

Water Properties Group

Sampling Log

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

Cruise ID:

2019-014

Station:

ES03

Event #:

02

Ship:

Tully

UTC Date (dd/mm/yyyy): 19 JUL 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					Comments				
			Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC		

1		1	Btm-5	✓	3280	x	x	x	x	x				
2		2	3000	✓	3000	x	x	x						
3		3	2500	✓	2500	x	x	x						
4		4	2000	✓	2000	x	x	x						
5		5	1500	✓	1500	x	x	x						
6		6	1250	✓	1250	x	x	xx						
7		7	1100	✓	1100	x	xx	x						
8		8	1000	✓	980	x	x	x						
9		9	900	✓	899	x	x	x						
10		10	800	✓	800	xx	x	x						
11		11	700	✓	700	x	x	x						
12		12	600	✓	600	x	x	x						
13		13	500	✓	500	x	x	x						
14		14	400	✓	400	x	x	xx						
15		15	300	✓	300	x	x	x						
16		16	200	✓	200	x	x	x						
17		17	150	✓	150	x	xx			→ Spill hot OPEN WHEN BROUGHT OUT OF H ₂ O				TS SWMP
18		18	100	✓	100	x	x							TS SWMP
19		19	50	✓	50	x	x				x			
20		20	20	✓	20	xx	x				xx			
21		21	5	✓	5	x	x				x			
22														
23	z						z						z	
24														

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

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

Time UTC Local
Start 1546 0746
Bottom 1643 0943
End 1754 1054

Positional Information
Lat: 49 ° 00.70 N
Lon: 130 ° 38.38 W

Lat: 49 ° 00.67 N
Lon: 130 ° 38.34 W

Lat: 49 ° 00.70 N
Lon: 130 ° 38.25 W

Extra comments:

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

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

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

Cruise ID:

2019-014

Station:

ES02

Event #: 04

ships:

Tully

UTC Date (dd mmm yyyy): 20 Jun 2013

[illegible]

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

Bottom Depth: 2387 m

Transmissio Cleaned: 6 / N

Time	UTC	Local
Start	0035	1735
Bottom	0119	1819
End	0155	1855

Positional Information	
Lat: 49 ° 02.430 N	
Lon: 130 ° 50.480 W	

Bottom	Lat:	49° 02' 420	N
	Lon:	130° 50' 500	W

End	N	W
Lat:	49 ° 02.440	
Lon:	130 ° 50.980	

Extra comments:

1			22	Btm-5	2400
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Water Properties Group

Sampling Log

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

Cruise ID:

2019-014

Station:

ES01

Event #:

05

Ship:

Tully

UTC Date (dd/mm/yyyy):

20 Jul 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials							Comments			
			Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC			
1	1	23	Btm-40	967	x		x	x	x						
32	3	24	800	800	x	x	x	x	x						
43	4	25	700	700	x		x	xx	x						
54	5	26	600	600	x		x	x	xx						
65	6	27	500	500	xx		x	x	y						
76	7	28	400	401	x		x	x	y						
87	8	29	300	300	x		x		x						
98	9	30	200	201	x		xx		x						
109	10	31	150	150	x		x		y						
1110	11	32	100	101	x		x		y						
1211	12	33	50	50	xx		x		y		xx	yy			
1312	13	34	20	21	x		x		y		xx	yy			
1413	14	35	5	5.5	x		xx		yy		xx	yy			
214	2	36	Btm-40	967						xx					
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

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

bottom depth

Bottom Depth: 917 m
Transmisso Cleaned: Y / N

Time UTC Local
Start 02:51
Bottom 03:10
End

Positional Information
Lat: 49° 03.50' N
Lon: 130° 56.68' W

Lat: 49° 03' 500 N
Lon: 130° 56' 670 W

Lat: 49° 03' N
Lon: 130° 56' W

Extra comments:
labels for samples
24-35 have
incorrect bottle
numbers

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

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

Cruise ID:

2019-014 Station:

ES06

Event #:

09

Ship:

Tully

UTC Date (dd mmm yyyy): 20 JUL 2019

Niskin #	Firing #	Sample #
----------	----------	----------

Rosette Operation	
Target Pressure	Confirmed Pressure

Samples Taken / Sampler's Initials					
OXY	Sal	Nut-F	Nut-C	DIC	eDNA

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

Bottom Depth: 2140 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0713	1213
Bottom	0750	
End	08	

Positional Information
Start Lat: 48 ° 56.840 N
Lon: 130 ° 56.990 W

Bottom Lat: 48 ° 56.860 N
Lon: 130 ° 56.940 W

End Lat: 48 ° 56. N
Lon: 130 ° 56. W

Extra comments:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Niskin #	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57				
Firing #																								
Sample #																								
Pressure	Btm-5	Btm-5	2000	1500	1250	1100	1000	900	800	700	600	500	400	300	200	150	100	50	20	5				
Confirmed	2162	2162	2001	1500	1251	1100	1001	900	800	701	600	500	400	300	200	150	100	50	20.3	5.0				
OXY	xx		x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x				
Sal	x		x	xx	x	x	x	x																
Nut-F	x		x	x	x	xx	x	x	x	x	x	x	x	xx	x	x	x	x	x	x				
Nut-C	x		xx	x	x	x	x	x	xx	x	x	x	x	x										
DIC																								
eDNA			xx																					
CHL																								
HPLC																								
Comments																								

Cruise ID: 2019-014 Station: ES07 Event #: 11 Ship: Tully UTC Date (dd|mm|yyyy): 21 Jul 2019

Profile type: (ROS) TRM X-Niskin other? Watchkeeper(s): TF / CF 2815

Bottom Depth: 2883 m Transmisso Cleaned: (Y) / N

Time UTC Local

Start	1204	0504
Bottom	1252	0552
End	1358	

Positional Information

Lat: 48 ° 47.070 N
Lon: 130 ° 53.400 W

Lat: 48 ° 47.150 N
Lon: 130 ° 53.200 W

Lat: 48 ° 47.120 N
Lon: 130 ° 53.070 W

Extra comments: skipped bottle 3, sample 60, b/c cast only went to 2883 m

Rosette Operation		Samples Taken / Sampler's Initials										Comments	
Niskin #	Firing #	Sample #	Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC	
1	1	58	Btm-5	✓ 2883	x	x	x	x	x				
2	2	59	Btm-5	✓ 2883						xx			
3		60	3000		x	x	x	x	x				
4	3	61	2500	✓ 2500	xx	x	xx	x	x				
5	4	62	2000	✓ 2000	x	x	x	xx	xx				
6	5	63	1500	✓ 1500	x	xx	x	x	x				
7	6	64	1250	✓ 1250	x	x	x	x	x				
8	7	65	1100	✓ 1100	x	x	x	x	x				
9	8	66	1000	✓ 1000	x	x	x	x	x				
10	9	67	900	✓ 900	x	x	x	x	x				
11	10	68	800	✓ 800	x	x	x	x	x				
12	11	69	700	✓ 700	x	x	x	x	x				
13	12	70	600	✓ 600	x	x	x	x	x				
14	13	71	500	✓ 500	x	x	x	x	x				
15	14	72	400	✓ 400	x	x	x	x	x				
16	15	73	300	✓ 300	x	x	x	xx	xx				
17	16	74	200	✓ 200	x	x	x	x	x				
18	17	75	150	✓ 150	x	x	x	x	x				
19	18	76	100	✓ 100	x	x	xx	x	x				
20	19	77	50	✓ 50	x	x	x	x	x		x	xx	
21	20	78	20	✓ 20	xx	x	x	x	x		xx	xx	
22	21	79	5	✓ 5	x	x	x	x	x		x	xx	
23													
24													

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

UTC Date (dd mmm yyyy): 21 Jul 2019

[illegible][illegible]

Profile type:		
ROS	TRM	X-Niskin other?
Watchkeeper(s): <i>AS</i>		

Bottom Depth: 628 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0119	1819
Bottom	0133	1833
End		

Positional Information	
Lat: 49 ° 03.390	N
Lon: 130 ° 56.470	W

Bottom

Lat: 49° 03' 50" N
Lon: 130° 56' 40" W

End	Lat:	°	N
	Lon:	°	W

Extra comments:

Water Properties Group

Sampling Log

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

UTC Date (dd|mm|yyyy): 20 Jul 2019

Cruise ID: 2019-014 Station: ES12 Event #: 16 Ship: Tully

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

Bottom Depth: 1389 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0434	2134
Bottom	0500	
End	0523	

Positional Information
Lat: 49 ° 06.110 N
Lon: 130 ° 56.860 W

Lat: 49 ° 06.130 N
Lon: 130 ° 56.860 W

Lat: 49 ° 06.130 N
Lon: 130 ° 56.860 W

Extra comments:

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials									
			Target Pressure	Confirmed Pressure √	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC		

1		82	Btm-5	✓	1408											
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Cruise ID:

2019-014
Station:

ES16

Event #:

Ship:

Tully

UTC Date (dd mmm yyyy): 21 JUL 2019

—

Niskin	Firing	Sample
#	#	#

Rosette Operation	
Target	Confirmed
Pressure	✓ Pressure

[illegible]

Comments

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

Bottom Depth: 1424 m

Transmisso Cleaned: Y / N

Time

UTC Local

Start

0625	2325
------	------

Bottom

7590	
------	--

End

0731	
------	--

Positional Information

Lat: _____

49.07.250

Lon:

Lon: 130.57.100

Bottom

Lat:

at: 49 • 07, 240

Lon:

Lon: 30° 57.010 W

End

Lat:

49.07.340

En/Lo:

Lot: 130.57.000 W

Extra comments:

Version: 25 Nov 2011

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

Water Properties Group

Sampling Log

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

Cruise ID:

2019-014

Station:

ES23

27

Ship:

Tully

Til 2019

Profile type: ROS TRM X-Niskin other? TF

Watchkeeper(s):

Bottom Depth: 2341 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	07:01	00:01
Bottom	07:43	
End	08:43	

Positional Information	
Lat:	49 ° 26.680 N
Lon:	130 ° 53.190 W

Lat:	49 ° 26.730	N
Lon:	130 ° 53.140	W

Lat:	49° 26.750	N
Lon:	130° 53.160	W

Extra comments:

- one bucket & caps attached
- bottle is not fired (intentionally)

[illegible]

3 X storm petrels

Water Properties Group

Sampling Log

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

UTC Date (dd|mm|yyyy): 22 | JUL | 2019

Cruise ID: 2019-014 Station: ES21 Event #: 29 Ship: Tully

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

Watchkeeper(s): TP

Bottom Depth: 2034 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	11:34	0434
Bottom	12:08	
End	12:58	

Positional Information

Lat: 49 ° 12. 470 N

Lon: 130 ° 55.040 W

Bottom

Lat: 49 ° 12. 430 N

Lon: 130 ° 54. 960 W

End

Lat: 49 ° 12. 400 N

Lon: 130 ° 54. 970 W

Extra comments:

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					Comments				
			Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC		
1		134	Btm-5							xx				
2		135	Btm-5		xx	x	x	x						
3		136	2000		xx	x	x	x						
4		137	1500		x	x	x	x						
5		138	1250		x	x	xx	x						
6		139	1100		x	xx	x	x						
7		140	1000		x	x	x	x						
8		141	900		x		x	x						
9		142	800		x		x	xx						
10		143	700		x		x	x						
11		144	600		x		x	x						
12		145	500		x		x	x						
13		146	400		x		x	x						
14		147	300		x		x							
15		148	200		x		x							
16		149	150		x		x							
17		150	100		x		x							
18		151	50		xx		xx				x			
19		152	20		x		x				x			
20		153	5		x		x				xx			
21		154												
22														
23														
24														

Cruise ID:

2019-014

Station:

ES24

Event #:

35

Ship:

Tully

UTC Date (dd mmm yyyy):

23 JUL 2019

#	Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					Comments				
				Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC		
1			175	Btm-57	3262	x	xx	x	x		xx				alt meter, windier than steady state
2			176	3000	3001	xx	x	x	x						
3			177	2500	2500	x	x	x	x						
4			178	2000	2000	x	x	x	x						
5			179	1500	1501	x	x	x	x						
6			180	1250	1250	x	x	x	x						
7			181	1100	1101	x	x	x	x						
8			182	1000	1000	x	x	x	xx						
9			183	900	900	x		x	x						
10			184	800	800	x		x	x						
11			185	700	700	x		x	x						
12			186	600	601	x		x	x						
13			187	500	500	x		x	x						
14			188	400	400	x		x	xx						
15			189	300	300	x		x							
16			190	200	200	x		x							
17			191	150	150	xx		xx							
18			192	100	100	x		x							
19			193	50	50	x		x				x			fluor = 11 @ 35 m
20			194	20	19.9	x		x				x			
21			195	5	4.9	x		xx				xx			forgot to fire bottle
22															
23															
24															

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

Watchkeeper(s): TF

Bottom Depth: 3214 m

Transmisso Cleaned: Y / N

Time UTC Local

Start 0823 01:23

Bottom 0924

End 10

Positional Information

Lat: 49 ° 11.150 N

Lon: 130 ° 41.830 W

Lat: 49 ° 11.110 N

Lon: 130 ° 41.750 W

Lat: 49 ° 11. N

Lon: 130 ° 41. W

Extra comments:

stopped @ 108 m of downcast to reposition ship + try continued

Water Properties Group

Sampling Log

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

Cruise ID: 2019-014 Station: ES13 Event #: 37 Ship: Tully UTC Date (dd mmm yyyy): 23 JUL 2017

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

Bottom Depth: 2255 m Transmisso Cleaned: ☒ Y ☐ N

Time UTC Local Start 1222 0522 Bottom 1306 End

Positional Information Lat: 49° 06.000' N Lon: 130° 49.780' W

Lat: 49° 05.990' N Lon: 130° 49.440' W

Lat: 49° 06.0' N Lon: 130° 49.0' W

Extra comments: download stopped @ 75306 for ship to reposition them continued

Niskin #		Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials										Comments	
				Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC				
1	196			Btm-5		x	x	x	x		xx						
2	197			2008		x	x	x	x								
3	198			1500		x	xx	x	x								
4	199			1250		x	x	x	x								
5	200			1100		x	x	x	xx								
6	201			1000		x	x	x	x								
7	202			900		x		x	x								
8	203			800		x		xx	x								
9	204			700		x		x	x								
10	205			600		xx		x	x								
11	206			500		x		x	x								
12	207			400		x		x	x								
13	208			300		x		x									
14	209			200		x		x									
15	210			150		x		x									
16	211			100		x		x									
17	212			50		x		x				xx					
18	213			20		x		x				x					
19	214			5		xx		xx				x					
20	197			2000		x		x									
21																	
22																	
23																	
24																	

Cruise ID: 2019-014 Station: UN10

UTC Date (dd mmm yyyy): 24 Jul 2019

Ship: Tully

Event #: 40

Rosette Operation

Target Pressure	Confirmed
Pressure	✓

Samples Taken / Sampler's Initials

OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC

Comments

Niskin #	Firing #	Sample #	Pressure	Target	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC	Comments
1	1	215	Btm-5	1892		x	x	x	x		xx			
2	3	216	1250	1250		x	x	x	x					
3	4	217	1100	1100		x	x	x	x					
4	5	218	1000	1000		x	xx	x	x					
5	6	219	900	900		x		x	xx					
6	7	220	800	800		x		x	x					
7	8	221	700	700		x		x	x					
8	9	222	600	600		xx		xx	xx					
9	10	223	500	500		x		x	x					
10	11	224	400	400		x		x	x					
11	12	225	300	300		x		xx						
12	13	226	200	200		xx		x						
13	14	227	150	150		x		x						
14	15	228	100	99.8		x		x						
15	16	229	50	50.2		x		x				x		
16	17	230	20	20.4		x		x				x		
17	18	231	5	5.5		x		x				xx		
18	2	232	1500	1500		x	x	x	x					
19														
20														
21														
22														
23														
24														

Bottom Depth: 1824 m

Transmisso Cleaned: (Y) / N

Time

UTC

Local

Start

0442

2142

Bottom

0516

End

0602

Positional Information

Lat:

49 ° 15. 780

N

Lon:

131 ° 07. 870

W

Lat:

49 ° 15. 780

N

Lon:

131 ° 07. 850

W

Lat:

49 ° 15. 740

N

Lon:

131 ° 07. 890

W

Extra comments:
bottle 18 fixed out
of order - bottom
deeper than anticipated

Water Properties Group

Sampling Log

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

UTC Date (dd mmm yyyy): 24 JUL 2019

Cruise ID: 2019-014 Station: ES18 Event #: 41 Ship: Tully: Comments:

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

Bottom Depth: 3160 m Transmisso Cleaned: Y N

Time		UTC	Local
Start		0737	0037
Bottom		0834	
End		0923	

Positional Information

Lat: 49 ° 06.270 N Lon: 131 ° 15.640 W

Lat: 49 ° 06.160 N Lon: 131 ° 15.770 W

Lat: 49 ° 06.050 N Lon: 131 ° 15.930 W

Extra comments:
cup bucket attached

Cruise ID: 2019-014			Station: ES18			Event #: 1			Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Sampling Log

Water Properties Group

24 JUL 2019

UTC Date (dd mmm yyyy):

Tully

Ship:

43

Event #:

ES10

Station:

Cruise ID:

2019-014

Samples Taken / Sampler's Initials

Comments

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

Bottom Depth: 3138 m
 Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1122	0422
Bottom	1218	
End	1330	

Positional Information

Lat: 48 ° 55.820 N
 Lon: 131 ° 10.560 W

Lat: 48 ° 55.730 N
 Lon: 131 ° 10.710 W

Lat: 48 ° 55.840 N
 Lon: 131 ° 10.680 W

Extra comments:
 downcast
 stopped @ 62m for
 ship to adjust posn.
 + at ~ 880m

Niskin			Firing	Sample	Rosette Operation		Samples Taken / Samplers' initials										
#	#	#			Target Pressure	Confirmed	✓	Pressure	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC	
1		234			Btm-5			3185	x	x	x	x					max fluo @ ~35m
2		235			3000			3000	x	x	xx	x					= ~21.5
3		236			2500			2500	x	x	x	x					
4		237			2000			2001	x	x	x	x					
5		238			1500			1500	x	xx	x	x					
6		239			1250			1251	x	x	x	x					
7		240			1100			1099	x	x	x	x					
8		241			1000			1000	x	x	x	x					
9		242			900			900	x		x	x					
10		243			800			800	xx		x	x					
11		244			700			700	x		x	x					
12		245			600			601	x		x	x					
13		246			500			500	x		x	x					
14		247			400			400	x		x	xx					
15		248			300			300	x		x						
16		249			200			200	x		x						
17		250			150			150	x		xx						
18		251			100			100	x		x						
19		252			50			49.9	xx		x				x		
20		253			20			20.2	x		x				x		
21		254			5			5.5	x		x				xx		
22																	
23																	
24																	

Start

Bottom

http://www.pac.dfo

Seawater sampler to be cleaned before each cast, do not use Ammonia products

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

Cruise ID:

2019-014

Station:

UN01

Event #:

47

Ship:

Tully

UTC Date (dd mmm yyyy):

26 June 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's initials					Comments				
			Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC		

1	2	255	Btm-5	✓	953	x		x	x	xx				
2	3	256	800	✓	800	x	x	x	x					
3	4	257	700		700	x	x	x	x					
4	5	258	600		600	x	x	x	x					
5	6	259	500		500	x	x	xx	x					
6	7	260	400		400	x	x	x	x					
7	8	261	300		300	x	x		xx					
8	9	262	200		201	xx	xx		x					
9	10	263	150		150	x	x		x					
10	11	264	100		100.5	x	x		x					
11	12	265	50		50.3	x	xx		x	xx	xx			
12	13	266	20		20.4	xx	x		xx	x	xx			
13	14	267	5		5.0	x	x		x	x	xx			
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

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

Bottom Depth: 965 m
Transmisso Cleaned: Y / N

Time UTC Local
Start 0130 1830
Bottom 0148 1848
End 0218

Positional Information
Start Lat: 47° 54' 01.0" N
Lon: 130° 18' 34.0" W

Bottom Lat: 47° 54' 00" N
Lon: 130° 18' 34.0" W

End Lat: 47° 34' 01.0" N
Lon: 130° 18' 34.0" W

Extra comments:
bottle 1 fired at 722 m on downcast
string of other bottles started at 2 on upcast

Cruise ID: 2019-014 Station: UN06 Event #: 49 Ship: Tully UTC Date (dd mmm yyyy): 26 JUL 2019

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

Bottom Depth: 2841 m
Transmisso Cleaned: ☒ Y ☐ N

Time UTC Local
Start 0337 2037
Bottom 0428
End 0530

Positional Information
Start Lat: 47° 33.990 N
Lon: 130° 10.870 W

Bottom Lat: 47° 33.980 N
Lon: 130° 11.000 W

End Lat: 47° 34.020 N
Lon: 130° 10.870 W

Extra comments:
x20 extra nutrient
samples taken at each
bottle 11, 17, 19, 20
for cool storage
study

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					Comments				
			Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC		
1		268	Btm-5	2872	x	x	x	x	xx					
2		265	2500	2501	x	x	x	x						
3		220	2000	2000	x	x	x	x						
4		271	1500	1501	x	xx	x	x						
5		272	1250	1250	x	x	x	xx						
6		273	1100	1100	x	x	x	x						
7		274	1000	1000	x	x	x	x						
8		275	900	900.5	xx		xx	x						
9		276	800	800	x		x							
10		277	700	701	x		x	xx						
11		278	600	600	x		xx	x						
12		275	500	500	xx		x	x						
13		280	400	400	x		x	x						
14		281	300	300	x		x							
15		282	200	200	x		x							
16		283	150	150	x		x							
17		284	100	101	x		x							
18		285	50	50.5	x		x				x			
19		286	20	20.5	x		x				xx			
20		287	5	5.3	x		x				x			
21														
22														
23														
24														

Sampling Log

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

Cruise ID:

2019-014 Station:

SP01

Event #:

Ship:

Tully

UTC Date (dd|mmm|yyyy): 26 | JUL | 2019

Niskin	Firing	Sample
#	#	#

Rosette Operation	
Target	Confirmed
Pressure	✓ Pressure

Samples Taken / Sampler's Initials

Comments

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

Bottom Depth: 934 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	12 43	05 43
Bottom	13 02	
End	13 28	

Positional Information	
Lat:	48 ° 04. 080 N
Lon:	130 ° 11. 770 W

Bottom	Lat: 48 ° 04.080 N
	Lon: 130 ° 11.780 W

Lat:	48 ° 04.080	N
Lon:	130 ° 11.780	W

Extra comments:

cup bucket attached

[illegible]

Version: 25 Nov 2011

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

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

Sampling Log

Water Properties Group

UTC Date (dd mm yy): 27 Jul 2019

Cruise ID: 2019-014 Station: SP02 Event #: 55 Ship: Tully

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

Bottom Depth: 2843 m Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0301	2001
Bottom	0351	
End	0454	

Positional Information

Start Lat: 48° 05.920 N Lon: 130° 01.340 W

Bottom Lat: 48° 05.910 N Lon: 130° 01.350 W

End Lat: 48° 05.900 N Lon: 130° 01.330 W

Extra comments:

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials					CHL	CHL	HPLC	Comments
			Target Pressure	Confirmed	OXY	Sal	Nut-F	Nut-C	DIC	eDNA			
1		296	Btm-5		x	x	x	x	x	xx			CHL max @ 60m
2		297	2500		x	x	x	x	x				= 2
3		298	2000		x	x	x	x	x				
4		299	1500		x	xx	x	x	x				
5		300	1250		x	x	x	x	x				
6		301	1100		x	x	x	xx	xx				
7		302	1000		x	x	x	x	xx				
8		303	900		x		x	x	x				
9		304	800		xx		x	x	x				
10		305	700		x		xx	xx	x				
11		306	600		x		x	x	x				
12		307	500		x		x	x	x				
13		308	400		x		x	x	x				
14		309	300		x		x		x				
15		310	200		xx		x		xx				
16		311	150		x		x		x				
17		312	100		x		xx		x	x	xx		
18		313	50		x		x		x	xx	xx		
19		314	20		x		x		x	x	xx		
20		315	5		x								
21													
22													
23													
24													

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

Sampling Log

Water Properties Group

UTC Date (dd|mm|yyyy): 27 | Jul | 2019

Cruise ID: 2019-014 Station: SP02 Event #: 55 Ship: Tully

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

Bottom Depth: 2843 m Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0301	2001
Bottom	0351	
End	0454	

Positional Information

Start Lat: 48 ° 05.920 N Lon: 130 ° 01.340 W

Bottom Lat: 48 ° 05.910 N Lon: 130 ° 01.350 W

End Lat: 48 ° 05.900 N Lon: 130 ° 01.330 W

Extra comments:

Niskin #	Firing #	Sample #	Rosette Operation Target Pressure	Confirmed	Pressure	OXY	Sal	Nut-F	Nut-C	DIC	eDNA	CHL	HPLC	Comments
----------	----------	----------	-----------------------------------	-----------	----------	-----	-----	-------	-------	-----	------	-----	------	----------

1		296	Btm-5		2880	x	x	x	x	x	xx			CHL max @ 60m
2		297	2500		2501	x	x	x	x	x				= 2
3		298	2000		2000	x	x	x	x	x				
4		299	1500		1501	x	xx	x	x					
5		300	1250		1250	x	x	x	x					
6		301	1100		1100	x	x	x	xx					
7		302	1000		1001	x	x	x	x	xx				
8		303	900		900	x		x	x					
9		304	800		800	xx		x	x	x				
10		305	700		700	x		xx	xx	x				
11		306	600		599	x		x	x	x				
12		307	500		500	x		x	x	x				
13		308	400		400.8	x		x	x	x				
14		309	300		300	x		x		x				
15		310	200		200	xx		x		x				
16		311	150		149.7	x		x		xx				
17		312	100		100	x		xx		x	xx			
18		313	50		49.8	x		x		xx	xx			
19		314	20		20.1	x		x		x	x			
20		315	5		5.3	x		x						
21														
22														
23														
24														

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

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

Cruise ID:

2019-014 Station:

H503

Event #:

Ship:

Tully

UTC Date

[illegible][illegible]

Bottom Depth: 2500 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1052	0352
Bottom	1135	
End	1234	

Positional Information

Lat:	48 ° 23.820 N
Lon:	129 ° 30.040 W

Lat:	48 ° 23.820 N
Lon:	129 ° 29.990 W

Lat:	48 ° 23. 800	N
Lon:	129 ° 29. 970	W

Extra comments:

Water Properties Group

Sampling Log

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

Cruise ID:

2019-014

Station:

HS01

Event #:

59

Ship:

Tully

UTC Date (dd/mm/yyyy):

24 Nov 2019

Niskin #	Firing #	Sample #	Rosette Operation		Samples Taken / Sampler's Initials		DIC		eDNA	CHL	HPLC	Comments
			Target Pressure	Confirmed Pressure	OXY	Sal	Nut-F	Nut-C				
1		335	Blm-5	✓ 1140	x		x	x	x	xx		
2		336	900	✓ 900	x	x	x	x	x			
3		337	800	✓ 800	x		x	xx	xx			
4		338	700	✓ 700	x		xx	x	x			
5		339	600	✓ 600	x		x	x	x			
6		340	500	✓ 500	xx		x	xx	x			
7		341	400	✓ 400	x		x	x	x			
8		342	300	✓ 300	x		x	x	x			
9		343	200	✓ 200	x		x	x	x			
10		344	150	✓ 150	x		x	x	xx			
11		345	100	✓ 100	x		xx	x	x			
12		346	50	✓ 50	x		x	x	x	xx		
13		347	20	✓ 20	x		x	x	x	xx		
14		348	5	✓ 5	xx		x	x	x	xx		
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

<http://www.pac.dfo-mpo.gc.ca/sciosap/projects/waterproperties/>Profile type:
ROS TRM X-Niskin other?
Watchkeeper(s):Bottom Depth: 1162 m
Transmisso Cleaned: 9 / NTime UTC Local
Start 1348 0648
Bottom 1409 0705
End 1434 0735

Positional Information

Start
Lat: 48° 24.020' N
Lon: 129° 22.570' WBottom
Lat: 48° 24.020' N
Lon: 129° 22.570' WEnd
Lat: 48° 24.020' N
Lon: 129° 22.570' W

Extra comments: