

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: 59

Event #: 002

Ship: Tully

UTC Date (dd|mmm|yyyy): 12 | MAY | 2017

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ☒ Pressure	OXY	Nut-fr	DIC	Sal		CHL	HPLC	Phyto	DA					
1		1	Bot-5	✓ 222	x	x	x											
2		2	200	✓ 200	x	x	x											
3		3	150	✓ 150	x	x	xx											
4		4	100	✓ 100	x	x	x											
5		5	75	✓ 75	x	xx	x											
6		6	50	✓ 50	xx	x	x			x								
7		7	30	✓ 30	x	x	xx			x								
8		8	20	✓ 20	x	xx	x			x								
9		9	10	✓ 10	x	x	x			xx								
10		10	5	✓ 5	xx	x	x	x		x								
11		11	0	✓ 0	x	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):

Bottom Depth: 226 m

Transmisso Cleaned: Y 1(N)

Time	UTC	Local
Start	2039	1339
Bottom	2044	1344
End	2056	1356

Positional Information

Lat: 48 ° 36.730 N
Lon: 123 ° 14.720 W

Lat: 48 ° 36.660 N
Lon: 123 ° 14.670 W

Lat: 48 ° 36.460 N
Lon: 123 ° 14.460 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: 42 Event #: A Ship: Tully UTC Date (dd mmm yyyy): 23 May 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	DIC	DA			
1		12	b-10	✓ 313	x		x										
2		13	200	✓ 200	x		x										
3		14	100	✓ 100	x		x										
4		15	75	✓ 75	x		x										
5		16	50	✓ 50	x		x										
6		17	40	✓ 40	x		x x										
7		18	30	✓ 30	x		x										
8		19	20	✓ 20	x x		x		x								
9		20	10	✓ 10	x		x		x								
10		21	5	✓ 5	x	x	x		x x								
11		22	0	✓ 0	x		x		x	x x		x					Fluo:
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 316 m
 Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0510	2210
Bottom	0517	2217
End	0530	2230

Positional Information

Start	Lat: 49 ° 01.760 N
	Lon: 123 ° 26.190 W

Bottom

Lat: 49 ° 01.750 N
Lon: 123 ° 26.210 W

End

Lat: 49 ° 01.710 N
Lon: 123 ° 26.260 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: GEO1 Event #: 008 Ship: Tully UTC Date (dd mmm yyyy): 23 May 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			
					GC-RS	RS	KY		KY/MM	GC		KY				
1	1	23	b-10	✓ 394	x		x							x		
2	2	24	200	✓	x		x							x		
3	3	25	100	✓	x		x									
4	4	26	75	✓	xx		x									
5	5	27	50	✓	x		x							x		
6	6	28	40	✓	x		x									
7	7	29	30	✓	x		x									
8	8	30	20	✓	x		x		xx					x		
9	9	31	10	✓	x		xx		x					xx		
10	10	32	5	✓	x	x	x		x					x		
11	11	33	0	✓	x		x		x	xx		x		x		Fluo: 1.3
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

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

Bottom Depth: 398 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0912	212
Bottom	0918	
End	0934	

Positional Information
Start
Lat: 49 ° 14.590 N
Lon: 123 ° 44.860 W

Bottom
Lat: 49 ° 14.980 N
Lon: 123 ° 44.770 W

End
Lat: 49 ° 14.990 N
Lon: 123 ° 44.830 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

CPF1

Event #:

10

Ship:

Tully

UTC Date (dd:mmm/yyyy):

23 May 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	Var				
1	1	34	20	✓ 20			x		x								
2	2	35	10	✓ 10			x		x x								
3	13	36	0	✓ 0			x		x	x x							Fluo: 2.22
4	3	37	ChlMax	✓ 5									x				
5	4	38	ChlMax	✓ 5									x				
6	5	39	ChlMax	✓ 5									x				
7	6	40	ChlMax	✓ 5									x				
8	7	41	ChlMax	✓ 5									x				
9	8	42	5	✓									x				
10	9	43	5	✓									x				
11	10	44	5	✓									x				
12	11	45	5	✓									x				
13	12	46	5	✓									x				
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 232 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1206	506
Bottom	1210	
End	1221	

Positional Information

Lat:	49 ° 21.840	N
Lon:	124 ° 04.950	W

Bottom

Lat:	49 ° 21.830	N
Lon:	124 ° 04.960	W

End

Lat:	49 ° 21.790	N
Lon:	124 ° 05.010	W

Extra comments:
 OUT OF ORDER!
 12, 4, 5, 6, 7, 8, 9, 10
 11, 12, 13, 3

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

22

Event #: 12

Ship:

J.P. Tully

UTC Date (dd mmm yyyy): 23 May 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	DIC	
				✓	NN		GC/RS		KY/NN	KY		NN		GC/KY	
1	1	47	Bot-510	✓	347	x		x						XX	
2	2	48	200	✓		xx		x						x	
3	3	49	100	✓		x		x							
4	4	50	75	✓		x		x							
5	5	51	50	✓		x		x						x	
6	6	52	40	✓		x		x							
7	7	53	30	✓		x		x							
8	8	54	20	✓		x		x	x					x	
9	9	55	10	✓		x		x	x					x	
10	10	56	5	✓		x	x	x	xx					x	
11	11	57	0	✓		x		xx	x	xx		x		x	Fluo: 1.04
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

GC

Bottom Depth: 347 m

Transmisso Cleaned: Y / N

Time UTC Local

Start 1537 837

Bottom 1547

End 1600

Positional Information

Lat: 49 ° 40.200 N

Lon: 124 ° 15.990 W

Lat: 49 ° 40.180 N

Lon: 124 ° 15.960 W

Lat: 49 ° 40.180 N

Lon: 124 ° 16.020 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: CPF2

Event #: 14

Ship: Tully

UTC Date (dd mmm yyyy): 23 May 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							
1		58	20	✓	20			x		xx									
2		59	10	✓	10			x		x									
3		60	5	✓	5			x		x									
4		61	0	✓	0			x		x	xx	x	x						
5																			Fluo:
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): CS

Bottom Depth: 320 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2010	1310
Bottom	2018	1318
End	2025	1325

Positional Information

Lat:	49 ° 28.190	N
Lon:	124 ° 29.010	W

Start

Lat:	49 ° 27.990	N
Lon:	124 ° 30.010	W

Bottom

Lat:	49 ° 27.990	N
Lon:	124 ° 30.010	W

End

Lat:	49 ° 27.990	N
Lon:	124 ° 30.010	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

12

Event #:

15

Ship:

Tully

UTC Date (dd mmm yyyy):

23 May 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	DIC	DA				
1		62	20	✓ 20			x		x									
2		63	10	✓ 10			x		x									
3		64	5	✓ 5			x		x x									
4		65	0	✓ 0			x		x	x x		x					Fluo:	
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):

0

Bottom Depth:

348

m

Transmisso Cleaned:

(Y) / N

Time

UTC

Local

Start

2239

1539

Bottom

2247

1547

End

2251

1557

Positional Information

Start

Lat:

49 ° 43 610

N

Lon:

124 ° 40 780 W

Bottom

Lat:

49 ° 43.61

N

Lon:

124 ° 40 78 W

End

Lat:

49 ° 43.617

N

Lon:

124 ° 40.809 W

Extra comments:

GPS FEED STOPPED
DURING CAST

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: JS

Event #: 17

Ship: Tully

UTC Date (dd mmm yyyy): 24 May 2019

Niskin #		Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Ship: Tully				UTC Date (dd r	
				Target Pressure	Confirmed Pressure	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	Phyto	DIC					Comments		
1		1	66	b-5	✓ 396	x		x							x						
2		2	67	200	✓	x		x							xx						
3		3	68	150	✓	xx		x							x						
4		4	69	100	✓	x		x							x						
5		5	70	75	✓	x		xx							x						
6		6	71	50	✓	x		x							x						
7		7	72	30	✓	x		x		X					x						
8		8	73	20	✓	xx		x		x					xx						
9		9	74	10	✓	x		x		x					x						
10		10	75	5	✓	x	x	x		x					x						
11		11	76	0	✓	x		x		xx					x						
12								x		x	xx				x				Fluo 0.65		
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): GC

Bottom Depth: 397 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1055	0355
Bottom	1102	
End	1119	

Positional Information

Start

Lat: 50 ° 29.970 N

Lon: 126 ° 28.410 W

Bottom

Lat: 50 ° 30.010 N

Lon: 126 ° 28.400 W

End

Lat: 50 ° 30.000 N

Lon: 126 ° 28.510 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

CS09

Event #:

36

Ship:

Tully

UTC Date (dd mmm yyyy): 25 May 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments			
			Target	Confirmed	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4	UVic	Jun						
			Pressure	✓ Pressure															
1	1	77	Bot-10	✓	186	x		x											
2	2	78	175	✓		x x		x											
3	3	79	150	✓		x		x					x						
4	4	80	125	✓		x		x											
5	5	81	100	✓		x		x					x						
6	6	82	75	✓		x		x											
7	7	83	50	✓		x		x		x			x						
8	8	84	30	✓		x		x x		x									
9	10	85	20	✓		x		x		x		x x	x						
10	11	86	10	✓		x		x		x x		x x	x						
11	12	87	5		4.5	x		x		x	x x	x x	x					Fluo: 0.65	
12	9	88	Chl Max	✓	28									x					
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth:	<u>190</u>	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	<u>1127</u>	<u>427</u>
Bottom	<u>1131</u>	
End	<u>1147</u>	

Positional Information
Lat: <u>51 ° 12.550</u> N
Lon: <u>128 ° 27.860</u> W

Lat: <u>51 ° 12.550</u> N
Lon: <u>128 ° 27.850</u> W

Lat: <u>51 ° 12.590</u> N
Lon: <u>128 ° 27.910</u> W

Extra comments:
OUT-OF-ORDER!
1, 2, 3, 4, 5, 6, 7, 8
12, 9, 10, 11

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: CS06 Event #: 43 Ship: Tully UTC Date (dd mmm yyyy): 25 May 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					
					NP/KY						KY							
1	1	89	Bot-10	✓ 55	x		x x											
2	2	90	50	✓ 51	x		x		x									
3	3	91	30	✓ 31	x x		x		x x									
4	4	92	20	✓	x		x		x		x x							
5	5	93	10	✓	x		x		x		x x							
6	6	94	5	✓	x	x	x				x x							
7	7	95	5	✓					x	x x		x x x	x				Fluo: 7.46	
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): GC

Bottom Depth: 61 m

Transmisso Cleaned: 6 / N

Time	UTC	Local
Start	1530	0830
Bottom	1532	
End	1539	

Positional Information

Start Lat: 50 ° 59.980 N
Lon: 128 ° 51.760 W

Bottom Lat: 50 ° 59.980 N
Lon: 128 ° 51.800 W

End Lat: 50 ° 59.960 N
Lon: 128 ° 51.910 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: CS04 Event #: 54 Ship: Tully UTC Date (dd mmm/yyyy): 26 MAY 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		96	Bot-10	✓ 88	x		x									
2		97	75	✓ 75	x		x									
3		98	50	✓	x		x		x							
4		99	30	✓ 31	x		x		x							
5		100	20	✓	x		x		x		xx					
6		101	10	✓	xx		xx		x		xx					
7		102	5	✓	x		x		xx	xx	xx					Fluo: 2.55
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): A

Bottom Depth: 92 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0640	2340
Bottom	0642	2342
End	0653	

Positional Information
Start
Lat: 50 ° 49.16' N
Lon: 129 ° 12.92' W

Bottom
Lat: 50 ° 49.17' N
Lon: 129 ° 12.98' W

End
Lat: 50 ° 49.19' N
Lon: 129 ° 13.02' W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: CS02 Event #: 61/62/63 Ship: Tully UTC Date (dd mmm yyyy): 26 May 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	UVic	Jun		
1	1	103	Bot-10	✓ 1910	x		x	x								
2	2	104	1500	✓	xx	xx	x	x								event 61
3	3	105	1250	✓	x	x	xx	xx								
4	4	106	1000	✓	x	x	x	x								
5	5	107	750	X	x		x	x								Never fired
6	6	108	500	X	x		x	x								didn't fire
7	7	109	400	X	x		x									" "
8	8	110	300	✓ 300	xx		x									fired event 63
9	9	111	250★	✓ 250	x		x						x			
10	11	112	200	✓ 199	x		x									
11	12	113	175	✓ 175	x		x									
12	13	114	150	✓ 149	x		x						x			
13	14	115	125	✓ 125	x		xx									
14	15	116	100★	✓ 100	x		x									
15	17	117	75	✓ 75	x		x									
16	18	118	50	✓ 50	x		x		x				x			
17	19	119	30	✓ 30	x		x		xx							
18	20	120	20	✓ 20	x		x		x		xx		x			
19	21	121	10	✓ 10	x		x		x		xx		x			
20	22	122	5	✓	xx	x	x		x	xx	xx		x			
21	23	123	Chl Max	✓ 5										x		
22	10	124	250	✓ 381							x					NH4 blank water event 63
23	16	125	100	✓ 100							x					NH4 blank water
24																

Profile type:
ROS TRM X-Niskin other?
Watchkeeper(s): GCBottom Depth: 1895 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1208	508
Bottom	1241	
End	13:48	6:48

Positional Information
Start
Lat: 50 ° 41.360 N
Lon: 129 ° 27.850 WStart
Bottom
EndLat: 50 ° 41.400 N
Lon: 129 ° 28.230 WLat: 50 ° 41.380 N
Lon: 129 ° 28.920 WExtra comments:
OUT-OF-ORDER!
Don't forget 250m and 100m
Niskins 22 and 23, then Chl Max
Niskin 21

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: CS02 Event #: 64 Ship: Tully UTC Date (dd mmm yyyy): 26 May 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Var										
1		126*	Chl Max	✓ 250				x							Miss fire. Not sampled.
2		127	Chl Max	✓ 30				x							Just below Par-3.30
3		128	Chl Max	✓ 30				x							mixed layer.
4		129	Chl Max	✓ 30				x							
5		130	Chl Max	✓ 30				x							
6		131	5	✓				x							Par = 2.30
7		132	5	✓				x							
8		133	5	✓				x							
9		134	5	✓				x							
10		135	5	✓				x							
11		136	250	✓ 250	x										
12		137	150	✓ 150	x										
13		138	50	✓ 50	x										
14		139	20	✓ 21.5	x										
15		140	10	✓ 10	x										
16		141	5	✓ 5	x										
17				5											Not Sampled.
18				5											Testing bottle firing
19				5											
20				5											Fluo:
21				5											
22				5											
23				5											
24		126		✓ 30											

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

Bottom Depth: 1900 m

Transmisso Cleaned: 60 / N

Time	UTC	Local
Start	1437	0737
Bottom	1442	
End	1458	

Positional Information
Start
Lat: 50 ° 41.280 N
Lon: 129 ° 27.890 WBottom
Lat: 50 ° 41.300 N
Lon: 129 ° 28.010 WEnd
Lat: 50 ° 41.350 N
Lon: 129 ° 28.290 WExtra comments:
Rosette for Michael
Out of order!

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: CS00 Event #: 67 Ship: Tully UTC Date (dd mmm yyyy): 26 May 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	UVic	DA			
1		142	2000	✓ 2000	x x	x	x	x									
2		143	1500	✓ 1500	x	x x	x	x									
3		144	1250	✓ 1250	x	x x	x	x									
4		145	1000	✓ 1000	x	x x	x	x									
5		146	750	✓ 750	x	x	x	x									
6		147	500	✓ 500	x	x	x x	x x									
7		148	400	✓ 400	x x	x	x	x									
8		149	300	✓ 300	x	x	x										
9		150	250	✓ 250	x	x	x										
10		151	200	✓ 200	x	x	x										
11		152	175	✓ 175	x	x	x										
12		153	150	✓ 150	x	x	x										
13		154	125	✓ 125	x	x	x										
14		155	100	✓ 100	x	x	x										
15		156	75	✓ 75	x	x	x										
16		157	50	✓ 50	x	x	x		x x								
17		158	30	✓ 30	x	x	x		x								
18		159	20	✓ 20	x x	x	x		x		x x						
19		160	10	✓ 10	x	x	x x		x		x x						
20		161	5	✓ 5	x	x	x		x	x x	x x	x x x		x			Fluo:
21																	
22																	
23																	
24																	

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

Bottom Depth: 2171 m
 Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1902	1202
Bottom	1938	1238
End	2028	1328

Positional Information

Start	Lat: 50 ° 27.610 N
	Lon: 129 ° 55.000 W

Bottom

Lat: 50 ° 27.600 N
Lon: 129 ° 55.020 W

End

Lat: 50 ° 27.630 N
Lon: 129 ° 55.000 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

LBP3

Event #:

82

Ship:

Tully

UTC Date (dd mmm yyyy):

27 May 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials															Comments
			Target Pressure	Confirmed		Oxy	Sal	Nut-Fr	CHL	HPLC	NH4		UVic	phyto	DA	Var	Jun			
				✓	Pressure														GC/KY	
1	1	162	bot-10	✓	149	x		x												
2	2	163	150	✓	149	x		x					x							
3	3	164	125	✓	125	x		x												
4	4	165	100	✓	101	x		x					x							
5	5	166	75	✓	76	x		x x												
6	6	167	50	✓	51	x		x	x				x							
7	7	168	30	✓	31	x		x	x x											
8	8	169	20	✓	20	x		x	x		x x		x							
9	15	170	10	✓	10	x x		x	x		x x		x							Fluoro: 0.68
10	16	171	5	✓	5	x	x	x	x	x x	x x		x	x x x	x					
11	9	172	Chl Max	✓	20												x			Par: 30.3
12	10	173	Chl Max	✓	20											x				
13	11	174	Chl Max	✓	20											x				
14	12	175	Chl Max	✓	20											x				
15	13	176	Chl Max	✓	20											x				
16	14	177	Chl Max	✓	20											x				
17	17	178	5	✓												x				Par: 341
18	18	179	5	✓												x				Surface: Par ≈ 570
19	19	180	5	✓												x				
20	20	181	5	✓												x				
21	21	182	5	✓												x				
22																				
23																				
24																				

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

Bottom Depth: 153 m

Transmissio Cleaned: (Y) N

Time	UTC	Local
Start	1447	747
Bottom	1452	
End	1506	

Positional Information

Start
Lat: 50 ° 03.350 N
Lon: 127 ° 55.330 W

Bottom
Lat: 50 ° 03.350 N
Lon: 127 ° 55.330 W

End
Lat: 50 ° 03.370 N
Lon: 127 ° 55.460 W

Extra comments:
OUT-OF-ORDER
Rosette for Michael too

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LBP5

Event #: 85

Ship: Tully

UTC Date (dd mmm yyyy): 22 May 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		UVic	phyto	DA		
1	1	183	Bot-10	✓ 1277	x		x	x									
2	2	184	1250	✓ 1249	x	x	x	x									
3	3	185	1000	✓ 1001	x	x	x	x									
4	4	186	750	✓ 750	x		x	x									
5	5	187	500	✓ 500	xx		x	x									
6	6	188	400	✓ 400	x		xx	xx									
7	7	189	300	✓ 300	x		x										
8	8	190	250	✓ 250	x		x										
9	9	191	200	✓ 200	x		x										
10	10	192	175	✓ 175	x		x										
11	11	193	150	✓ 151	x		x										
12	12	194	125	✓ 125	x		x										
13	13	195	100	✓ 100	x		xx										
14	14	196	75	✓ 76	x		x										
15	15	197	50	✓ 50	x		x		x								
16	16	198	30	✓ 31	x		x		x								
17	17	199	20	✓ 21	xx		x		x		xx						
18	18	200	10	✓ 10	x		x		x		xx						
19	19	201	5	✓ 5	x	x	x		xx	xx	xx						
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth:	1270 m
Transmisso Cleaned:	⓪ 1 N

Time	UTC	Local
Start	1717	1017
Bottom	1739	
End	1819	

Positional Information
Start
Lat: 49 ° 59.900 N
Lon: 127 ° 59.880 W

Bottom
Lat: 49 ° 59.900 N
Lon: 127 ° 59.880 W

End
Lat: 49 ° 59.900 N
Lon: 127 ° 59.870 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LBP7

Event #: 87

Ship: Tully

UTC Date (dd|mmm|yyyy): 27 MAY 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		UVic	phyto	DA			
1		202	2000	✓ 2000.4	x	xx	x	x										
2		203	1500	✓ 1499.2	x	xx	x	x										
3		204	1250	✓ 1249.4	x	xx	x	x										
4		205	1000	✓ 1000.4	xx	x	x	x										
5		206	750	✓ 750.4	x	x	xx	xx										
6		207	500	✓ 500.3	x	x	x	x										
7		208	400	✓ 401.1	x	x	x	x										
8		209	300	✓ 300.6	x	x	x											
9		210	250	✓ 250.2	x	x	x											
10		211	200	✓ 200.3	x	x	x											
11		212	175	✓ 175.4	x	x	x											
12		213	150	✓ 150.8	xx	x	x											
13		214	125	✓ 125.0	x	x	x											
14		215	100	✓ 100.3	x	x	x											
15		216	75	✓ 75.7	x	x	x											
16		217	50	✓ 49.6	x	x	x		x									
17		218	30	✓ 29.9	x	x	xx		x									
18		219	20	✓ 19.9	x	x	x		x		xx							
19		220	10	✓ 9.8	xx	x	x		xx		xx							
20		221	5	✓ 5.4	x	x	x		x	xx	xx			xxx	x			
21																		
22																		
23																		
24																		

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

Bottom Depth: 2185 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start		20:22
Bottom	←	20:55
End		21:47

Positional Information
Lat: 49 ° 52.380 N
Lon: 128 ° 11.140 W

Start
Bottom
End
Lat: 49 ° 52.390 N
Lon: 128 ° 11.170 W

Lat: 49 ° 52.390 N
Lon: 128 ° 11.180 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LBP8 Event #: 89 Ship: Tully UTC Date (dd mmm yyyy): 27 MAY 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		UVic	phyto	DA	Jun	
1		222	Chl Max	45.9			X		X	X						X	
2		223	5 m	5.4			X		X	X							
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Watchkeeper(s): AS

Bottom Depth: 2070 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	2308	1608
Bottom		
End	0012	

Positional Information

Start	Lat: 49 ° 48 59 0 N
	Lon: 128 ° 16 75 0 W
Bottom	Lat: 49 ° 48 58 N
	Lon: 128 ° 16 79 W
End	Lat: 49 ° 48 57 N
	Lon: 128 ° 16 78 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LJ06

Event #: 92

Ship: Tully

UTC Date (dd mmm yyyy): 28 MAY 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	DIC	DA			
1		224	20	20.2			x		xx		xx						
2		225	10	10.8			x		x		xx						
3		226	5	5.1			x		x	xx	xx						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): AS

Bottom Depth: 1048 m
Transmisso Cleaned: Y/N

Time	UTC	Local
Start	0506	2206
Bottom	0556	2257
End	0617	2317

Positional Information
Start
Lat: 49 ° 27 792 N
Lon: 127 ° 28 668 W

Bottom
Lat: 49 ° 27 792 N
Lon: 127 ° 28 638 W

End
Lat: 49 ° 27 710 N
Lon: 127 ° 28 530 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LJ04

Event #: 96

Ship: Tully

UTC Date (dd mmm yyyy): 28 May 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	DIC	DA			
1	1	227	20	✓ 19.3			x		x		x x						
2	2	228	10	✓ 10			x		x x		x x						
3	3	229	5	✓ 5			x		x	x x	x x						Fluo: 10.2
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): <u>AS</u>			GC

Bottom Depth:	<u>156</u>	m
Transmisso Cleaned:	☒ Y	☐ N

Time	UTC	Local
Start	0936	0236
Bottom	0940	
End	0946	

Positional Information

Start	Lat:	49 ° 35.490	N
	Lon:	127 ° 16.850	W
Bottom	Lat:	49 ° 35.570	N
	Lon:	127 ° 16.860	W
End	Lat:	49 ° 35.550	N
	Lon:	127 ° 16.880	W

Extra comments:
Loops for 2x Chl, 1x Sal ✓

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LJ02 Event #: 100 Ship: Tully UTC Date (dd mmm yyyy): 28 May 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	DIC	DA		
1	1	230	20	✓ 20.7			x		x		x x					
2	2	231	10	✓ 10.8			x		x		x x					
3	3	232	5	✓ 5.8			x		x x	x x	x x					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): GC

Bottom Depth: 76 m
Transmisso Cleaned: ☒ N

Time	UTC	Local
Start	1140	0440
Bottom	1142	
End	1147	

Positional Information
Start
Lat: 49 ° 42.890 N
Lon: 127 ° 05.430 W

Bottom
Lat: 49 ° 42.900 N
Lon: 127 ° 05.450 W

End
Lat: 49 ° 42.880 N
Lon: 127 ° 05.470 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LG01 Event #: 103 Ship: Tully UTC Date (dd/mm/yyyy): 28 May 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					
					AC/M	GL			BM	RS	Ky					
1	1	233	Bot-10	✓ 51	x		x		x							
2	2	234	30	✓ 31	x		xx		x							
3	3	235	20	✓ 21	x		x		x		xx					
4	4	236	10	✓ 10	xx		x		x		xx					
5	5	237	5	✓ 4.8	x		x		xx	xx	xx					Fluo: 11.6
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): GL

Bottom Depth: 50 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1536	836
Bottom	1537	
End	1543	

Positional Information

Lat:	49 ° 20.430	N
Lon:	126 ° 35.210	W

Start

Bottom

End

Lat:	49 ° 20.420	N
Lon:	126 ° 35.220	W

Lat:	49 ° 20.370	N
Lon:	126 ° 35.260	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LG02

Event #: 105

Ship: Tully

UTC Date (dd mmm yyyy): 25 May 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	UVic	DA	Jun		Var
1	1	238	Bot-10	✓ 91	x		x							x				Didn't fire. Layed
2	2	239	75	✓ 76	x		x x							x				hooked in #24
3	3	240	50	✓ 50	x		x		x					x				
4	4	241	30	✓ 30	x		x		x					x				
5	5	242	20	✓ 20	x x		x		x		x x			x				
6	12	243	10	✓ 11	x		x		x x		x x			x				
7	13	244	5	✓ 5	x		x		x	x x	x x		x x x	x	x			Fluo: 6.2
8	6	245	Chl Max	✓ 15												x		Par: 9.25
9	2	246	Chl Max	✓ 15													x	
10	8	247	Chl Max	✓ 15													x	
11	9	248	Chl Max	✓ 15													x	
12	10	249	Chl Max	✓ 15													x	
13	11	250	Chl Max	✓ 15													x	
14	14	251	5	✓ 5													x	Par: 130
15	15	252	5	✓ 5													x	
16	16	253	5	✓ 5													x	
17	17	254	5	✓ 5													x	
18	18	255	5	✓ 5													x	
19																		Surface Par: 267
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 95 m

Transmissio Cleaned: ☒ / N

Time	UTC	Local
Start	1623	0923
Bottom	1626	
End	1636	

Positional Information

Lat:	49 ° 18.850	N
Lon:	126 ° 38.300	W

Start

Bottom

Lat:	49 ° 18.860	N
Lon:	126 ° 38.510	W

End

Lat:	49 ° 18.860	N
Lon:	126 ° 38.460	W

Extra comments:
OUT-OF-ORDER!
238
Nut-Fr
LG02
Bot-10
19-005
Bot 1

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

LG04

Event #:

108

Ship:

Tully

UTC Date (dd mmm yyyy): 28 May 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		256	Bot-10	✓ 134.0	x		x									
2		257	125	✓ 125.0	x		x									
3		258	100	✓ 100.1	x		x									
4		259	75	✓ 75.0	x		x									
5		260	50	✓ 50.0	x		x		x							
6		261	30	✓ 30.2	x x		x		x x							
7		262	20	✓ 20.3	x		x		x		x x					
8		263	10	✓ 10.2	x		x x		x		x x					
9		264	5	✓ 5.3	x		x		x	x x	x x					Fluo:
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:	137	m
Transmisso Cleaned:	Y	N

Time	UTC	Local
Start	1908	1208
Bottom	1911	1211
End	1921	

Positional Information	
Start	Lat: 49 ° 11.360 N
	Lon: 126 ° 49.110 W
Bottom	Lat: 49 ° 11.355 N
	Lon: 126 ° 49.090 W
End	Lat: 49 ° 11.330 N
	Lon: 126 ° 49.050 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

LG06

Event #:

111

Ship:

Tully

UTC Date (dd mmm yyyy):

28 May 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		265	Bot-10	✓ 982.5	x		x	x											
2		266	750	✓ 750.6	x	x	x	x											
3		267	500	✓ 500.2	x		xx	xx											
4		268	400	✓ 400.4	x		x	x											
5		269	300	✓ 301.1	xx		x												
6		270	250	✓ 250.0	x		x												
7		271	200	✓ 200.1	x		x												
8		272	175	✓ 174.9	x		x												
9		273	150	✓ 150.4	x		x												
10		274	125	✓ 125.7	x		x												
11		275	100	✓ 100.0	x		x												
12		276	75	✓ 75.3	x		xx												
13		277	50	✓ 50.0	x		x		x										
14		278	30	✓ 29.9	x		x		x										
15		279	20	✓ 20.0	xx		x		xx		xx								
16		280	10	✓ 10.5	x		x		x		xx								
17		281	5	✓ 5.9	x	x	x		x	xx	xx	xxx	x				Fluo:		
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth:	979	m
Transmisso Cleaned:	(Y) / N	

Time	UTC	Local
Start	2129	1429
Bottom	2144	1444
End	2215	1515

Positional Information
Start
Lat: 49 ° 03.450 N
Lon: 127 ° 01.210 W

Bottom
Lat: 49 ° 03.410 N
Lon: 127 ° 01.280 W

End
Lat: 49 ° 03.400 N
Lon: 127 ° 01.310 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LG09 Event #: 117 Ship: Tully UTC Date (dd mmm yyyy): 29 May 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	Jun			
1		282	Chl Max		15.6	F	S		CHL	HPLC				x			Fluo: 3.37
2		283	5		5.2	x	x		xx	xx							
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 2054 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0347	2029
Bottom	0417	2117
End	0447	2147

Positional Information
Start
Lat: 48° 51' 19.0" N
Lon: 127° 19' 48.0" W

Bottom
Lat: 48° 51' 25.5" N
Lon: 127° 19' 62.7" W

End
Lat: 48° 51' 25.0" N
Lon: 127° 19' 73.0" W

Extra comments:
Loop for 1x Sal, 2x Chl ✓

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LD11 Event #: 120 Ship: Tully UTC Date (dd mmm/yyyy): 29 May 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	Phyto			
1	1	284	Bot-10	✓ 1594	x		x	x								
2	2	285	1500	✓ 1500	x	xx	xx	xx								
3	3	286	1250	✓ 1250	x	x	x	x								
4	4	287	1000	✓ 1000	x	x	x	x								
5	5	288	750	✓ 750	xx	x	x	x								
6	6	289	500	✓ 500	x	x	x	x								
7	7	290	400	✓ 401	x	x	x	x								
8	8	291	300	✓ 300	x	x	x									
9	9	292	250	✓ 250	x	x	x									
10	10	293	200	✓ 200	xx	x	x									
11	11	294	175	✓ 175	x	x	x									
12	12	295	150	✓ 150	x	x	x									
13	13	296	125	✓ 126	x	x	x									
14	14	297	100	✓ 100	x	x	x									
15	15	298	75	✓ 75	x	x	x									
16	16	299	50	✓ 50	x	x	x		xx							
17	17	300	30	✓ 30	x	x	x		x							
18	18	301	20	✓ 20	x	x	xx		x		xx					
19	19	302	10	✓ 10	x	x	x		x		xx					
20	20	303	5	✓ 5	xx	x	x		x	xx	xx					Fluo: 2.2
21																
22																
23																
24																

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

Bottom Depth: 1586 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0844	0144
Bottom	0912	
End	0956	

Positional Information

Start
Lat: 48 ° 28.760 N
Lon: 126 ° 42.970 WBottom
Lat: 48 ° 28.760 N
Lon: 126 ° 42.970 WEnd
Lat: 48 ° 28.760 N
Lon: 126 ° 43.030 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LD09 Event #: 123 Ship: Tully UTC Date (dd mmm yyyy): 29 May 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal-R	Nut-Fr	Nut-C	CHL	HPLC	NH4	DIC	Phyto	Var			
1	1	304	Chl Max	✓ 28										x			Par: 3.82e-001
2	2	305	Chl Max	✓ 28										x			
3	3	306	Chl Max	✓ 28										x			
4	4	307	Chl Max	✓ 28										x			
5	5	308	Chl Max	✓ 28										x			Par: 1.35e+001
6	6	309	5	✓										x			
7	7	310	5	✓										x			
8	8	311	5	✓										x			
9	9	312	5	✓										x			
10	10	313	5	✓										x			
11																	Par Surface: 2.4e+001
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 1049 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1242	0542
Bottom	1301	
End	1321	

Positional Information
Start
Lat: 48 ° 35.710 N
Lon: 126 ° 30.350 W

Bottom
Lat: 48 ° 35.700 N
Lon: 126 ° 30.410 W

End
Lat: 48 ° 35.67 N
Lon: 126 ° 30.47 W

Extra comments:
Cast for Michael

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LD08 Event #: 124 Ship: Tully UTC Date (dd mmm yyyy): 29 May 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy GC/KY	Sal MM	Nut-Fr MM/RS	Nut-C MM/RS	CHL KY	HPLC NN	NH4 MM	DIC	phyto NN	DA NN				
1	1	314	Bot-10	✓ 772	x		x	x										
2	2	315	750	✓ 750	x	x	x x	x x										
3	3	316	500	✓ 500	x	x	x	x										
4	4	317	400	✓ 401	x		x	x										
5	5	318	300	✓ 301	x		x											
6	6	319	250	✓ 250	x		x											
7	7	320	200	✓ 200	x x		x											
8	8	321	175	✓ 175	x		x											
9	9	322	150	✓ 151	x		x											
10	10	323	125	✓ 126	x		x											
11	11	324	100	✓ 100	x		x											
12	12	325	75	✓ 75	x		x x											
13	13	326	50	✓ 50	x		x		x									
14	14	327	30	✓ 30	x		x		x x									
15	15	328	20	✓ 21	x x		x		x		x x							
16	16	329	10	✓ 10	x		x		x		x x							
17	17	330	5	✓ 5	x	x	x		x	x x	x x		x	x			Fluo: 4.10	
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 770 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	1417	0717
Bottom	1430	
End	1458	

Positional Information

Lat:	48 ° 39.210	N
Lon:	126 ° 23.490	W

Start

Bottom

End

Lat:	48 ° 37.180	N
Lon:	126 ° 23.500	W

Lat:	48 ° 39.170	N
Lon:	126 ° 23.650	W

Extra comments:
Phyto = Lugol only
Loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LD06 Event #: 127 Ship: Tully UTC Date (dd|mmm|yyyy): 29 May 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	Phyto				
					GC	MM	KY/MM		B+KB	PS	MM						
1	1	331	Bot-10	✓ 129	x		x										
2	2	332	100	✓ 100	x		xx										
3	3	333	75	✓ 75	x		x										
4	4	334	50	✓ 50	xx		x		x								
5	5	335	30	✓ 30	x		x		x								
6	6	336	20	✓ 21	x		x		xx		xx						
7	7	337	10	✓ 10	x		x		x		xx						
8	8	338	5	✓ 5	x	x	x		x	xx	xx						Fluo: 2.6
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): GCBottom Depth: 133 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1801	1101
Bottom	1804	
End	1814	

Positional Information
Start
Lat: 48 ° 46.240 N
Lon: 126 ° 10.230 WBottom
Lat: 48 ° 46.260 N
Lon: 126 ° 10.230 WEnd
Lat: 48 ° 46.270 N
Lon: 126 ° 10.200 W

Extra comments:

Cruise ID: 2019-005 Station: LD04 Event #: 129 Ship: Tully UTC Date (dd mmm/yyyy): 29 MAY 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		339	Bot-10	✓ 53.6	x x		x		x									
2		340	30	✓ 30.1	x		x		x									
3		341	20	✓ 20.6	x		x x		x		x x							
4		342	10	✓ 9.9	x		x		x x		x x							
5		343	5	✓ 5.5	x		x		x	x x	x x							Fluo:
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Watchkeeper(s):

Bottom Depth: 58 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1952	1252
Bottom	1954	1254
End	1959	1257

Positional Information

Start Lat: 48 ° 53.140 N

Start Lon: 125 ° 57.030 W

Bottom Lat: 48 ° 53.140 N

Bottom Lon: 125 ° 57.040 W

End Lat: 48 ° 53.150 N

End Lon: 125 ° 57.070 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LD02 Event #: 132 Ship: Tully UTC Date (dd/mmm/yyyy): 29 MAY 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		344	Bot-10	✓ 32.8	x		x		x								→ BOTTLE DID NOT FILL
2		345	30	✓ 30.0	x		x		x								
3		346	20	✓ 20.3	x		x		x x		x x						
4		347	10	✓ 10.5	x x		x x		x		x x						
5		348	5	✓ 4.8	x		x		x	x x	x x		x	x			Fluo:
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 37 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	21	14
Bottom	21	14
End	21	14

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

Bottom
Lat: 48 ° N
Lon: 125 ° W

End
Lat: 48 ° N
Lon: 125 ° W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

LD01

Event #:

134

Ship:

Tully

UTC Date (dd mmm/yyyy):

29 MAY 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal-R	Nut-Fr	Nut-C	CHL	HPLC	NH4	DIC	Phyto						
1		349	Bot-10	✓ 25.1	x		x x		x										
2		350	20	✓ 20.0	x		x		x		x x								
3		351	10	✓ 10.1	x		x		x		x x								
4		352	5	✓ 5.3	x x		x		x x	x x	x x						Fluo:		
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 34 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	22 16	15 16
Bottom	22 17	15 17
End	22 21	15 21

Positional Information

Start
Lat: 49 ° 00.146 N
Lon: 125 ° 43.726 W

Bottom
Lat: 49 ° 00.146 N
Lon: 125 ° 43.732 W

End
Lat: 49 ° 00.150 N
Lon: 125 ° 43.740 W

Extra comments:

Loops for 1x Sal, 2x Chl

Loop LD01
SBY

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LC01 Event #: 134 Ship: Tully UTC Date (dd mmm/yyyy): 30 May 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		353	Bot-10	✓ 85.9	x		x								
2		354	75	✓ 15.3	x x		x								
3		355	50	✓ 50.1	x		x		x						
4		356	30	✓ 30.4	x		x		x						
5		357	20	✓ 20.5	x		x x		x		x x				
6		358	10	✓ 9.9	x		x		x		x x				
7		359	5	✓ 5.2	x	x	x		x x	x x	x x				Fluo:
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):	CS			

Bottom Depth:	90	m
Transmisso Cleaned:	(Y) / N	

Time	UTC	Local
Start	0037	1737
Bottom	0037	1737
End	0047	1747

Start	Positional Information	
	Lat: 48 ° 50.440 N	Lon: 125 ° 27.680 W
Bottom	Lat: 48 ° 50.440 N	Lon: 125 ° 27.680 W
	Lat: 48 ° 50.460 N	Lon: 125 ° 27.700 W
End		

Extra comments:
Loops for 1x Sal, 2x Chl ✓

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LC02 Event #: 138 Ship: Tully UTC Date (dd mmm yyyy): 30 May 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	phyto	DA		
1		360	Bot-10	✓ 100	x		x						x				
2		361	75	✓ 75.9	x		x						x x				
3		362	50	✓ 50.4	x		x		x				x				
4		363	30	✓ 30.5	x		x		x				x x				
5		364	20	✓ 20.1	x		x		x x		x x		x				
6		365	10	✓ 10.5	x		x x		x		x x		x				
7		366	5	✓ 5.2	x x		x						x				
8		367	5	✓ 5.2			x		x	x x	x x			x	x		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): CD

Bottom Depth: 104 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	01 17	18 17
Bottom	01 19	18 19
End	01 28	18 28

Positional Information
Start
Lat: 48 ° 48.680 N
Lon: 125 ° 30.950 W

Bottom
Lat: 48 ° 48.680 N
Lon: 125 ° 30.960 W

End
Lat: 48 ° 48.680 N
Lon: 125 ° 30.970 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

LC04

Event #:

141

Ship:

Tully

UTC Date (dd mmm yyyy): 30 May 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments	
			Target	Confirmed	Oxy	Sal	Nut-Fr	Nut-C	CHL	HPLC	NH4		Uvic	Jun				
			Pressure	✓ Pressure														
1		368	Bot-10	✓	158.9	x		x										
2		369	150	✓	149.5	x		x					x					
3		370	125	✓	125.0	x		x										
4		371	100	✓	100.6	x		x					x					
5		372	75	✓	75.4	x		x										
6		373	50	✓	50.6	x		x x		x			x					
7		374	30	✓	30.0	x		x		x								
8		375	20	✓	20.8	x		x		x		x x	x					
9		376	10	✓	10.2	x x		x		x x		x x	x					
10		377	5			x		x		x	x x	x x	x					Fluo:
11		378	Chl Max	✓	10.2									x				CHL MAX = 10.0
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 162 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	03:05	2005
Bottom	03:28	2008
End	03:19	2019

Positional Information

Start	Lat: 48 ° 43.480 N
	Lon: 125 ° 40.820 W
Bottom	Lat: 48 ° 43.490 N
	Lon: 125 ° 40.820 W
End	Lat: 48 ° 43.480 N
	Lon: 125 ° 40.830 W

Extra comments:
OUT-OF-ORDER

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LC05 Event #: 143 142 Ship: Tully UTC Date (dd mmm yyyy): 30 May 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		Uvic	Jun			
1		9378	Chl-max	☒	10									X			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	Fluo:
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: *62* m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0403	
Bottom	0408	
End	0407	

Positional Information
Start
Lat: *48* ° *39.960* N
Lon: *125* ° *47.370* W

Bottom
Lat: *48* ° *39.950* N
Lon: *125* ° *47.360* W

End
Lat: *48* ° *59.980* N
Lon: *125* ° *47.370* W

Extra comments:
Forgot to pick Jun zoops at LC04 so I took a catamaran bottle here & picked from Benthos.

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LC06

Event #: 145

Ship: Tully

UTC Date (dd mmm yyyy): 30 May 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		379	Bot-10	✓ 84.6	x		x									
2		380	75	✓ 75.6	x x		x									
3		381	50	✓ 49.8	x		x		x							
4		382	30	✓ 29.9	x		x x		x							
5		383	20	✓ 20.3	x		x		x		x x					
6		384	10	✓ 10.3	x		x		x		x x					
7		385	5	✓ 4.9	x	x	x		x x	x x	x x					Fluo:
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): OS

Bottom Depth: 88 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	05 27	12 27
Bottom	05 29	12 29
End	05 37	12 37

Positional Information
Start
Lat: 48 ° 36.510 N
Lon: 125 ° 53.970 W

Bottom
Lat: 48 ° 36.510 N
Lon: 125 ° 53.980 W

End
Lat: 48 ° 36.480 N
Lon: 125 ° 53.980 W

Extra comments:
Loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LC08 Event #: 149 Ship: Tully UTC Date (dd mmm yyyy): 30 May 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	Uvic	phyto	DA	Jun		
1	1	386	Bot-10	✓ 191	x		x						x						
2	2	387	175	✓ 175	x		x												
3	3	388	150	✓ 151	x		x						x x						
4	4	389	125	✓ 125	x		x												
5	5	390	100	✓ 101	x		x						x						
6	6	391	75	✓ 75	x		x												
7	7	392	50	✓ 51	x		x		x				x						
8	8	393	30	✓ 29	x x		x		x				x						
9	9	394	20	✓ 20	x		x		x		x x		x x						
10	10	395	10	✓ 11	x		x x		x x		x x		x						
11	11	396	5	✓ 5	x	x	x		x	x x	x x		x				Fluro: 2.3		
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22			2						2								2		
23																			
24																			

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

Watchkeeper(s): GC

Bottom Depth: 194 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0743	0043
Bottom	0747	
End	0800	

Positional Information

Start Lat: 48° 49' 29.450 N

Start Lon: 126° 07.110 W

Bottom Lat: 48° 49' 29.460 N

Bottom Lon: 126° 07.080 W

End Lat: 48° 49' 29.520 N

End Lon: 126° 07.180 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LC09

Event #: 153

Ship: Tully

UTC Date (dd mmm yyyy): 30 May 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	Uvic	phyto		DA	Jun
1	1	397	Bot-10	✓ 600	x		x x	x x					x					
2	2	398	500	✓ 500	x	x	x	x					x x					
3	3	399	400	✓ 400	x		x	x					x					
4	4	400	300	✓ 300	x		x						x					
5	5	401	250	✓ 250	x x		x						x	x				
6	6	402	200	✓ 200	x		x						x x					
7	7	403	175	✓ 175	x		x											
8	8	404	150	✓ 150	x		x							x				
9	9	405	125	✓ 125	x		x											
10	10	406	100	✓ 100	x		x x						x					
11	11	407	75	✓ 75	x		x											
12	12	408	50	✓ 50	x		x		x				x	x				
13	13	409	30	✓ 30	x x		x		x				x					
14	14	410	20	✓ 20	x		x		xx		xx			x				
15	15	411	10	✓ 10	x		x		x		xx		x	x				
16	16	412	5	✓	x	x	x						x					
17	17	413	5	✓			x		x	xx	xx			x	x	x		Fluo: 3.0
18	18	414	Chl Max	✓ 5													x	
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth:	601	m
Transmisso Cleaned:	☒ Y ☐ N	

Time	UTC	Local
Start	1052	0352
Bottom	1102	
End	1128	

Positional Information		
Lat:	48 ° 25.900	N
Lon:	126 ° 13.640	W

Start

Bottom

End

Lat:	48 ° 25.890	N
Lon:	126 ° 13.620	W

Lat:	48 ° 25.910	N
Lon:	126 ° 13.580	W

Extra comments:
OUT-OF-ORDER!

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LC11

Event #: 155

Ship: Tully

UTC Date (dd mmm yyyy): 30 May 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Sal-R	Nut-Fr	Nut-C	CHL	HPLC	NH4	DIC	Phyto	Var			
1		415	Chl Max	✓	28 m									x			PAR 1.14+e0.00
2		416	Chl Max	✓										x			
3		417	Chl Max	✓										x			
4		418	Chl Max	✓										x			
5		419	Chl Max	✓										x			
6		420	5	✓	5									x			PAR 3.44+e0.01
7		421	5	✓										x			
8		422	5	✓										x			
9		423	5	✓										x			
10		424	5	✓										x			
11																	PAR Surface -4.2+
12																	e0.01
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 1450 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1347	0647
Bottom	1352	0652
End	1358	0658

Positional Information

Start
Lat: 48 ° 18.890 N
Lon: 126 ° 26.660 W

Bottom
Lat: 48 ° 18.870 N
Lon: 126 ° 26.660 W

End
Lat: 48 ° 18.880 N
Lon: 126 ° 26.680 W

Extra comments:

Cast for Michael

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LC11 Event #: 156 Ship: Tully UTC Date (dd|mmm|yyyy): 30 May 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	425	Bot-10	✓ 1453	x		x	x									
2	2	426	1250	✓ 1250	x	x	xx	xx									
3	3	427	1000	✓ 1001	x	xx	x	x									
4	4	428	750	✓ 750	xx	x	x	x									
5	5	429	500	✓ 500	x	x	x	x									
6	6	430	400	✓ 400	x		x	x									
7	7	431	300	✓ 300	x		x										
8	8	432	250	✓ 251	x		x										
9	9	433	200	✓ 201	x		x										
10	10	434	175	✓ 176	xx		x										
11	11	435	150	✓ 150	x		x										
12	12	436	125	✓ 125	x		xx										
13	13	437	100	✓ 100	x		x										
14	14	438	75	✓ 75	x		x										
15	15	439	50	✓ 50	x		x		xx								
16	16	440	30	✓ 30	x		x		x								
17	17	441	20	✓ 21	x		x		x		xx						
18	18	442	10	✓ 10	xx		x		x		xx						
19	19	443	5	✓ 5	x	x	x		x	xx	xx						Fluoro: 1.8
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 1430 m
Transmisso Cleaned: ☒ N

Time	UTC	Local
Start	1423	0723
Bottom	1450	
End	1531	

Positional Information
Start
Lat: 48 ° 18.930 N
Lon: 126 ° 26.590 W

Bottom
Lat: 48 ° 18.950 N
Lon: 126 ° 26.580 W

End
Lat: 48 ° 18.970 N
Lon: 126 ° 26.650 W

Extra comments:

Cruise ID: 2019-005 Station: LB16 Event #: 161 Ship: Tully UTC Date (dd mmm yyyy): 31 MAY 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		444	5	☒ 5.0		x	x			x x	x x							Fluo: 0.757
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):

Bottom Depth: 1752 m

Transmisso Cleaned: ☒ N

Time	UTC	Local
Start	0054	1754
Bottom	0123	1823
End		

Positional Information

Start

Lat: 48 ° 00.660 N

Lon: 126 ° 17.170 W

Bottom

Lat: 48 ° 00.680 N

Lon: 126 ° 17.160 W

End

Lat: ° N

Lon: ° W

Extra comments:

Loops for 1x Sal, 2x Chl

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LB15 Event #: 163 Ship: Tully UTC Date (dd/mmm/yyyy): 31 May 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		445	5	✓	S.V			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):

Bottom Depth: 1562 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0324	2024
Bottom	2349	2049
End	0413	2113

Positional Information

Start	Lat: 48 ° 04.520 N
	Lon: 126 ° 08.590 W
Bottom	Lat: 48 ° 04.530 N
	Lon: 126 ° 08.580 W
End	Lat: 48 ° 04.570 N
	Lon: 126 ° 08.640 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LB14

Event #: 164

Ship: Tully

UTC Date (dd mmm yyyy): 31 May 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		446	Bot-10	✓ 1180	x		x	x							
2		447	1000	✓ 1000.2	x	xx	x	x							
3		448	750	✓ 750.0	x	x	xx	xx							
4		449	500	✓ 500.2	x	x	x	x							
5		450	400	✓ 400.0	xx		x	x							
6		451	300	✓ 300.5	x		x								
7		452	250	✓ 249.9	x		x								
8		453	200	✓ 199.9	x		x								
9		454	175	✓ 175.0	x		x								
10		455	150	✓ 150.0	x		x								Valve left open
11		456	125	✓ 124.9	x		x								
12		457	100	✓ 100.1	x		xx								
13		458	75	✓ 74.5	x		x								
14		459	50	✓ 50.1	x		x		xx						
15		460	30	✓ 30.0	xx		x		x						
16		461	20	✓ 20.0	x		x		x		xx				
17		462	10	✓ 10.1	x		x		x		xx				
18		463	5	✓ 5.5	x	x	x		x	xx	xx				Fluo:
19															
20															
21															
22															
23															
24															

Profile type:
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?
Watchkeeper(s): 0

Bottom Depth: 1174 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0511	2211
Bottom	0529	2229
End	0603	2303

Positional Information
Start
Lat: 48° 08.460 N
Lon: 125° 59.980 W

Start

Bottom

End

Bottom
Lat: 48° 08.460 N
Lon: 125° 59.990 W

End
Lat: 48° 08.440 N
Lon: 125° 59.930 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LB13 Event #: 165 Ship: Tully UTC Date (dd mmm yyyy): 31 May 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	464	5	✓ 5			x		xx	xx							Fluo: 1.2
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): GC

Bottom Depth: 916 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0634	0034
Bottom	0659	
End	0716	

Positional Information

Start	Lat: 48 ° 10.550 N
	Lon: 125 ° 56.100 W
Bottom	Lat: 48 ° 10.560 N
	Lon: 125 ° 56.100 W
End	Lat: 48 ° 10.540 N
	Lon: 125 ° 56.160 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LB12

Event #: 166

Ship: Tully

UTC Date (dd mmm yyyy): 31 May 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	465	Bot-10	✓ 501	x		x x	x x									
2	2	466	400	✓ 401	x		x	x									
3	3	467	300	✓ 301	x		x										
4	4	468	250	✓ 250	x		x										
5	5	469	200	✓ 201	x x		x										
6	6	470	175	✓ 175	x		x										
7	7	471	150	✓ 150	x		x										
8	8	472	125	✓ 125	x		x										
9	9	473	100	✓ 101	x		x										
10	10	474	75	✓ 76	x x		x										
11	11	475	50	✓ 51	x		x		x								
12	12	476	30	✓ 30	x		x		x								
13	13	477	20	✓ 20	x		x		x x		x x						
14	14	478	10	✓ 10	x		x x		x		x x						
15	15	479	5	✓ 5	x		x		x	x x	x x	x x x	x				Fluo: 1.8
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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

Bottom Depth: 502 m

Transmisso Cleaned: (Y) 1 N

Time	UTC	Local
Start	0754	0054
Bottom	0803	
End	0826	

Positional Information

Start
Lat: 48 ° 12.920 N
Lon: 125 ° 51.830 W

Bottom
Lat: 48 ° 12.910 N
Lon: 125 ° 51.840 W

End
Lat: 48 ° 12.910 N
Lon: 125 ° 51.930 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LB11

Event #: 168

Ship: Tully

UTC Date (dd mmm yyyy): 31 May 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	Gases			
1	1	480	Bot-10	✓ 197	x		x								
2	2	481	175	✓ 175	x		x								
3	3	482	150	✓ 151	x		x								
4	4	483	125	✓ 126	x		x								
5	5	484	100	✓ 101	x		x								
6	6	485	75	✓ 75	x		x								
7	7	486	50	✓ 51	x		x x		x						
8	8	487	30	✓ 31	x		x		x						
9	9	488	20	✓ 20	x x		x		x		x x				
10	10	489	10	✓ 11	x		x		x		x x				
11	11	490	5	✓ 5.6	x	x	x		x x	x x	x x				Fluo:
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 201 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0920	0220
Bottom	0924	
End	0937	

Positional Information

Start
Lat: 48 ° 15.230 N
Lon: 125 ° 47.680 W

Bottom
Lat: 48 ° 15.220 N
Lon: 125 ° 47.630 W

End
Lat: 48 ° 15.210 N
Lon: 125 ° 47.570 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LB10 Event #: 169 Ship: Tully UTC Date (dd/mmm/yyyy): 31 May 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	491	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): ROS

Bottom Depth: 140 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1028	0328
Bottom	1031	
End	1035	

Positional Information

Start	Lat:	49 °	18.560	N
	Lon:	125 °	41.340	W
Bottom	Lat:	49 °	18.550	N
	Lon:	125 °	41.330	W
End	Lat:	49 °	18.560	N
	Lon:	125 °	41.350	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LB09 Event #: 170 Ship: Tully UTC Date (dd mmm yyyy): 31 May 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		492	Bot-10	✓ 140	x		x									
2		493	125	✓ 125	x x		x									
3		494	100	✓ 100	x		x									
4		495	75	✓ 75	x		x x									
5		496	50	✓ 50	x		x		x							
6		497	30	✓ 30	x		x		x x							
7		498	20	✓ 20	x		x		x		x x					
8		499	10	✓ 10	x		x		x		x x					
9		500	5	✓ 4	x		x		x	x x	x x					Fluo: 5.6
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

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

Bottom Depth: 144 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	11:26	04:26
Bottom	11:30	04:30
End	11:40	04:40

Positional Information

Lat:	48 ° 22.010	N
Lon:	125 ° 34.890	W

▼

Lat:	48 ° 22.000	N
Lon:	125 ° 34.910	W

▼

Lat:	48 ° 22.000	N
Lon:	125 ° 34.920	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

LB08

Event #:

172

Ship:

Tully

UTC Date (dd:mmm yyyy): 31 May 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			
1	1	501	Bot-10	✓ 131	x		x					xx			
2	2	502	125	✓ 125	x		x								
3	3	503	100	✓ 101	x		x					x			
4	4	504	75	✓ 75	x		x					x			
5	5	505	50	✓ 50	xx		x		x			x			
6	6	506	30	✓ 30	x		x		x			x			
7	7	507	20	✓ 21	x		x		x		xx	x			
8	8	508	10	✓ 10.5	x		xx		xx		xx	x			
9	9	509	5	✓ 5.5	x	x	x					xx			
10	10	510	5	✓ 5.6			x		x	xx	xx				Fluo: 6.8 Loop 2xCHL/ASA
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

GC

Bottom Depth: 137 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1250	0530
Bottom	1254	
End	1304	

Positional Information

Start
Lat: 48 ° 25.260 N
Lon: 125 ° 28.690 W

Bottom
Lat: 48 ° 25.250 N
Lon: 125 ° 28.690 W

End
Lat: 48 ° 25.310 N
Lon: 125 ° 28.740 W

Extra comments:

Loop 2xCHL, 1SA

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: B7 Event #: 173 Ship: Tully UTC Date (dd mmm/yyyy): 31 May 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	Var			
1		511	Chl Max	68.0									x			CLOSED BY MISTAKE NOT NEEDED
2		512	Chl Max	28									x			Par: 0.015
3		513	Chl Max	28									x			
4		514	Chl Max	28									x			
5		515	Chl Max	28									x			
6		516	Chl Max	28									x			
7		517	5	5									x			Par: 19.0.
8		518	5	5									x			
9		519	5	5									x			
10		520	5	5									x			
11		521	5	5												Surface Par: 630
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

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

Watchkeeper(s): GC

Bottom Depth: 73 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1415	0715
Bottom	1418	
End	1425	

Positional Information

Lat: 48 ° 32.080 N

Lon: 125 ° 35.480 W

Lat: 48 ° 32.140 N

Lon: 125 ° 35.480 W

Lat: 48 ° 32.170 N

Lon: 125 ° 35.570 W

Extra comments:

Cast for Michael

Water Properties Group

Sampling Log

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

Cruise ID:

2019-005

Station:

LB07

Event #: 179

Ship:

Tully

UTC Date (dd mmm yyyy): 31 May 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	Gases	UBC					
1		521 522 5		✓				x		xx	xx							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):

Bottom Depth:	152	m
Transmisso Cleaned:	Y	N

Time	UTC	Local
Start	19 27	12 27
Bottom	19 30	12 30
End	19 33	12 33

Positional Information		
Start	Lat: 48 ° 28.710	N
	Lon: 125 ° 22.120	W

Bottom	Lat: 48 ° 28.750	N
	Lon: 125 ° 22.112	W

End	Lat: 48 ° 28.710	N
	Lon: 125 ° 22.120	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LB06 Event #: 185 Ship: Tully UTC Date (dd:mmm:yyyy): 31 May 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		523	Bot-10	✓ 105.6	x		x								
2		524	100	✓ 100.2	x		x								
3		525	75	✓ 75.3	x		x x								
4		526	50	✓ 50.5	x		x		x						
5		527	30	✓ 30.0	x		x		x						
6		528	20	✓ 20.5	x		x		x		x x				
7		529	10	✓ 10.8	x x		x		x x		x x				
8		530	5	✓ 5.0	x		x		x	x x	x x				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): 68

Bottom Depth: 110 m
Transmisso Cleaned: Y N

Time	UTC	Local
Start	2350	1650
Bottom	2352	1652
End	0000	1700

Positional Information
Start Lat: 48 ° 32.090 N
Lon: 125 ° 15.540 W

Bottom Lat: 48 ° 32.090 N
Lon: 125 ° 15.530 W

End Lat: 48 ° 32.090 N
Lon: 125 ° 15.550 W

Extra comments:

Sampling Log

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

Cruise ID: 2019-005 Station: LB05 Event #: 187 Ship: Tully UTC Date (dd,mmm,yyyy): 01 JUN 2019

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): HR

Bottom Depth: 96 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0046	1746
Bottom	0048	1748
End		

Positional Information			
Lat:	48 °	34.010	N
Lon:	125 °	11.970	W

Start

Lat:	48 ° 34.000	N
Lon:	125 ° 11.980	W

Bottom

Lat:	48	°	34.000	N
Lon:	125	°	11.970	W

End

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LB04

Event #: 188

Ship: Tully

UTC Date (dd mmm yyyy): 01 JUN 2017

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		532	Bot-10	✓ 102.3	x		x								
2		533	75	✓ 75.2	x		x								
3		534	50	✓ 50.0	x		x		x						
4		535	30	✓ 29.8	xx		x		x						
5		536	20	✓ 20.1	x		x		x		xx				
6		537	10	✓ 9.8	x		x		xx		xx				
7		538	5	✓ 5.0	x		xx		x	xx	xx				
8															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): QA

Bottom Depth: 107 m
 Transmissio Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0121	1821
Bottom	0123	1823
End	0130	1830

Positional Information

Start	Lat: 48 ° 35.670 N
	Lon: 125 ° 08.710 W
Bottom	Lat: 48 ° 35.670 N
	Lon: 125 ° 08.710 W
End	Lat: 48 ° 35.650 N
	Lon: 125 ° 08.770 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LB03 Event #: 189 Ship: Tully UTC Date (dd mmm yyyy): 01 JUN 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		539	5	✓ 4.9			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):

Bottom Depth: 89 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0200	1900
Bottom	0202	1902
End	0204	1904

Positional Information

Start Lat: 48 ° 37.290 N
Lon: 125 ° 05.590 W

Bottom Lat: 48 ° 37.300 N
Lon: 125 ° 05.590 W

End Lat: 48 ° 37.300 N
Lon: 125 ° 05.600 W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005

Station: LB02

Event #: 190

Ship: Tully

UTC Date (dd mmm yyyy): 01 JUN 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		540	Bot-10	✓ 41.4	x x		x		x								
2		541	30	✓ 29.9	x		x		x x								
3		542	20	✓ 19.9	x		x		x		x x						
4		543	10	✓ 10.1	x		x x		x		x x						
5		544	5	✓ 5.3	x		x		x	x x	x x		x x x	x			
6																	
7																	
8																	
9																	
10																	
11																	
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21																	
22																	
23																	
24																	

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

Bottom Depth: 52 m
 Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	02 35	19 55
Bottom	02 36	19 36
End	02 41	19 41

Positional Information		
Start	Lat: 48 ° 38.960	N
	Lon: 125 ° 02.410	W
Bottom	Lat: 48 ° 38.960	N
	Lon: 125 ° 02.400	W
End	Lat: 48 ° 38.970	N
	Lon: 125 ° 02.390	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-005 Station: LB01 Event #: 191 Ship: Tully UTC Date (dd mmm yyyy): 01 JUN 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				
1		545	Bot-10	✓ 20.8	x		x		x			x				
2		546	20	✓ 19.9	x		x x		x x		x x	x				
3		547	10	✓ 10.4	x		x		x		x x	x				
4		548	5	✓ 5.1	x x		x					x x				
5		549	5	✓ 5.3			x		x x	x x	x x					
6																
7																
8																
9																
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18																
19																
20																
21																
22																
23																
24																

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

Watchkeeper(s): CA

Bottom Depth: 31 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	0307	2007
Bottom	0307	2007
End	0311	2011

Positional Information

Start Lat: 48° 40.390 N

Start Lon: 124° 59.430 W

Bottom Lat: 48° 40.390 N

Bottom Lon: 124° 59.420 W

End Lat: 48° 40.380 N

End Lon: 124° 59.430 W

Extra comments: