bottom	0037	
End	0048	

Positional Information

Lat:	49 °	11 270	N
Lon:	126 °	49 360	W

▼

Lat:	49 °	11 260	N
Lon:	126 °	49 380	W

▼

Lat:	49 °	11 280	N
Lon:	126 °	49 380	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-023

Station:

LG02

Event #:

89

Ship:

Tully

UTC Date (dd:mmm/yyyy): 3 SEP 2019

Cruise ID#			Date/Time		Station												Comments			
Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												DA	UBC gases		
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4		phyto							
1	1	342	Bot-10	✓ 91	x		x													
2	2	343	75	✓ 75	x x		x													
3	3	344	50	✓ 50	x		x x		x											
4	4	345	30	✓ 30	x		x		x											
5	5	346	20	✓ 20	x		x		x x		x x									
6	6	347	10	✓ 10	x		x		x		x x									
7	7	348	5	✓ 5	x		x		x	xx	xx		xxx		x			Fluo: 42		
8	8	349	5	✓ 5												xx				
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): MB

Bottom Depth: 100 m

Transmisso Cleaned: ☒ Y ☐ N

	UTC	Local
Start	0231	1931
Bottom	0233	
End	0240	

Positional Information

Start
Lat: 49 ° 18 636 N
Lon: 126 ° 38 168 W

Bottom
Lat: 49 ° 18 640 N
Lon: 126 ° 38 173 W

End
Lat: 49 ° 18 634 N
Lon: 126 ° 38 196 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LJ05 Event #: 92 Ship: Tully UTC Date (dd|mmm|yyyy): 3 | Sep | 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments		
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4							
1		350	5					x		x x	x x							Fluo: <i>< 2</i>
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): MR/H.M

Bottom Depth: 1070 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0632	2332
Bottom	0649	
End	0708	

Positional Information

Lat:	49 ° 31 600	N
Lon:	127 ° 22 570	W

▼

Lat:	49 ° 31 60	N
Lon:	127 ° 22 56	W

▼

Lat:	49 ° 31 61	N
Lon:	127 ° 22 55	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-23 Station: LJ06

Event #: 94

Ship: Tully

UTC Date (dd mmm yyyy): 3 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA		
1		351	Bot-10	✓	1041	x		x	x						
2		352	750	✓		x	x	xx							
3		353	500	✓		x		xx	x						
4		354	400	✓		x		x	x						
5		355	300	✓		x		x							
6		356	250	✓		x		x							
7		357	200	✓		xx		x							
8		358	175	✓		x		x							
9		359	150	✓		x		x							
10		360	125	✓		x		x							
11		361	100	✓		x		x							
12		362	75	✓		x		x							
13		363	50	✓		x		xx		x					
14		364	30	✓		x		x		x					
15		365	20	✓		xx		x		x		xx			
16		366	10	✓		x		x		xx		xx			
17		367	5	✓		x	x	x		x	xx	xx			
18		368	5	✓											Fluo:
19															UBC DMS
20															
21															
22															
23															
24															

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

Bottom Depth: 1044 m
Transmisso Cleaned: YZ ☒ Y ☐ N

Time	UTC	Local
Start	0812	0112
Bottom	0830	
End	0859	

Positional Information

Start	Lat: 49 ° 27 84	N
	Lon: 127 ° 29 59	W

Start

Bottom

Bottom	Lat: 49 ° 27 91	N
	Lon: 127 ° 28 57	W

Bottom

End

End	Lat: 49 ° 27 91	N
	Lon: 127 ° 28 50	W

End

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LBP07

Event #: 98

Ship: Tully

UTC Date (dd mmm yyyy): 3 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC DMS	UBC gases	phyto	DA	
1		369	2000	✓	x	x	x	x								
2		370	1500	✓	xx	x	x	x								
3		371	1250	✓	x	x	x	x								
4		372	1000	✓	x	xx	xx	xx								
5		373	750	✓	x		x	x								
6		374	500	✓	x		x	x								
7		375	400	✓	x		x	x								
8		376	300	✓	x		x									
9		377	250	✓	x		x									
10		378	200	✓	xx		x									
11		379	175	✓	x		x									
12		380	150	✓	x		x									
13		381	125	✓	x		x									
14		382	100	✓	x		x									
15		383	75	✓	x		xx									
16		384	50	✓	x		x		x							
17		385	30	✓	x		x		x							
18		386	20	✓	xx		x		xx		xx					
19		387	10	✓	x		x		x		xx					
20		388	5	✓	x	x	x		x	xx	xx			xxx	x	
21		389	5	✓									xx			
22		390	5	✓												
23																
24																

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

Bottom Depth: 2183 m

Transmisso Cleaned: 12 (Y) N

	UTC	Local
Start	1715	1015
Bottom	1753	
End	1847	

Positional Information
Start
Lat: 49 ° 52 40 N
Lon: 120 ° 11 21 W

Bottom
Lat: 49 ° 52 43 N
Lon: 120 ° 11 18 W

End
Lat: 49 ° 52 456 N
Lon: 120 ° 11 189 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: LBP5 Event #: 101 Ship: Tully UTC Date (dd mmm yyyy): 3 Sept 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4			phyto	DA	UBC gases			
1	1	391	Bot-10	✓ 1284	x		x	x											
2	2	392	1250	✓ 1251	x	x	x	x											
3	3	393	1000	✓ 1001	x	x	xx	xx											
4	4	394	750	✓ 751	x		x	x											
5	5	395	500	✓ 501	x		x	x											
6	6	396	400	✓ 400	xx		x	x											
7	7	397	300	✓ 300	x		x												
8	8	398	250	✓ 250	x		x												
9	9	399	200	✓ 200	x		x												
10	10	400	175	✓ 174	x		x												
11	11	401	150	✓ 150	x		x												
12	12	402	125	✓ 125	x		x												
13	13	403	100	✓ 100	x		x												
14	14	404	75	✓ 75	x		x												
15	15	405	50	✓ 50	x		xx		x										
16	16	406	30	✓ 29	xx		x		xx										
17	17	407	20	✓ 20	x		x		x		xx								
18	18	408	10	✓ 10	x		x		x		xx								
19	19	409	5	✓ 5	x		x		x	xx	xx								
20	20	410	5	✓ 5															
21																			
22																			
23																			
24																			

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

Bottom Depth: 1282 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2043	1343
Bottom	2105	
End	2144	

Positional Information
Start
Lat: 50 ° 0.00 N
Lon: 128 ° 0.00 W

Bottom
Lat: 49 ° 59.99 N
Lon: 128 ° 0.02 W

End
Lat: 50 ° 0.01 N
Lon: 128 ° 0.05 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-023

Station:

LBP3

Event #:

105

Ship:

Tully

UTC Date (dd|mmm|yyyy):

3-4 Sept 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments	
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	CHL	HPLC	NH4			phyto	DA	UBC DMS	UBC gases		
1	1	411	bot-10	✓ 158	x		x											
2	2	412	150	✓ 150	x	x	xx											
3	3	413	125	✓ 125	x		x											
4	4	414	100	✓ 100	x		x											
5	5	415	75	✓ 76	x		x											
6	6	416	50	✓ 50	x		x	x										
7	7	417	30	✓ 30	x		x	x										
8	12	418	20	✓ 21	x		x	xx		xx								
9	13	419	10	✓ 10	x		x	x		xx								
10	14	420	5	✓ 5	xx		x	x	xx	xx			xxx	x				
11	15	421	5	✓ 5													UBC DMS	
12	16	422	5	✓ 5												xx		
13	17	423	5	✓ 5													UVIC	
14	18	424	5	✓ 5													UVIC	
15	19	425	5	✓ 5													UVIC	
16	20	426	5	✓ 5													UVIC	
17	21	427	5	✓ 5													UVIC	
18	8	428	CHL Max	✓ 25													UVIC	
19	9	429	CHL Max	✓ 25													UVIC	
20	10	430	CHL Max	✓ 25													UVIC	
21	11	431	CHL Max	✓ 25													UVIC	
22																		
23																		
24																		

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

Bottom Depth: 165 m
Transmissio Cleaned: Y / N

Time	UTC	Local
Start	2355	1655
Bottom	0000	
End	0016	

Positional Information

Lat:	50 ° 03.26	N
Lon:	127 ° 55.47	W

Start

Lat:	°	N
Lon:	°	W

Bottom

Lat:	°	N
Lon:	°	W

End

Lat:	50 ° 03.25	N
Lon:	127 ° 55.57	W

Extra comments:
Out of order!
Check for Chl max
forgot to record
Bottom Lat + Lon

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CS00 Event #: 121 Ship: Tully UTC Date (dd:mmm:yyyy): 4 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA	UBC DMS	UBC gases			
1	1	432	2000	✓ 2188	x		x	x										MIS-FIRE
2	3	433	1500	✓ 1500	x	x	xx	xx										USED Bot 23 @ 2000
3	4	434	1250	✓ 1250	x	xx	x	x										
4	5	435	1000	✓ 1000	x	x	x	x										
5	6	436	750	✓ 750	xx		x	x										
6	7	437	500	✓ 500	x		x	x										
7	8	438	400	✓ 400	x		x	x										
8	9	439	300	✓ 300	x		x											
9	10	440	250	✓ 250	x		x											
10	11	441	200	✓ 200	x		x											
11	12	442	175	✓ 175	x		x											
12	13	443	150	✓ 150	x		x											
13	14	444	125	✓ 125	x		x											
14	15	445	100	✓ 100	x		x											
15	16	446	75	✓ 75	x		x											
16	17	447	50	✓ 50	x		x		xx									
17	18	448	30	✓ 30	x		x		x									
18	19	449	20	✓ 20	xx		x		x		xx							
19	20	450	10	✓ 10	x		xx		x		xx	xx	x					Fluo: <2
20	21	451	5	✓ 5	x		x		x	xx	xx	xx	x					
21	22	452	5	✓ 5										x				
22	23	453	5	✓ 5											xx			
23	2	432	2000	✓ 2000	x	x	x	x										Mistakenly drained by Ross
24																		

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

Bottom Depth: 2175 m
Transmisso Cleaned: 2 (Y) / N

	UTC	Local
Start	18 10	11 10
Bottom	1847	
End	1938	

Positional Information
Start
Lat: 50 ° 27 62 N
Lon: 129 ° 55 13 W

Bottom
Lat: 50 ° 27 694 N
Lon: 129 ° 55 163 W

End
Lat: 50 ° 27 726 N
Lon: 129 ° 55 279 W

Extra comments:
Loop @ 5m
#5121.

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CS02 Event #: 123 Ship: Tully UTC Date (dd:mmm/yyyy): 4 SEP 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	UBC gases					
1	1	454	Bot-10	✓	1911	x		x	x									
2	2	455	1500	✓	1500	x	x	xx	xx									
3	3	456	1250	✓	1250	x	x	x	x									
4	4	457	1000	✓	1000	x	xx	x	x									
5	5	458	750	✓	750	x		x	x									
6	6	459	500	✓	500	x		x	x									
7	7	460	400	✓	400	x		x	x									
8	8	461	300	✓	300	x		x										
9	9	462	250	✓	250	x		x										
10	10	463	200	✓	200	x		xx										
11	11	464	175	✓	175	x		x										
12	12	465	150	✓	150	xx		x										
13	13	466	125	✓	125	x		x										
14	14	467	100	✓	100	x		x										
15	15	468	75	✓	75	x		x										
16	16	469	50	✓	50	x		x		x								
17	17	470	30	✓	30	x		x		x								
18	18	471	20	✓	20	x		x		x		xx						
19	19	472	10	✓	10	xx		x		xx		xx						
20	20	473	5	✓	5	x	x	x		x	xx	xx					Fluo: 2-5	
21	21	474	5	✓	5								xx					
22																		
23																		
24																		

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

Bottom Depth: 1904 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0029	1729
Bottom	0059	
End	0149	

Positional Information
Start
Lat: 50 ° 41 330 N
Lon: 129 ° 28 010 W

Bottom
Lat: 50 ° 41 288 N
Lon: 129 ° 28 003 W

End
Lat: 50 ° 41 230 N
Lon: 129 ° 27 950 W

Extra comments:
Out of order!
Check for GHI Max

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CS02_UVIC Event #: 1260 Ship: Tully UTC Date (dd mmm yyyy): 5 SEP 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials													Comments	
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA	UBC DMS	UBC gases	UVIC			
1	5	475	5	✓	5														
2	6	476	5	✓	↓													X	
3	7	477	5	✓	↓													X	
4	8	478	5	✓	↓													X	
5	9	479	5	✓	↓													X	
6	1	480	Chl max	✓	17													X	
7	2	481	Chl max	✓	↓													X	
8	3	482	Chl max	✓	↓													X	
9	4	483	Chl max	✓	↓													X	
10																		X	
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Watchkeeper(s): MB

Bottom Depth: 1907 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0247	1947
Bottom	0245	
End	0253	

Positional Information

Start Lat: 50 ° 41 220 N
Lon: 129 ° 27 991 W

Bottom Lat: 50 ° 41 212 N
Lon: 129 ° 28 000 W

End Lat: 50 ° 41 195 N
Lon: 129 ° 28 034 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CS04 Event #: 130 Ship: Tully UTC Date (dd|mmm|yyyy): 5 | Sep | 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases	UBC DMS					
1	1	484	Bot-10	✓	85	x		x									493	ALL SAMPE NUMBERS WRONG ON LABELS!
2	2	485	75	✓	75	x		x									494	
3	3	486	50	✓	50	x		x		x							495	
4	4	487	30	✓	30	xx		x		xx							496	
5	5	488	20	✓	20	x		x		x		xx					497	
6	6	489	10	✓	10	x		x		x		xx					498	
7	7	490	5	✓	5	x		xx		x	xx	xx					499	Fluo: 2-5
8	8	491	5	✓	5								xx				500	
9	9	492	5	✓	5													UBC DMS
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Watchkeeper(s): MB

Bottom Depth: 960 m

Transmissio Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	05 34	2234
Bottom	05 38	
End	05 45	

Positional Information

Start

Lat: 50° 49 180 N

Lon: 129° 13 110 W

Start

Bottom

Lat: 50° 49 190 N

Lon: 129° 13 110 W

End

Lat: 50° 49 200 N

Lon: 129° 13 180 W

Extra comments:

LABEL SAYS CS024

SHOULD SAY CS04

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: new ODAS Event #: 132 Ship: Tully UTC Date (dd mmm yyyy): 5 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	UBC gases						
1		493	5	5			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): H.M.Bottom Depth: 2113 m
Transmisso Cleaned: 72 Y / N

Time	UTC	Local
Start	10 06	0303
Bottom	10 43	
End	11 19	

Positional Information
Start
Lat: 50 ° 56 43 N
Lon: 129 ° 58 73 WBottom
Lat: 50 ° 56 46 N
Lon: 129 ° 58 71 WEnd
Lat: 50 ° 56 45 N
Lon: 129 ° 58 76 W

Extra comments:

Out of order:-

Check for Chl Max

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023

Station: CS06

Event #:

143

Ship:

Tully

UTC Date (dd|mmm|yyyy):

5 | Sept | 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA	UBC DMS	UBC gases			
1	1	494	Bot-10	✓ 56	x		xx											
2	2	495	50	✓ 50	xx		x		x									
3	3	496	30	✓ 30	x		x		x									
4	4	497	20	✓ 20	x		x		xx		xx							
5	5	498	10	✓ 10	x		x		x		xx							
6	6	499	5	✓ 5	x	x	x		x	xx	xx	xxx	x				Fluo: 3.2	
7	7	500	5	✓ 5										x				
8	8	501	5	✓ 5											xx			
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): RJP

Bottom Depth: 64 m

Transmissio Cleaned: Y / N

Time UTC Local

Start	2141	1441
Bottom	2145	
End	2153	

Positional Information

Start	Lat: 50 ° 59.88	N
	Lon: 128 ° 51.71	W
Bottom	Lat: 50 ° 59.88	N
	Lon: 128 ° 51.71	W
End	Lat: 50 ° 59.87	N
	Lon: 128 ° 51.71	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CS09 Event #: 150 Ship: Tully UTC Date (dd mmm yyyy): 5 SEP 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC DMS	UBC gases					
1	1	502	Bot-10	✓ 188	x x		x											
2	2	503	175	✓ 175	x		x											
3	3	504	150	✓ 150	x		x											
4	4	505	125	✓ 125	x		x x											
5	5	506	100	✓ 100	x		x											
6	6	507	75	✓ 75	x		x											
7	7	508	50	✓ 50	x		x		x									
8	8	509	30	✓ 30	x		x		x x									
9	9	510	20	✓ 20	x		x		x		x x							
10	10	511	10	✓ 10	x		x		x		x x							
11	11	512	5	✓ 5	x		x		x	x x	x x						Fluo: >2	
12	12	513	5	✓ 5								UBC					UBC DMS	
13	13	514	5	✓ 5									x x					
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

Profile type:
RO~~S~~ TRM X-Niskin other?
Watchkeeper(s): MB

Bottom Depth: 196 m
Transmisso Cleaned: Y N

Time	UTC	Local
Start	0144	1844
Bottom	0158	
End	0159	

Positional Information

Lat:	51 ° 12 457	N
Lon:	128 ° 28 258	W

Start

Bottom

Lat:	51 ° 12 456	N
Lon:	128 ° 28 282	W

End

Lat:	51 ° 12 464	N
Lon:	128 ° 28 364	W

Extra comments:
Out of order!
Check for Chl Max

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: SS1 Event #: 153 Ship: Tully UTC Date (dd mmm yyyy): 6 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases	UBC DMS						
1		515	20	✓ 20			x		x		x x								
2		516	10	✓			x		x		x x								
3		517	5	✓			x		x	x x	x x							Fluo:	
4		518	5	✓								xx	Y						
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: 488 m
Transmisso Cleaned: 2 (Y) / N

Time	UTC	Local
Start	09 12	02 12
Bottom	09 21	
End	09 31	

Positional Information

Lat:	51 ° 12 01	N
Lon:	129 ° 59 86	W

▼

Lat:	51 ° 12 02	N
Lon:	129 ° 59 89	W

▼

Lat:	51 ° 12 01	N
Lon:	129 ° 59 92	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: SS3 Event #: 155 Ship: Tully UTC Date (dd mmm yyyy): 6 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓	Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases					
1		519	20	✓	20			x		x		x x						
2		520	10	✓				x		x x		x x						
3		521	5	✓				x		x	x x	x x					Fluo:	
4		522	5	✓									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.A.

Bottom Depth: 291 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	12 45	05 45
Bottom	12 51	
End	12 59	

Positional Information
Start
Lat: 51° 15' 00" N
Lon: 129° 21' 30" W

Bottom
Lat: 51° 15' 01" N
Lon: 129° 21' 29" W

End
Lat: 51° 15' 03" N
Lon: 129° 21' 33" W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: NL05 Event #: 158 Ship: Tully UTC Date (dd mmm yyyy): 6 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓	Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases	DA				
1		523	20	✓	20			x		x x		x x						
2		524	10	✓				x		x x		x x						
3		525	5	✓				x		x x	x x	x x					Fluo: 1.50	
4		526	5	✓									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: 44 m
Transmisso Cleaned: *2 ☒ Y ☐ N

Time	UTC	Local
Start	1727	1027
Bottom	1729	
End	1732	

Positional Information

Lat:	51 ° 40 47 N
Lon:	128 ° 54 40 W

▼

Lat:	51 ° 40 47 N
Lon:	128 ° 54 43 W

▼

Lat:	51 ° 40 47 N
Lon:	128 ° 54 42 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: SS5 Event #: 160 Ship: Tully UTC Date (dd mmm yyyy): 6 SEP 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UBC gases	UBC DMS							
1	1	527	20	✓ 20			x		x		x x									
2	2	528	10	✓ 10			x		x		x x									
3	3	529	5	✓ 5			x		x	x x	x x						Fluo: < 2			
4	4	530	5	✓ 5								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): MB

Bottom Depth: 200 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	2010	1310
Bottom	2013	
End	2019	

Positional Information
Start
Lat: 51 ° 28 040 N
Lon: 128 ° 29 970 W

Bottom
Lat: 51 ° 28 010 N
Lon: 128 ° 29 970 W

End
Lat: 51 ° 28 020 N
Lon: 128 ° 29 970 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CPE1 Event #: 167 Ship: Tully UTC Date (dd|mmm|yyyy): 7 SEP 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓	Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	UBC DMS				
1	1	531	5	✓	5			x		xx	xx			x				FL: 2-5
2																		
3																		Fluo:
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): MB

Bottom Depth: 143 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0443	2143
Bottom	0446	
End	0448	

Positional Information
Start
Lat: 51 ° 0 030 N
Lon: 127 ° 50 100 W

Bottom
Lat: 51 ° 0 037 N
Lon: 127 ° 50 102 W

End
Lat: 51 ° 0 040 N
Lon: 127 ° 50 106 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: JS01 Event #: 170 Ship: Tully UTC Date (dd|mmm|yyyy): 7 | 9 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DIC				
1		532	Bot-10	✓ 395	x		x						x				
2		533	200	✓	x		x						x				
3		534	150	✓	x		x						x x				
4		535	100	✓	x x		x						x				
5		536	75	✓	x		x						x				
6		537	50	✓	x		x						x				
7		538	30	✓	x		x		x				x				
8		539	20	✓	x		x x		x x				x				
9		540	10	✓	x x		x		x				x				
10		541	5	✓	x	x	x		x				x x				
11		542	0	✓	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): H.M.

Bottom Depth: 400 m

Transmisso Cleaned: Y2 (Y) / N

Time	UTC	Local
Start	12 44	05 44
Bottom	12 52	
End	13 06	06 06

Positional Information

Start Lat: 50 ° 29 92 N

Start Lon: 126 ° 29 34 W

Bottom Lat: 50 ° 29 91 N

Bottom Lon: 126 ° 29 36 W

End Lat: 50 ° 29 87 N

End Lon: 126 ° 29 34 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: 14 Event #: 174 Ship: Tully UTC Date (dd mmm yyyy): 7 Sep 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	UBC DMS						
1	1	543	20	✓ 20			x		x										
2	2	544	10	✓ 10			x		x										
3	3	545	5	✓ 5									x					Fluo 2-5	
4	4	546	0	✓ 2.6			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): MB

Bottom Depth: 315 m
Transmisso Cleaned: Y N

Time	UTC	Local
Start	2212	1512
Bottom	2217	
End	2226	

Positional Information

Lat:	49 ° 53 020 N
Lon:	124 ° 59 586 W

▼

Lat:	49 ° 53 020 N
Lon:	124 ° 59 546 W

▼

Lat:	49 ° 53 054 N
Lon:	124 ° 59 544 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: 12 Event #: 180 Ship: Tully UTC Date (dd/mmm/yyyy): 8 Sep 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DMS/UBC	DA			
1	1	547	20	✓ 20			x		x								
2	2	548	10	✓ 10			x		xx								
3	3	549	5	✓ 5									x				Fluo DMS UBC
4	4	550	0	✓ 3.1			x		x	xx		x					Fluo 2-5
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): MB

Bottom Depth: 354 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0455	2155
Bottom	0500	
End	0509	

Positional Information

Lat:	49 °	43 590 N
Lon:	124 °	40 800 W

▼

Lat:	49 °	43 590 N
Lon:	124 °	40 790 W

▼

Lat:	49 °	43 570 N
Lon:	124 °	40 800 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: 22 Event #: 184 Ship: Tully UTC Date (dd mmm yyyy): 8 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments			
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA	UBC DMS					
1		344	Bot-5	✓	551	x		x											
2			200	✓	552	x		x x											
3			100	✓	553	x		x											
4			75	✓	554	x x		x											
5			50	✓	555	x		x											
6			40	✓	556	x		x											
7			30	✓	557	x		x		x									
8			20	✓	558	x		x		x									
9			10	✓	559	x		x		x									
10			5	✓	560	x	x	x		x x									
11			5	✓	561										x			Fluo:	
12			0	✓	562	x		x		x	x x		x						
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 352 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	09 48	02 48
Bottom	09 55	
End	10 09	

Positional Information
Start
Lat: 49 ° 40 23 N
Lon: 124 ° 16 51 W

Bottom
Lat: 49 ° 40 24 N
Lon: 124 ° 16 51 W

End
Lat: 49 ° 40 25 N
Lon: 124 ° 16 47 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: 24 Event #: 186 Ship: Tully UTC Date (dd mmm yyyy): 8 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto						
1		563	20	✓	20			x		x x								
2		564	10	✓				x		x								
3		565	0	✓				x		x	x x							Fluo: 1.7
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: 424 m
Transmisso Cleaned: x 2 (Y) 1 N

Time	UTC	Local
Start	1220	0520
Bottom	1228	
End	1230	

Positional Information
Start
Lat: 49 ° 30 27 N
Lon: 124 ° 05 95 W

Bottom
Lat: 49 ° 30 25 N
Lon: 124 ° 05 90 W

End
Lat: 49 ° 30 25 N
Lon: 124 ° 05 93 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CPF2 Event #: 100 Ship: Tully UTC Date (dd mmm yyyy): 8 9 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	URC	DMS				
1		566	20	✓			x		x x									
2		567	10	✓			x		x									
3		568	0				x		x	x x		x						Fluo:
4		569	(5)										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): H.M.

Bottom Depth: 325 m
Transmisso Cleaned: +2 (Y) / N

Time	UTC	Local
Start	16 36	09 36
Bottom	16 42	
End	16 50	

Positional Information
Start
Lat: 49 ° 27 99 N
Lon: 124 ° 29 98 W

Bottom
Lat: 49 ° 27 98 N
Lon: 124 ° 30 01 W

End
Lat: 49 ° 28 06 N
Lon: 124 ° 30 01 W

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

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: CPF1 Event #: 191 Ship: Tully UTC Date (dd|mmm|yyyy): 8 | 9 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto						
1	1	570	20	✓ 20			x		x									
2	2	571	10	✓ 10			x		x x									
3		572	0	✓ 2.4			x		x	x x							Fluo: 42	
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
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17																		
18																		
19																		
20																		
21																		
22			↔							↔							↔	
23																		
24																		

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

Bottom Depth: 245 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1904	1204
Bottom	1908	
End	1915	

Positional Information
Start
Lat: 49 ° 22 030 N
Lon: 124 ° 5 090 W

Bottom
Lat: 49 ° 22 030 N
Lon: 124 ° 5 090 W

End
Lat: 49 ° 22 030 N
Lon: 124 ° 5 090 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: 28 Event #: 192 Ship: Tully UTC Date (dd mmm/yyyy): 8 Sept 2019

Niskin #	Firing #	Sample #	Rosette Operation ..		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	UBC DMS					
1	1	573	20	✓ 20			x		x									
2	2	574	10	✓ 10			x		xX									
3	3	575	5	✓ 5										x				Fluo: 1.78
4	4	576	0	✓ 2.4			x		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): RIP / MB

Bottom Depth: 135 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	2119	1419
Bottom	2122	
End	2129	

Positional Information

Start Lat: 49 ° 24.09 N
Lon: 123 ° 45.45 W

Bottom Lat: 49 ° 24.10 N
Lon: 123 ° 45.45 W

End Lat: 49 ° 24.10 N
Lon: 123 ° 45.45 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: GE01 Event #: 195 Ship: Tully UTC Date (dd:mmm:yyyy): 8: Sep 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DA			
1	577	577	b-10	✓ 395	x		x									
2	578	578	200	✓ 200	x		x									
3	579	579	100	✓ 100	x		x									
4	580	580	75	✓ 75	x		xx									
5	581	581	50	✓ 50	x		x									
6	582	582	40	✓ 40	xx		x									
7	583	583	30	✓ 30	x		x		x							
8	584	584	20	✓ 20	x		x		x							
9	585	585	10	✓ 10	x		x		x							
10	586	586	5	✓ 5	x	x	x		xx							
11	587	587	0	✓ 2.3	x		x		x	xx		x				Fluo: ~2
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22	*						*					*				
23																
24																

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

Bottom Depth:	402 m
Transmisso Cleaned:	Y / N

Time	UTC	Local
Start	2336	1636
Bottom	2343	
End	2358	

Positional Information
Lat: 49 ° 15 020 N
Lon: 123 ° 44 996 W

Lat: 49 ° 15 030 N
Lon: 123 ° 44 001 W

Lat: 49 ° 15 020 N
Lon: 123 ° 44 989 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: 38 Event #: 197 Ship: Tully UTC Date (dd mmm yyyy): 9 Sep 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	UBC DMS					
1	1	588	20	✓ 20			x		x x									
2	2	589	10	✓ 10			x		x									
3	3	590	0	✓ 2.2			x		x	xx							Fluo: 1.5	
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): MB

Bottom Depth: 307 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0212	1912
Bottom	0217	
End	0224	

Positional Information

Lat:	49 ° 12 030 N
Lon:	123 ° 26 480 W

▼

Lat:	49 ° 12 030 N
Lon:	123 ° 26 490 W

▼

Lat:	49 ° 12 030 N
Lon:	123 ° 26 480 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-023 Station: 42 Event #: 203 Ship: Tully UTC Date (dd:mmm:yyyy): 9 Sep 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto		DA			
1	1	591	b-10	✓ 311			x										
2	2	592	200	✓ 200			x										
3	3	593	100	✓ 100			x										
4	4	594	75	✓ 75			x										
5	5	595	50	✓ 50			x										
6	6	596	40	✓ 40			x										
7	7	597	30	✓ 30			x		x								
8	8	598	20	✓ 20			x		x								
9	9	599	10	✓ 10			x		xx								
10	10	600	5	✓ 5		x	xx		x								
11	11	601	0	✓ 2.4			x		x	xx		x					Fluo: 2-5
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: 319 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0555	2255
Bottom	0600	
End	06	

Positional Information
Start
Lat: 49 ° 1 76 N
Lon: 123 ° 26 190 W

Bottom
Lat: 49 ° 1 750 N
Lon: 123 ° 26 180 W

End
Lat: 49 ° 1 N
Lon: 123 ° 26 W

Extra comments: