

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P16 Event #: 53 Ship: Tully UTC Date (dd/mmm/yyyy): 19 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed ✓ Pressure	DMS	DMSP	DMSP	Nut-F		Chl	HPLC								
					MA/HRt		d	MG		HR/RN	RN								
1		369	300	✓	300	x			x										
2		370	200	✓	200	x	x	x	x										
3		371	150	✓	150	x	x	x	x										
4		372	100	✓	100	x			x		x								
5		373	75	✓	75	x			x		x								
6		374	60	✓	60				x		x	xx							
7		375	50	✓	50	x			x		x	xx						0.87	
8		376	40	✓	40	x			xx		xx	xx						1.49	
9		377	30	✓	30	x	x	x	x		x	xx						Fluo. 3.0	
10		378	25	✓	25	x			x		x							Fluo. 4.62	
11		379	20	✓	20	xx	xx	xx	x		xx								
12		380	15	✓	15	x			x		x	xx							
13		381	10	✓	10	x			x		x							0.71	
14		382	5	✓	5	x	x	x	x										
15		383	5	✓	5				x		x	xx							
16		384	0	✓	1.9	x	x	x	x		x							0.64	
17																			
18																			
19																			
20																			
21																			
22		↔							↔								↔		
23																			
24																			

Version: 25 Nov 2011

Trenameter to be placed at 100m depth

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

Bottom Depth: 3625 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0012	1712 (18)
Bottom	0017	
End	0035	

Positional Information

Lat:	49 ° 17.01	N
Lon:	134 ° 39.96	W

▼

Lat:	49 ° 16.98	N
Lon:	134 ° 39.96	W

▼

Lat:	49 ° 17.02	N
Lon:	134 ° 39.92	W

Extra comments:
DMS cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008

Station: P16

Event #: 54

Ship: Tully

UTC Date (dd mmm yyyy): 19 08 19

Niskin #		Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials						Event #: 34										Ship: Tully		UTC Date (dd m)	
				Target Pressure	Confirmed ✓ Pressure	Nut-C	Nut-F	Sal	TM F	TM UF										Comments					
1			385	2000	1999	x	x	x	x	x															
2			386	1800	1800	xx	xx	x	x	x															
3			387	1600	1599	x	x	x	xx	xx															
4			388	1400	1400	x	x	x	x	x															
5			389	1200	1999	x	x	x	x	x															
6			390	1100	1100	x	x	x	x	x															
7			391	1000	999	x	x		x	x															
8			392	800	799	x	x		x	x															
9			393	600	599	x	x		x	x															
10			394	400	398	x	x		x	x															
11			395	250	249		x		x	x															
12			396	130	130		x		x	x															
13									x	x															
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): RT

Bottom Depth: 3625 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	00:56	1756
Bottom	0129	
End	0204	

Positional Information

Start	Lat: 49 ° 17.02 N
	Lon: 134 ° 39.93 W
Bottom	Lat: 49 ° 17.03 N
	Lon: 134 ° 39.99 W
End	Lat: 49 ° 17.08 N
	Lon: 134 ° 40.09 W

Extra comments:
 Deep TMR

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P16 Event #: 55 Ship: Tully UTC Date (dd mmm yyyy): 19 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments					
			Target Pressure	Confirmed ✓ Pressure	OXY	Sal	Nut-F	Nut-C		TOC	DOC	Gels		SAGs					DNA	
1		397	Bot-10	✓	3684	x		x	x		x	x	x		x	x				
2		398	3500	✓	3500	x	xx	x	x											
3		399	3500	✓	3506	xx	x	x	x		x	x	x							
4		400	3000	✓	3000	x	xx	x	x		x	x	x		x	x				
5		401	2500	✓	2500	x	x	x	x		x	x	x							
6		402	2000	✓	2001	x	x	x	x		x	x	x		x	x				
7		403	1500	✓	1501	x	x	x	x		x	x	x		x	x				
8		404	1250	✓	1250	x	x	x	x		x	x	x		x	x				
9		405	1000	✓	1000	x	x	x	x		x	x	x		x	x				
10		406	800	✓	801	xx		x	x		x	x	x		x	x				
11		407	600	✓	601	x		xx	xx		x	x	x		x	x				
12		408	400	✓	400	x		x	x		x	x	x		x	x				
13		409	300	✓	300	x		x			x	x	x		x	x				
14		410	250	✓	251	x		x			x	x	x							
15		411	200	✓	206	x		x			x	x	x		x	x				
16		412	175	✓	175	xx		x			x	x	x							
17		413	150	✓	150	x		x			x	x	x		x	x				
18		414	125	✓	126	x		x			x	x	x							
19		415	100	✓	101	x		x			x	x	x		x	x				
20		416	75	✓	75	x		xx			x	x	x							
21		417	50	✓	50	x		x			x	x	x		x	x				
22		418	25	✓	25	x		x			x	x	x		x	x				
23		419	10	✓	10	xx		x			x	x	x		x	x				
24		420	5	✓	4	x		x			x	x	x							

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

Bottom Depth:	3625	m
Transmissio Cleaned:	(Y) / N	

Time	UTC	Local
Start	0302	2002
Bottom	0404	
End	0529	

Positional Information		
Start	Lat: 49 ° 16.97	N
	Lon: 134 ° 39.92	W

Bottom	Lat: 49 ° 16.97	N
	Lon: 134 ° 39.92	W

End	Lat: 49 ° 16.97	N
	Lon: 134 ° 39.92	W

Extra comments:
Deep cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P16

Event #: 56

Ship: Tully

UTC Date (dd|mmm|yyyy): 19 Aug 2019

Event #.		Ship:		Tully		UTC Date (dd/mm/yy)													
Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials						Comments								
			Target Pressure	Confirmed Pressure	Nut-C	Nut-F	Sal	TM F	TM UF										
1		421	300	300		x	x	x	x										
2		422	200	200		x	x	x	x										
3		423	150	150		xx	x	x	x										
4		424	100	100		x	x	x	x										
5		425	75	75		x	x	x	x										
6		426	50	50		x	x	xx	xx										
7		427	40	40		x		x	x										
8		428	25	25		x		x	x										
9		429	10	9.98		x		x	x										
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
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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): RT

Bottom Depth: 300 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0536	2236
Bottom	0545	
End	0601	

Positional Information

Start	Lat: 49° 16.97 N	Lon: 134° 39.92 W
Bottom	Lat: 49° 16.97 N	Lon: 134° 39.92 W
End	Lat: 49° 16.97 N	Lon: 134° 39.92 W

Extra comments:
 Shallow TMR

Water Properties Group

Sampling Log

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

Cruise ID:

2019-008

Station:

P16

Event #:

57

Ship:

Tully

UTC Date (dd:mmm:yyyy):

19 08 17

Cruise ID: 2019-008			Station: P16		Event #: 57		Ship: R/V		Date: 11/11/19		Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Profile type:	ROS	TRM	X-Niskin	other?
Watchkeeper(s):	MG/H.A			

Bottom Depth:	3624	m
Transmisso Cleaned:	Y	N

Time	UTC	Local
Start	0639	2339 (18)
Bottom	0645	
End	0701	0001

Positional Information
Start
Lat: 48 ⁴⁹ ° 16 97 N
Lon: 134 ° 39.91 W

Bottom
Lat: 48 ⁴⁹ ° 16 97 N
Lon: 134 ° 39 91 W

End
Lat: 48 ⁴⁹ ° 16 97 N
Lon: 134 ° 39 91 W

Extra comments:
Cesium 500m cast

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

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P16 Event #: 58 Ship: Tully UTC Date (dd mmm yyyy): 19 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure			Cs								
1		454	150	✓	150			x							
2		455	150	✓				x							
3		456	150	✓				x							
4		457	150	✓				x							
5		458	150	✓				x							
6		459	150	✓				x							
7		460	100	✓	100			x							
8		461	100	✓				x							
9		462	100	✓				x							
10		463	100	✓				x							
11		464	100	✓				x							
12		465	100	✓				x							
13		466	50	✓	50			x							
14		467	50	✓				x							
15		468	50	✓				x							
16		469	50	✓				x							
17		470	50	✓				x							
18		471	50	✓				x							
19		472	5	✓	5			x							
20		473	5	✓				x							
21		474	5	✓				x							
22		475	5	✓				x							
23		476	5	✓				x							
24		477	5	✓				x							

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

Bottom Depth: 3624 m
Transmisso Cleaned: Y2 ☒ Y / N

Time	UTC	Local
Start	0724	0024
Bottom	0728	
End	0734	

Positional Information

Lat:	489° 17' 00"	N
Lon:	134° 39' 97"	W

Start

▼

Lat:	489° 17' 00"	N
Lon:	134° 39' 97"	W

Bottom

▼

Lat:	489° 17' 00"	N
Lon:	134° 39' 97"	W

End

Extra comments:
Cesium 150m cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P16 Event #: 61 Ship: Tully UTC Date (dd mmm/yyyy): 19 0 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Var										
1		478	Chl Max	✓ 34	x										
2		479	Chl Max	✓	x										
3		480	Chl Max	✓	x										
4		481	Chl Max	✓	x										
5		482	5		x										
6		483	5		x										
7		484	5		x										
8		485	5		x										
9		486	5		x										
10		487	5		x										
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Watchkeeper(s): I.M.

Bottom Depth: 3624 m

Transmisso Cleaned: X Z (Y) N

Time	UTC	Local
Start	0929	0229
Bottom	0932	
End	0937	

Positional Information

Start

Lat: 49 ° 17 00 N

Lon: 134 ° 39 15 W

Bottom

Lat: 49 ° 17 00 N

Lon: 134 ° 39 45 W

End

Lat: 49 ° 17 00 N

Lon: 134 ° 39 45 W

Extra comments:

Productivity cast

CTD to 150 m!

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P17 Event #: 63 Ship: Tully UTC Date (dd:mmm/yyyy): 19 0 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ☒ Pressure	Nut-F		Chl	HPLC							
1		488	5		x		xx	xx							
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 3742 m
Transmisso Cleaned: Y2 (Y) 1 N

Time	UTC	Local
Start	15 04	08 04
Bottom	15 37	
End	16 10	09 10

Positional Information

Lat:	48° 21 04	N
Lon:	135° 40 01	W

▼

Lat:	48° 21 00	N
Lon:	135° 40 08	W

▼

Lat:	48° 20 95	N
Lon:	135° 39.97	W

Extra comments:
Loops for 1xSal, 1xNut, 2xChl
~

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P18 Event #: 64 Ship: Tully UTC Date (dd mmm yyyy): 19 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	CHL	HPLC	Nut	Sal		TOC	DOC	Gels						
1		489	Bot-10	✓	3891					x	x	x						3810T OPEN !! WE HAVE NO ANSWER
2		490	3500	✓	3501			x		x	x	x						
3		491	3000	✓	3001			x x		x	x	x						
4		492	2500	✓	2499			x		x	x	x						
5		493	2000	✓	2001			x		x	x	x						
6		494	1750	✓	1750			x		x	x	x						
7		495	1500	✓	1501			x		x	x	x						
8		496	1250	✓	1249			x		x	x	x						
9		497	1000	✓	1001			x		x	x	x						
10		498	800	✓	800					x	x	x						
11		499	600	✓	600					x	x	x						
12		500	400	✓	400					x	x	x						
13		501	300	✓	300					x	x	x						
14		502	250	✓	250					x	x	x						
15		503	200	✓	200					x	x	x						
16		504	175	✓	175					x	x	x						
17		505	150	✓	151					x	x	x						
18		506	125	✓	125					x	x	x						
19		507	100	✓	100					x	x	x						
20		508	75	✓	75					x	x	x						
21		509	50	✓	49					x	x	x						
22		510	25	✓	25					x	x	x						
23		511	10	✓	10					x	x	x						
24		512	5	✓	5	x x	x x	x		x	x	x						

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

Bottom Depth:	3822	m
Transmisso Cleaned:	Y	N

Time	UTC	Local
Start	2052	1352
Bottom	2159	
End	2328	

Positional Information
Start
Lat: 49 ° 26.00 N
Lon: 136 ° 39.95 W

Bottom
Lat: 49 ° 26.00 N
Lon: 136 ° 39.95 W

End
Lat: 49 ° 26.00 N
Lon: 136 ° 39.95 W

Extra comments:
TOC & Gels cast

Water Properties Group

Sampling Log

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

Cruise ID:

2019-008

Station:

P19

Event #:

66

Ship:

Tully

UTC Date (dd mmm yyyy):

20 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Nut-F		Chl	HPLC							
1		513	5	✓ 5.6	x		x x	x x							Flour M6 @ 35 m ↓
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 3912 m
 Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0340	2040
Bottom	0415	
End	0445	

Positional Information

Start	Lat: 49 ° 30.03 N
	Lon: 137 ° 39.93 W

Bottom

	Lat: 49 ° 30.02 N
	Lon: 137 ° 39.93 W

End

	Lat: 49 ° 30.03 N
	Lon: 137 ° 39.94 W

Extra comments:
 Loops for 1xSal, 1xNut, 2xChl

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P20 Event #: 67 Ship: Tully UTC Date (dd:mmm:yyyy): 20 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	Var										
1		514	Chl Max	✓ 39	x										
2		515	Chl Max	✓	x										
3		516	Chl Max	✓	x										
4		517	Chl Max	✓	x										
5		518	5	5	x										
6		519	5		x										
7		520	5		x										
8		521	5		x										
9		522	5		x										
10		523	5		x										
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: 3940 m
Transmisso Cleaned: ~~X~~ 2 (Y) / N

Time	UTC	Local
Start	10 34	0334
Bottom	10 36	
End	10 42	

Positional Information
Start
Lat: 49 ° 34 00 N
Lon: 138 ° 39 98 W

Start

Bottom
Lat: 49 ° 34 00 N
Lon: 138 ° 39 99 W

Bottom

End
Lat: 49 ° 34 00 N
Lon: 138 ° 39 99 W

End

Extra comments:
Productivity cast
CTD to 150 m!

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P20 Event #: 70 Ship: Tully UTC Date (dd/mmm/yyyy): 20 / Aug / 2019

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials										Comments			
			Target	Confirmed		Nut-C	Nut-F	Sal	TM F	TM UF									
			Pressure	✓	Pressure														
1		524	2000		2000	x	x	x	x	x									
2		525	1800		1799	x	x	x	x	x									
3		526	1600		1600	x	x	x	x	x									
4		527	1400		1399	x	x	x	x	x									
5		528	1200		1200	x	x	x	xx	xx									
6		529	1100		1100	xx	xx	x	x	x									
7		530	1000		1000	x	x		x	x									
8		531	800		800	x	x		x	x									
9		532	600		600	x	x		x	x									
10		533	400		400	x	x		x	x									
11		534	250		250		x		x	x									
12		535	130		129		x		x	x									
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22					↕						↕							↕	
23																			
24																			

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

Bottom Depth: 3949 2000 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1419	0719
Bottom	1457	
End	1537	

Positional Information

Lat:	49 ° 34.00	N
Lon:	138 ° 39.99	W

▼

Lat:	49 ° 34.00	N
Lon:	138 ° 39.98	W

▼

Lat:	49 ° 34.00	N
Lon:	138 ° 39.98	W

Extra comments:
Deep TMR

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P20 Event #: 71 Ship: Tully UTC Date (dd mmm yyyy): 20 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed ✓ Pressure	OXY	Sal	Nut-F	Nut-C	DIC	TOC	DOC	Gels		SAGs	DNA			
					MG/MR	ML/MG	JS	JS	RN/HA	CL	CL	JS		JS	EVERYONE			
1		536	Bot-10	✓	4024	x		x	x	x	x	x		x	x			
2		537	3500	✓		x	xx	x	x	xx								
3		538	3500	✓		x	x	x	x	x	x	x						
4		539	3000	✓		x	x	x	x	x	x	x		x	x			
5		540	2500	✓		xx	x	x	x	x	x	x						
6		541	2000	✓		x	xx	xx	xx	x	x	x		x	x			
7		542	1500	✓		x	x	x	x	x	x	x		x	x			
8		543	1250	✓		x	x	x	x	x	x	x		x	x			
9		544	1000	✓		xx	x	x	x	x	x	x		x	x			
10		545	800	✓		x		x	x	x	x	x		x	x			
11		546	600	✓		x		x	x	x	x	x		x	x			
12		547	400	✓		x		x	x	x	x	x		x	x			
13		548	300	✓		x		x		x	x	x		x	x			
14		549	250	✓		xx		x		x	x	x						
15		550	200	✓		x		x		x	x	x		x	x			
16		551	175	✓		x		x		x	x	x						
17		552	150	✓		x		x		x	x	x		x	x			
18		553	125	✓		x		xx		x	x	x						
19		554	100	✓		x		x		x	x	x		x	x			
20		555	75	✓		xx		x		x	x	x						
21		556	50	✓		x		x		x	x	x		x	x			
22		557	25	✓		x		x		x	x	x		x	x			
23		558	10	✓		x		x		x	x	x		x	x			
24		559	5	✓		x		x		x	x	x						

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

Bottom Depth: 3940 m
 Transmisso Cleaned: x 2 (✓) N

Time	UTC	Local
Start	1550	0850
Bottom	1658	0958
End	1833	1133

Positional Information
 Lat: 49 ° 34 00 N
 Lon: 138 ° 39 99 W

Lat: 49 ° 34.00 N
 Lon: 138 ° 39.99 W

Lat: 49 ° 34.00 N
 Lon: 138 ° 40.00 W

Extra comments:
 Deep cast

Water Properties Group

Sampling Log

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

Cruise ID:

2019-008

Station:

P20

Event #:

72

Ship:

Tully

UTC Date (dd|mmm|yyyy):

20 | 08 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Nut-C	Nut-F	Sal	TM F	TM UF	Rac					
1		560	300	300		x	x	x	x						
2		561	200	200		x	x	x	x						
3		562	150	149		x	x	xx	xx						
4		563	100	100		x	x	x	x						
5		564	75	75		x	x	x	x						
6		565	50	50		x	x	x	x						
7		566	40	40		xx		x	x						
8		567	25	26		x		x	x						
9		568	10	9.88		x		x	x						
10		569	10	9						x					
11		570	10	9						x					
12		571	10	9						x					
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 3947 m
Transmissio Cleaned: Y / N

Time	UTC	Local
Start	1929	1229
Bottom	1935	
End	1947	

Positional Information
Start
Lat: 49 ° 33.97 N
Lon: 138 ° 39.99 W

Bottom
Lat: 49 ° 33.97 N
Lon: 138 ° 39.99 W

End
Lat: 49 ° 33.98 N
Lon: 138 ° 39.99 W

Extra comments:

Shallow TMR

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P20

Event #: 73

Ship: Tully

UTC Date (dd mmm yyyy): 20 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-F		Chi	HPLC				
1		572	300	✓ 299	x			x							
2		573	200	✓ 200	x	x	x	x							SALINITY 2nd ~ 0.01 DIP
3		574	150	✓ 150	x	x	x	x							
4		575	100	✓ 101	x			x		x					
5		576	75	✓ 76	x			x		xx					
6		577	60	✓ 60				x		x	xx				
7		578	50	✓ 51	x			x		x	xx				0.512
8		579	40	✓ 40	x			x		x	xx				1.5
9		580	30	✓ 30	x	x	x	x		x	xx				3.2
10		581	25	✓ 25	x			x		xx					2.6
11		582	20	✓ 20	xx	xx	xx	x		x					0.66
12		583	15	✓ 15	x			x		x	xx				
13		584	10	✓ 10	x			x		x					0.5
14		585	5	✓ 5.6	x	x	x	x							
15		586	5	✓ 5				x		x	xx				
16		587	0	✓ 1.7	x	x	x	xx		x					0.4
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 3849 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1958	1258
Bottom	2006	
End	2029	

Positional Information

Lat:	49 ° 33.96	N
Lon:	138 ° 40.00	W

Start

Lat:	49 ° 33.96	N
Lon:	138 ° 40.00	W

Bottom

Lat:	49 ° 33.96	N
Lon:	138 ° 40.00	W

End

Lat:	49 ° 33.97	N
Lon:	138 ° 40.00	W

Extra comments:
DMS cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P21 Event #: 76 Ship: Tully UTC Date (dd mmm/yyyy): 21 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure				Cs							
1		588	200	✓	200			x							FLUOR 6.8 @ 34m ↓
2		589	200	✓				x							
3		590	200	✓				x							
4		591	200	✓				x							
5		592	200	✓				x							
6		593	200	✓	✓			x							
7		594	150	✓	151			x							
8		595	150	✓	151			x							
9		596	150	✓	150			x							
10		597	150	✓	151			x							
11		598	150	✓	151			x							
12		599	150	✓	152			x							
13		600	100	✓	100			x							
14		601	100	✓	101			x							
15		602	100	✓	100			x							
16		603	100	✓	101			x							
17		604	100	✓	100			x							
18		605	100	✓	100			x							
19		606	50	✓	50			x							
20		607	50	✓				x							
21		608	50	✓				x							
22		609	50	✓				x							
23		610	50	✓				x							
24		611	50	✓				x							

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

Bottom Depth:	3949	m
Transmisso Cleaned:	☒ Y / ☐ N	

Time	UTC	Local
Start	0220	1920(20)
Bottom	0224	
End	0234	

Positional Information		
Lat:	49 ° 37.98	N
Lon:	139 ° 39.96	W

Start

Bottom

Lat:	49 ° 37.99	N
Lon:	139 ° 39.96	W

End

Lat:	48 ° 38.01	N
Lon:	139 ° 39.96	W

Extra comments:
Cesium 200m cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P21 Event #: 77 Ship: Tully UTC Date (dd mmm/yyyy): 21 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Nut-F		Chl	HPLC		Cs					
1		612	400	/ 401						x					SALINITY 0.003-6.006 PART FLUOR ~7 @ 39 m ↓
2		613	400	/ 400						x					
3		614	400	/ 401						x					
4		615	400	/ 401						x					
5		616	400	/ 400						x					
6		617	400	/ 401						x					
7		618	300	✓ 300						x					
8		619	300	✓						x					
9		620	300	✓						x					
10		621	300	✓						x					
11		622	300	/						x					
12		623	300	/						x					
13		624	5	4.7						x					
14		625	5	4.8						x					
15		626	5	5.8						x					
16		627	5	5.3						x					
17		628	5	5.6						x					
18		629	5	5.6						x					
19		630	5	5.3	x		xx	xx							HYDRAULIC LEAK OVER CLOSED BOTTLES
20															
21															
22															
23															
24															

Profile type:
ROS TRM X-Niskin other?

Watchkeeper(s): MG

Bottom Depth: 3949 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0258	1958 (20)
Bottom	0331	
End	0414	

Positional Information

Start

Lat: 49 ° 37.99 N

Lon: 139 ° 39.94 W

Bottom

Lat: 49 ° 38.06 N

Lon: 139 ° 39.99 W

End

Lat: 49 ° 38.15 N

Lon: 139 ° 39.67 W

Extra comments:

Cesium + IOS cast

Water Properties Group

Sampling Log

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

Cruise ID:

2019-008

Station:

P22

Event #:

79

Ship:

Tully

UTC Date (dd mmm yyyy):

21 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials								Comments			
			Target Pressure	Confirmed Pressure	CHL	HPLC	Nut	Sal	Oxy	Gels	TOC D	DOC D				
1		631	Bot-10	✓	3908					x	6	6				
2		632	3500	✓				x		x	x	x				
3		633	3000	✓				x x		x	x	x				
4		634	2500	✓				x		x	x	x				
5		635	2000	✓				x		x	x	x				
6		636	1750	✓				x		x	6	6				
7		637	1500	✓				x		x	x	x				
8		638	1250	✓				x		x	x	x				
9		639	1000	✓				x		x	x	x				
10		640	800	✓						x	x	x				
11		641	600	✓						x	6	6				
12		642	400	✓						x	x	x				
13		643	300	✓						x	6	6				
14		644	250	✓						x	x	x				
15		645	200	✓						x	x	x				
16		646	175	✓						x	x	x				
17		647	150	✓						x	x	x				
18		648	125	✓						x	x	x				
19		649	100	✓						x	6	6				
20		650	75	✓						x	x	x				
21		651	50	✓						x	x	x				
22		652	25	✓						x	x	x				
23		653	10	✓						x	6	6				
24		654	5	✓		x x	x x	x		x	x	x				

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

Bottom Depth: 3860 m
 Transmisso Cleaned: x 2 y 1 N

	UTC	Local
Start	0911	0211
Bottom	1018	0318
End	1141	0441

Positional Information

Start	Lat: 49 ° 42 01 N
	Lon: 140 ° 40 01 W

Bottom

	Lat: 49 ° 41 98 N
	Lon: 140 ° 40 00 W

End

	Lat: 49 ° 42 01 N
	Lon: 140 ° 40 03 W

Extra comments:
 TOC & Gels cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P23 Event #: 81 Ship: Tully UTC Date (dd|mmm|yyyy): 21|Aug|2019

Niskin #	Firing #	Sample #	Rosette Operation			Samples Taken / Sampler's Initials										Comments		
			Target Pressure	Confirmed ✓	Pressure	Nut-C	Nut-F	Sal	TM F	TM UF		UBC						
1		9671	25 10		12							x						
2		9672	25 10									x						
3		9673	25 10									x						
4		9674	25 10									x						
5		9675	25 10									x						
6		9676	25 10									x						
7		9677	25 10									x						
8		9678	25 10									x						
9		9679	25 10									x						
10		9680	25 10									x						
11		9681	25 10		4							x						
12		9682	25 10		8							x						
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 4031 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1544	0844
Bottom	1545	
End	1548	

Positional Information
Start
Lat: 49 ° 46 04 N
Lon: 141 ° 39 96 W

Bottom
Lat: 49 ° 46 04 N
Lon: 141 ° 39 96 W

End
Lat: 49 ° 46 04 N
Lon: 141 ° 39 95 W

Extra comments:
UBC Incubation TMR
Bottles fired rapidly between 12-8m depth.

Water Properties Group

Sampling Log

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

Cruise ID:

2019-008

Station:

P23

Event #:

84

Ship:

Tully

UTC Date (dd mmm yyyy): 21 08 19

Cruise ID: 2019-008			Station: P23		Event #: 01		Shp. Vane		Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
			Target Pressure	Confirmed Pressure	TOC	DOC	CDOM	PIC	POC	CHL	HPLC	Nut-F	Sal																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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1		655	400	✓	400	x	x	x	x	x																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s): W. M. MG

Bottom Depth: 4031 m

Transmisso Cleaned: x2 Y / N

Time UTC Local

Start 2030 1330

Bottom 2103

End 2147

Positional Information

Lat: 49 ° 45.98 N

Lon: 141 ° 39.82 W

Lat: 49 ° 45.85 N

Lon: 141 ° 39.82 W

Lat: 49 ° 45.78 N

Lon: 141 ° 39.84 W

Extra comments:

TOC DOC CDOM PIC POC
+ 105 CAST 2005M

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P24

Event #: 86

Ship: Tully

UTC Date (dd mmm yyyy): 22 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials														Comments
			Target Pressure	Confirmed Pressure	CHL	HPLC	Nut-F	Sal		Gels	TOC	DOC		TOC	DOC	CDOM	PIC	POC	
				✓	Rn					MO	DH	DH	CHL	AF	AF	AF	AF	AF	
1		671	Bot-10	✓	4046						x	x	x						
2		672	3500	✓	3500			x		x	x	x							Activity - 0.008-9 APAR
3		673	3000	✓	2999			x x		x	x	x							
4		674	2500	✓	2500			x		x	x	x							
5		675	2000	✓	2000			x		x	x	x							
6		676	1500	✓	1499			x		x	x	x							
7		677	1000	✓	999			x		x	x	x							
8		678	800	✓	800					x	x	x							
9		679	400	✓	399					x	x	x		x	x	x	x	x	
10		680	300	✓	300					x	x	x		x	x	x	x	x	
11		681	250	✓	250					x	x	x		x	x	x	x	x	
12		682	200	✓	200					x	x	x		x	x	x	x	x	
13		683	175	✓	175					x	x	x		x	x	x	x	x	
14		684	150	✓	150					x	x	x		x	x	x	x	x	
15		685	125	✓	125					x	x	x		x	x	x	x	x	
16		686	100	✓	100					x	x	x		x	x	x	x	x	
17		687	75	✓	75					x	x	x		x x x	x x x	x x x	x	x	
18		688	50	✓	50					x	x	x		x	x	x	x	x	
19		689	25	✓	25									x x x	x x x	x x x	x x x		
20		690	25	✓	25					x	x	x						x x x	
21		691	10	✓	11					x	x	x		x	x	x	x	x	
22		692	5	✓	4.6					x	x	x		x	x	x	x	x	
23		693	5	✓	4.9	x x	x x	x											
24		694	0	✓	2.9					x	x	x		x x x	x x x	x x x	x	x	

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

Bottom Depth: 3969 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0209	1910 (30)
Bottom	0321	
End	0455	

Positional Information

Lat:	49 ° 50.20	N
Lon:	142 ° 39.94	W

Start

Lat:	49 ° 50.20	N
Lon:	142 ° 39.94	W

Bottom

Lat:	49 ° 50.20	N
Lon:	142 ° 39.94	W

End

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P25 Event #: 38 Ship: Tully UTC Date (dd:mmm/yyyy): 22 '08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments				
			Target Pressure	Confirmed Pressure	Oxy	TOC	DOC	CDOM	PIC	POC	CHL	HPLC	Nut-F	Sal					
				✓	No	AF	AF	AF	AF	AF									
1		695	400	✓	399	x	x	x	x	x	x				x				SALINITY A ODO APART
2		696	300	✓	300	xx	x	x	x	x	x				x				SPIGOTS ARE LUBRICATED
3		697	250	✓	252	x	x	x	x	x	x				xx				
4		698	200	✓	199	x	x	x	x	x	x				x				
5		699	175	✓	176	x	x	x	x	x	x				x				
6		700	150	✓	150	x	x	x	x	x	x				x				
7		701	125	✓	125	x	x	x	x	x	x				x				
8		702	100	✓	100	x	x	x	x	x	x				x				
9		703	75	✓	75	x	xxx	xxx	xxx	x	x				x				
10		704	50	✓	49	x	x	x	x	x	x				x				
11		705	25	✓	24		xxx	xxx	xxx	xxx									
12		706	25	✓	24	xx					xxx				x				
13		707	10	✓	10	x	x	x	x	x	x				x				
14		708	5	✓	5.4	x	x	x	x	x	x								
15		709	5	✓	4.9								xx	xx	x				
16		710	0	✓	3.9	x	xxx	xxx	xxx	x	x				x				
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 4125 m
Transmisso Cleaned: 72 (Y) / N

Time	UTC	Local
Start	1836	1136
Bottom	1908	
End	1957	

Positional Information

Lat:	49 ° 59.97	N
Lon:	143 ° 36.27	W

Start

▼

Lat:	49 ° 59.97	N
Lon:	143 ° 36.27	W

Bottom

▼

Lat:	49 ° 59.98	N
Lon:	143 ° 36.27	W

End

Extra comments:
TOC DOC CDOM PIC POC
+ 105 CAST

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008

Station: P26

Event #: 90

Ship: Tully

UTC Date (dd:mmm:yyyy): 23 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	TOC	DOC	Gels	SAGs	DNA				
1		711	Bot-10	✓	4318	x		x	x	x	x	x		x	x			
2		712	4000	✓		x	x	x	x	xx	x	x		x	x			
3		713	3500	✓		xx	x	x	x	x	x	x						
4		714	3000	✓		x	x	x	x	x	x	x		x	x			
5		715	2500	✓		x	xx	x	x	x	x	x						
6		716	2000	✓		x	x	x	x	x	x	x		x	x			
7		717	1500	✓		x	x	xx	xx	x	x	x		x	x			
8		718	1250	✓		x	x	x	x	x	x	x		x	x			
9		719	1000	✓		x	x	x	x	x	x	x		x	x			
10		720	800	✓		xx		x	x	x	x	x		x	x			
11		721	600	✓		x		x	x	x	x	x		x	x			
12		722	400	✓		x		x	x	x	x	x		x	x			
13		723	300	✓		x		x		x	x	x		x	x			
14		724	250	✓		xx		x		x								
15		725	200	✓		x		x		x				x	x			
16		726	175	✓		x		x		x								
17		727	150	✓		x		x		x				x	x			
18		728	125	✓		x		xx		x								
19		729	100	✓		x		x		x				x	x			
20		730	75	✓		xx		x		x								
21		731	50	✓		x		x		x				x	x			
22		732	25	✓		x		x		x				x	x			
23		733	10	✓		x		x		x				x	x			
24		734	5	✓		x		x		x								

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

Bottom Depth:	4228	m	
Transmisso Cleaned:	Y2	Y	N

Time	UTC	Local
Start	1423	0723
Bottom	1538	0838
End	1707	

Positional Information
Start
Lat: 50 ° 00 11 N
Lon: 144 ° 59 96 W

Bottom
Lat: 50 ° 00 11 N
Lon: 144 ° 59 96 W

End
Lat: 50 ° 00 12 N
Lon: 144 ° 59 96 W

Extra comments:
Deep cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P26 Event #: 91 Ship: Tully UTC Date (dd:mmm:yyyy): 23 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure	DMS	DMSP	DMSP	Nut-F		Chl	HPLC	Phyto			
1		735	300	✓ 300	x			x							
2		736	200	✓	x	x	x	x							
3		737	150	✓	x	x	x	xx							
4		738	100	✓	x			x		x					
5		739	75	✓	x			x		x					
6		740	60	✓				x		xx	xx				
7		741	50	✓	x			x		x	xx				
8		742	40	✓	x			x		x	xx				
9		743	30	✓	x	x	x	x		x	xx				
10		744	25	✓	x			x		x					NO DING-HIT TWICE
11		745	20	✓	xx	xx	xx	x		x					
12		746	15	✓	x			x		x	xx				
13		747	10	✓	x			x		xx					
14		748	5	✓	x	x	x	x		x	xx	xxx			
15		749	0		x	x	x	x		x					
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

Bottom Depth: 4227 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1803	1103
Bottom	1808	
End	1825	

Positional Information

Lat:	50 ° 00 05	N
Lon:	145 ° 00 07	W

▼

Lat:	50 ° 00 04	N
Lon:	145 ° 00 09	W

▼

Lat:	50 ° 00 05	N
Lon:	145 ° 00 11	W

Extra comments:
DMS cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P26 Event #: 92193 Ship: Tully UTC Date (dd mmm yyyy): 23 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments	
			Target Pressure	Confirmed Pressure		Gels	TOC	DOC		TOC	DOC	CDOM	POC	PIC	POC	PIC		
				✓		MO	DH	DH		AF	AF	AF	GF/F	GF/F	GF/C	GF/C		
1		750	400	✓	399		x	x	x		x	x	x	x	x	x	x	SAFETY 0-003-209 APR
2		751	300	✓	300		x	x	x		x	x	x	x	x	x	x	
3		752	250	✓	250		x	x	x		x	x	x	x	x	x	x	
4		753	200	✓	201		x	x	x		x	x	x	x	x	x	x	PROGRAM STOP
5		754	175	✓	175		x	x	x		x	x	x	x	x	x	x	
6		755	150	✓	149		x	x	x		x	x	x	x	x	x	x	
7		756	125	✓	126		x	x	x		x	x	x	x	x	x	x	
8		757	100	✓	101		x	x	x		x	x	x	x	x	x	x	
9		758	75	✓	76		x	x	x		xxx	xxx	xxx	x	x	x	x	
10		759	50	✓	50		x	x	x		x	x	x	x	x	x	x	
11		760	25	✓	26		x	x	x		xxx	xxx	xxx			x	x	
12		761	25	✓	25									xxx	xxx	x	x	
13		762	10	✓	10		x	x	x		x	x	x	x	x	x	x	
14		763	5	✓	5		x	x	x		x	x	x	x	x	x	x	
15		764	5	✓	5											xxx	xxx	
16		765	0	✓	2.4		x	x	x		xxx	xxx	xxx	x	x	x	x	NEW CLIP LANYARD
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

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

Bottom Depth: 4227 m
Transmisso Cleaned: Y/N

Time	UTC	Local
Start	1947	1247
Bottom	1953	
End	2020	

Positional Information

Lat: 49 ° 59.99	N
Lon: 144 ° 59.95	W

Bottom

Lat: 49 ° 59.99	N
Lon: 144 ° 59.95	W

End

Lat: 49 ° 59.99	N
Lon: 144 ° 59.95	W

Extra comments:
WRONG CRUISE #
IN HEADER 93

Water Properties Group

Sampling Log

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

Cruise ID:

2019-008

Station:

P26

Event #:

95

Ship:

Tully

UTC Date (dd|mmm|yyyy):

23 | 08 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed Pressure			Cs								
1		766	500	✓	500			x							
2		767	500	✓				x							
3		768	500	✓				x							
4		769	500	✓				x							
5		770	500	✓				x							
6		771	500	✓				x							
7		772	400	✓	400			x							
8		773	400	✓	401			x							
9		774	400	✓	400			x							
10		775	400	✓	399			x							
11		776	400	✓	400			x							
12		777	400	✓	400			x							
13		778	300	✓	300			x							
14		779	300	✓	300			x							
15		780	300	✓	301			x							
16		781	300	✓	301			x							
17		782	300	✓	300			x							
18		783	300	✓	301			x							
19		784	200	✓	200			x							
20		785	200	✓	201			x							
21		786	200	✓	201			x							
22		787	200	✓	201			x							
23		788	200	✓	200			x							
24		789	200	✓	201			x							

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

Bottom Depth: 4227 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2147	1447
Bottom	2157	
End	2211	

Positional Information

Lat:	49 ° 59.99	N
Lon:	144 ° 59.98	W

Start

Lat:	49 ° 59.99	N
Lon:	144 ° 59.98	W

Bottom

Lat:	49 ° 59.99	N
Lon:	144 ° 59.98	W

End

Lat:	49 ° 59.99	N
Lon:	144 ° 59.98	W

Extra comments:

Cesium 500m cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008

Station: P26

Event #: 96

Ship: Tully

UTC Date (dd:mmm:yyyy): 23 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments
			Target Pressure	Confirmed Pressure			Cs										
1		790	150	✓ 150			x										SALINITY 0.008 → 0.01 APPAR
2		791	150	✓ 151			x										
3		792	150	✓ 151			x										
4		793	150	✓ 151			x										
5		794	150	✓ 150			x										
6		795	150	✓ 150			x										
7		796	100	✓ 101			x										
8		797	100	✓ 100			x										
9		798	100	✓ 100			x										
10		799	100	✓ 100			x										
11		800	100	✓ 101			x										
12		801	100	✓ 99			x										
13		802	50	✓ 50			x										
14		803	50	✓ 51			x										
15		804	50	✓ 51			x										
16		805	50	✓ 51			x										
17		806	50	✓ 50			x										
18		807	50	✓ 49			x										
19		808	5	✓ 5			x										
20		809	5	✓ 1			x										
21		810	5	✓			x										
22		811	5	✓			x										
23		812	5	✓			x										
24		813	5	✓			x										

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

Bottom Depth:	4227	m
Transmisso Cleaned:	☒ Y / ☐ N	

Time	UTC	Local
Start	2236	1536
Bottom	2239	
End	2248	

Positional Information
Start
Lat: 49° 59.99 N
Lon: 144° 59.98 W

Bottom
Lat: 49° 59.99 N
Lon: 144° 59.98 W

End
Lat: 49° 59.99 N
Lon: 144° 59.98 W

Extra comments:
Cesium 150m cast

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008

Station: P26

Event #: 97

Ship: Tully

UTC Date (dd:mmm/yyyy): 24 / 08 / 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					Comments									
			Target Pressure	Confirmed ☒ Pressure	Nut-C	Nut-F	Sal	TM F	TM UF										
1		814	400		400	x x	x x	x	x	x									
2		815	300		300		x	x	x	x									
3		816	200		200		x	x	x x	x x									
4		817	150		149		x	x	x	x									
5		818	100		99		x	x	x	x									
6		819	75		75		x	x	x	x									
7		820	50		49		x		x	x									
8		821	40		40		x		x	x									
9		822	25		24		x		x	x									
10		823	10		9		x		x	x									
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			

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

Bottom Depth: 4227 m

Transmissio Cleaned: Y / N

Time	UTC	Local
Start	0101	1801
Bottom	0108	
End	0117	

Positional Information

Start
Lat: 49 ° 59.95 N
Lon: 145 ° 0.00 W

Bottom
Lat: 49 ° 59.95 N
Lon: 145 ° 0.00 W

End
Lat: 49 ° 59.95 N
Lon: 145 ° 0.00 W

Extra comments:

Shallow TMR

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P26 Event #: 98 Ship: Tully UTC Date (dd mmm yyyy): 24 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure		UBC		YS							
1		824	2500	✓ 2500				x							
2		825	2500	✓				x							
3		826	2500	✓				x							
4		827	2500	✓				x							
5		828	2000	✓		x									
6		829	2000	✓											
7		830	2000	✓											
8		831	2000	✓											
9		832	1500	✓				x							
10		833	1500	✓				x							
11		834	1000	✓		x									
12		835	1000	✓											
13		836	1000	✓											
14		837	1000	✓											
15		838	500	✓		x									
16		839	500	✓											
17		840	500	✓											
18		841	500	✓											
19		842	10	✓		x									
20		843	10	✓											
21		844	10	✓											
22		845	10	✓											
23															
24															

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

Bottom Depth:	4226	m
Transmisso Cleaned:	+2 (Y) / N	

Time	UTC	Local
Start	0705	0005
Bottom	0745	
End	0831	

Positional Information
Start
Lat: 50 ° 00 03 N
Lon: 145 ° 00 12 W

Bottom
Lat: 50 ° 00 06 N
Lon: 145 ° 00 18 W

End
Lat: 50 ° 00 04 N
Lon: 145 ° 00 07 W

Extra comments:
UBC cast
Plus water for Yuanji Sun

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P26 Event #: 99 Ship: Tully UTC Date (dd|mmm|yyyy): 24 | 0 | 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials												Comments	
			Target Pressure	Confirmed ✓ Pressure		Var												
1		846	Chl Max	✓	34		x											
2		847	Chl Max	✓			x											
3		848	Chl Max	✓			x											
4		849	Chl Max	✓			x											
5		850	5	✓			x											
6		851	5	✓			x											
7		852	5	✓			x											
8		853	5	✓			x											
9		854	5	✓			x											
10		855	5	✓			x											
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: 4226 m
Transmisso Cleaned: 72 (Y) / N

Time	UTC	Local
Start	1104	0404
Bottom	1106	
End	1112	

Positional Information

Lat:	50 ° 00 00	N
Lon:	144 ° 59 95	W

▼

Lat:	49 ° 59 99	N
Lon:	144 ° 59 94	W

▼

Lat:	49 ° 59 99	N
Lon:	144 ° 59 90	W

Extra comments:
Productivity cast
CTD to 150 m!

Water Properties Group

Sampling Log

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

Cruise ID:

2019-008

Station:

P26

Event #: 100

Ship: Tully

UTC Date (dd/mm/yyyy): 24 Aug 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments			
			Target Pressure	Confirmed √ Pressure	Nut-C	Nut-F	Sal	TM F	TM UF									
1		856	4000	4004	x	x	x	x	x									
2		857	3000	2994	x	x	x	x	x									
3		858	2000	2000	x	x	x	x	x									
4		859	1800	1799	xx	xx	x	x	x									
5		860	1600	1599	x	x	x	xx	xx									
6		861	1400	1400	x	x	x	x	x									
7		862	1200	1200	x	x		x	x									
8		863	1100	1099	x	x		x	x									
9		864	1000	1000	x	x		x	x									
10		865	800	800	x	x		x	x									
11		866	600	601	x	x		x	x									
12		867	500	501	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.

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

Bottom Depth: _____ m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1421	0721
Bottom	1543	
End	1706	

Positional Information

Lat:	49° 59.99	N
Lon:	145° 00.01	W

Bottom

Lat:	49° 59.95	N
Lon:	145° 00.03	W

End

Lat:	49° 59.95	N
Lon:	145° 00.03	W

Extra comments:
Deep TMR
3000m winch did not hear direction to slow. Closed at 1m/s.

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: PA-013 Event #: 101 Ship: Tully UTC Date (dd mmm/yyyy): 24 8 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy										
1		868	15	✓ 15	x x										
2		869	10	✓ 15	x x										CLOSED @ 15
3		870	5	✓ 5	x x										
4		871	0	✓ 0	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): H.M.

Bottom Depth: 4207 m
Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	18 24	11 24
Bottom	18 31	
End	18 41	

Positional Information

Lat:	50 ° 07 62	N
Lon:	144 ° 53 16	W

▼

Lat:	50 ° 07 62	N
Lon:	144 ° 53 23	W

▼

Lat:	50 ° 07 60	N
Lon:	144 ° 53 27	W

Extra comments:

CTD to 350 m

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P35 Event #: 106 Ship: Tully UTC Date (dd mmm yyyy): 25 08 19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments
			Target Pressure	Confirmed ✓ Pressure	Nut-F		Chi	HPLC							
1		872	5	✓ 5.1	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): MG

Bottom Depth: 4228 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0222	1923 (24)
Bottom	0256	
End	0330	

Positional Information
Start
Lat: 50 ° 00.04 N
Lon: 144 ° 18.20 W

Bottom
Lat: 50 ° 00.04 N
Lon: 144 ° 18.17 W

End
Lat: 50 ° 00.02 N
Lon: 144 ° 18.16 W

Extra comments:
Loops for 1xSal, 1xNut, 2xChi

Water Properties Group

Sampling Log

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

Cruise ID: 2019-008 Station: P4 Event #: 117 Ship: Tully UTC Date (dd/mm/yyyy): 27/08/19

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials											Comments		
			Target Pressure	Confirmed	Oxy	Sal	Nut-F	Nut-C	Chl	HPLC								
			✓	Pressure														
1		873	Bot-10	✓	1318	x		x	x									
2		874	1250	✓		x	x	x	x									
3		875	1250	✓		x	x	x x	x x									
4		876	1000	✓		x x	x	x	x									
5		877	800	✓		x	x x	x	x									
6		878	600	✓		x	x	x	x									
7		879	400	✓		x		x	x									
8		880	300	✓		x x		x										
9		881	250	✓		x		x										
10		882	200	✓		x		x										
11		883	175	✓		x		x										
12		884	150	✓		x		x										
13		885	125	✓		x		x x										
14		886	100	✓		x x		x		x								
15		887	75	✓		x		x		x								
16		888	50	✓		x		x		x x	xx							
17		889	25	✓		x		x		x		873						
18		890	10	✓		x		x		x								
19		891	5	✓		x x		x		x	x x							
20																		
21																		
22			←								↑							↑
23																		
24																		

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

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

	UTC	Local
Start	1549	0849
Bottom	1611	0911
End		

Positional Information

Lat:	48 ° 38 99	N
Lon:	126 ° 39 95	W

Start

▼

Lat:	48 ° 39 98	N
Lon:	126 ° 39 96	W

Bottom

▼

Lat:	48 ° 38 98	N
Lon:	126 ° 40 00	W

End

Extra comments:

Deep cast

Return leg